



Convolvulaceae Plant Family as Riparian Vegetation at Gandhinagar of Gujarat State , India.

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ABSTRACT

The present research paper give the information regarding plant list of Convolvulaceae family as riparian vegetation , which are grow in the area of Sabarmati riverside at Gandhinagar of Gujarat state , India. Plant species belongs to family Convolvulaceae mostly as climbers and prostrate climbers. Plant species of family Convolvulaceae from riparian zone of Gandhinagar area, have listed systematically which counts 18 species of 07 genera , Mostly the plant species observed as wild weedy plant and some of them cultivated.

KEYWORDS : Riparian , Convolvulaceae , Gandhinagar.

INTRODUCTION

Riparian area are land bordering strips of rivers, streams and wetlands. They connect dryland ecosystem to the aquatic ecosystem. Riparian areas have an importance to control stream bank erosion , provide habitat for wildlife and prevent the pollution of water Convolvulaceae family recognized by their funnel-shaped, radially symmetrical corolla .Some plant species

having medicinal value for humanbeing. The Plants of Northern Gujarat published by Saxton, W. T. and Sedgwick L. J. (1918) ,Shah, C. K. (1963) enumerate the sedges of Sabarmati ,Bhatt, R. P. et.al (1969) reported A study of the vegetation and flora of Khedbrahma region. Sabnis , S. D. et.al (1975) reported the forest vegetation and phytogeography of Khedbrahma region. Shah, G. L. (1978) published the flora of Gujarat State. Yogi, D. V. (1970) submit thesis of the flora of North Gujarat. Earlier many research workers explore the Gandhinagar region and also explore the river Sabarmati.

STUDY AREA:

The geographical situation of the Sabarmati river near Gandhinagar 23° 21' North latitude and 72° 68' East longitude. It originates from Arvalli hills, near Vekaria in Rajasthan State and enters in the Gujarat state .It passing through across the Northern to central part of the Gujarat state .It flows through Gandhinagar and finally enters into the Gulf of Khambhat (Cambay).

MATERIAL AND METHODS

The study of Convolvulaceae family from the Sabarmati river area near Gandhinagar of Gujarat, on the results obtained from extensive and intensive studies of the vegetation of area. Field survey was carried out from last 05 years during d post doctorate for observation and collection of plants. Identification of plant species during field work was done by compiling different available floras and authenticated by experts from University department and research institutes. This piece of work is survey based. Surveys were made for a fifteen years (2011-2015) to collect and identify the plants. The enumerate plants were categorized according to their Scientific name, Vernacular name description.

RESULT:

1. *Argyreia nervosa* (Samudrashosh)

A gaint climber . Leaves large ,ovate, cordate, villous. Flowers pale-to bright-rosy, axillary cymes in 2-4 together, sessile, fascicles. Capsule , ellipsoid, subglobose, dark-brown, smooth, glabrous.

Fls. & Frs. : Aug-Sep. Not Common in Garden.

2. *Convolvulus microphyllus* (Roth)(Sankhvali)

Procumbent 15-30cm across hairy herbs. Leaves villous, linear-oblong or elliptic-oblong, tomentose. Flowers pale-to bright-rosy, axillary, solitary or in 2-4 together, sessile, fascicles. Capsule 0.4-0.5cm across, ellipsoid, subglobose, dark-brown, smooth, glabrous.

Fls. & Frs. : Throughout the year. Common in open ground.

3. *Convolvulus arvensis* L. (Khetrau fudardi)

Glabrous herbs. Leaves linear-oblong. Flowers pale-to bright-rosy, axillary, solitary or in 2-4 together, sessile, fascicles. Capsule long ,glabrous . seeds dark-brown, smooth, glabrous.

Fls. & Frs. : Throughout the year. Common in open ground.

4. *Evolvulus alsinoides* (L.) (Kali sankhvali)

Perennial hairy, glabrous herbs. Leaves numerous ovate, elliptic-oblong, acute, silky hairy, short petiolate. Flowers light-blue, pedicellate, axillary, solitary. Capsule 0.3-0.4cm across, glabrous, rounded. Seeds 0.15-0.2cm long, globose, 4-valved, smooth, glabrous, dark-brown.

Fls. & Frs. : Throughout the year .found in grassy land, common in the post monsoon season.

5. *Ipomoea aquatica* Forsk. Fl. (Nada ni vel)

Annual or biennial, prostrate, glabrous herbs with rooting at nodes, hollow stem. Leaves acute, glabrous, petiolate, and broadly ovate-triangular. Flowers pale-purple, solitary or 3-4 flowered cymes. Capsule 2-4 seeded, ovoid, glabrous. Seeds small, pubescent.

Fls. & Frs. : Almost the year. Commonly in marshy ground and in ditches .

6. *Ipomoea quamoclit* L.

Evergreen herbs with watery juice. Leaves 4.5-6cm broad, glabrous, broadly ovate. Flowers in axillary subumbellate cymes.

Fls. & Frs. : Throughout the year . Ornamental, planted as a hedge plant in gardens.

7. *Ipomoea eriocarpa* R.Br. (Bodi fudardi)

Slender, trailing or twining, appressed hairy herbs. Leaves, ovate-oblong or ovate-lanceolate, appressed-hairy. Flowers in axillary cymes. Capsule long, ovoid or oblong, glabrous. Seeds light-greyish-black or blackish-brown, glabrous, microscopically reticulate.

Fls. & Frs. : Aug-Jan. .Common, among grasses.

8. *Ipomoea fistulosa* Mart. (Naffat vel)

A straggling shrubs or small trees, greenish stem with milky juice. Leaves broadly ovate or ovate-lanceolate, acute, entire, pubescent beneath. Flowers pale -purple, in terminal, umbellate cymes.

Fls. & Frs. : Throughout the year . Common in nalas, waste lands near the ditches.

9. Ipomoea muricata (L.) Jacq. (Bhamardi)

Deciduous, herbaceous twiners. Leaves broadly ovate, glabrous. Flowers 1-4, in axillary cymes. Capsule 1.7-2 cm long, ovoid, glabrous, apiculate.

Fls. & Frs. : July - Oct. Common in open scrub area.

10. Ipomoea nil (L.) Roth, (Kaladana)

Slender, glabrous or hairy twiners, leaves broadly ovate, shallowly to deeply 3-5-lobed. Flowers axillary, solitary or a few in cymes. Capsule 0.8-1.4 cm across, globose, glabrous. Seeds black, oblong, smooth, glabrous.

Fls. & Frs. : Aug.- Feb. Occasional in the hedges also in hilly & slopes on scrubs.

11. Ipomoea obscura (L.) Ker-Gawl. (Vadfudrdi)

Annual, glabrous or patently long-hairy herbs. Leaves broadly ovate or nearly orbicular, glabrous or sparsely hairy. Flowers 1.5-2.3 cm across, axillary, solitary pedunculate. Capsule 0.8-1.2 cm long, ovoid, apiculate, glabrous Seeds deep-brown, oblong, velvety.

Fls. & Frs. : July -Dec. Common on lower sloppy area.

12. Ipomoea pes-caprae (L.) (Maryad vel)

Prostrate, glabrous herbs. Leaves fleshy; lobes ovate or orbicular, glabrous. Flowers axillary, solitary. Capsule 1.5-2 cm long, ovoid, slightly apiculate, glabrous, brown; seeds glabrous, hairy.

Fls. & Frs. : Throughout the year. Common cultivated .

13. Ipomoea pes-tigridis L. (Wagpadivel)

Twining or trailing, densely hairy herbs. Leaves 5-7 lobed broadly ovate. Flowers 2-2.5 cm long, rosy-purple. Capsule 0.6-0.8 cm. Seeds grey pubescent.

Fls. : Aug.-Oct.**Frs. :** Sep.- Dec.. Common, in the hedges .

14 Ipomoea batatas L. (Shakkariyu)

Creeping herbs. Leaves broadly ovate. Flowers in axillary cymes..

Fls.- Frs: Aug.-Oct. Common, cultivated .

15. Ipomoea palmata Forsk. (Nar vel)

straggling shrubs with milky juice . Leaves broadly ovate,. Flowers in terminal cymes .

Fls. & Frs. : Throughout the year . Common in the area.

16. Merremia gangetica (L.) (Undardi)

Slender, thinly hairy herbs stem glabrous, green. Leaves glabrous, petiolate, acute. Flowers yellow, pedicellate, axillary and solitary. Capsule subglobose, smooth, glabrous. Seeds rounded, small, glabrous, smooth, brownish-black.

Fls. & Frs. : Aug. - Feb. Common in dry area but always growing in moist soil.

17. Jacquemontia violacea Choisy.(Jakshini)

Twiner , Leaves glabrous, ovate ,petiolate, acute. Flowers violet blue , pedicellate, axillary and solitary.

Fls. & Frs. : Throughout the year .Planted in the garden as ornamental .

18. Rivea hypocrateriformis Choisy (Fang)

Extensive, appressed-whitish-tomentose, woody climbers. Leaves ovate-orbicular, appressedly-silky-hairy beneath. Flowers 1-3(-5), in axillary cymes. Capsule ovoid, apiculate, chestnut-brown, glabrous. Seeds oblong or slightly trigonous, dark-brown, smooth, glabrous.

Fls. : June-Sep.**Frs. :** Aug.-Feb. Common, in hedges on low shrubs and trees.

Table:1 : Plant list

No	BOTANICAL NAME	LOCAL NAME (In Gujarati)
1	<i>Argyreia nervosa (Burm.f)</i> Boj.	Samudrashosh
2	<i>Convolvulus microphyllus (Roth.)</i> Sieb.	Shankhaval
3	<i>Convolvulus arvensis</i> L.	Veldi
4	<i>Evolvulus alsinoides (L.)</i> L.	KaliShankhaval
5	<i>Ipomoea aquatica</i> Forsk.	Nada ni vel
6	<i>Ipomoea quamoclit</i> (L.)	Kamlata
7	<i>Ipomoea eriocarpa</i> R.Br.	Bodi Fudardi
8	<i>Ipomoea fistulosa</i> Mart.	Naffatvel
9	<i>Ipomoea muricata</i> (L.) Jacq.	Bhamardi
10	<i>Ipomoea nil</i> (L.) Roth.	Kaladana
11	<i>Ipomoea obscura</i> (L.) Ker-Gawl.	Vad Fudardi
12	<i>Ipomoea pes-caprae</i> (L.) Sw.	Maryad vel
13	<i>Ipomoea pes-tigridis</i> L.	Wagpadi vel
14	<i>Ipomoea batatas</i> L.	Shakkaria
15	<i>Ipomoea palmata</i> L.	Narvel
16	<i>Merremia gangetica (L.)</i> Cufod.	Undardi
17	<i>Jacquemontia violacea</i> choisy	Jakshini
18	<i>Rivea hypocrateriformis</i> (Desr.) Choisy	Fang

DISCUSSION & CONCLUSION:

The analysis of the plant species gives the result that the total Convolvulaceae comprises of 18 species belong to 07 genera of the family . The most of the species as wild species in this study area. There are 05 cultivated plant species and 13 wild plant species .The species of Convolvulaceae are found in the riverbed and riverside as hedges mostly during monsoon season .

STATISTICAL ANALYSIS OF FAMILY

Family: Convolvulaceae

Genera	07
Species	18

ANALYSIS OF CULTIVATED / WILD PLANTS

WILD PLANTS	CULTIVATED PLANTS
13	05

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