



Riparian Angiosperms of Family Cucurbitaceae at Sabarmati River of Gujarat State , India.

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ABSTRACT

The present research paper deals with enumeration and prepare a checklist of plant species of Cucurbitaceae family as riparian vegetation , which are grow in the area of Sabarmati river of Gujarat state , India. Plant species belongs to family Cucurbitaceae described in various available Floras. Plant species of family Cucurbitaceae from Sabarmati riverbed-riverside area, have listed systematically which counts 15 species of 10 genera , These plant species grow wild as well as cultivated.

KEYWORDS : Riparian , Cucurbits , Sabarmati river.

INTRODUCTION

Cucurbits are one of the most ecologically and economically important plant species. Mostly used as cooked food dishes, Fruit dishes and its also having medicinal value for human. Earlier, 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 North Gujarat region but not much explore the river Sabarmati.

STUDY AREA:

The geographical situation of the Sabarmati river is between 22° 30' to 24° 30' North latitude and 72° 30' to 73° 30' East longitude. It originates from Arvalli hills, near Vekaria in Rajasthan State and enters in the Gujarat state at the boundary of the Sabarkantha district .It passing through across the Northern to central part of the Gujarat state .It flows through seven districts of the Gujarat state , namely Banaskantha, Sabarkantha , Mehsana , Gandhinagar, Ahmedabad , Kheda and Anand and finally enters into the Gulf of Khambhat (Cambay). Sabarmati river is one of the longest river in the state, its length is about 418 km. It has total 5475 sq.km catchments area.

MATERIAL AND METHODS

The study of Cucurbitaceae family from the Sabarmati river of Gujarat, on the results obtained from extensive and intensive studies of the vegetation of area. Field survey was carried out from last 15 years during research work and 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 (2001-2015) to collect and identify the plants. The collected plants were categorized according to their Scientific name, Vernacular name and Habit represent in description.

RESULT:

1. Citrullus lanatus (Thunb.) Mats. & Nak. In Cat. Sm. Hort. Bot. Univ. Tokyo 920:38. 1920; Cooke 1: 571; Shah 1: 318 (TARBUCH)

Prostrate or sub erect, softly hairy herbs. Leaves pubescent, lobed, petiolate. Flowers pale-yellow, axillary, solitary. Berries olive-green with dark-green longitudinal stripes. Seeds obovate-oblong, black, smooth, glabrous.

Fls. : July-Nov. **Frs. :** Apr.-June **Field note :** Cultivated in river beds.

2. Coccinia grandis (L.) Voigt, Hort. Sub. Calc. 59.1845; Cooke 1: 572; Shah 1: 319; S & S 268 (GHILODI)

Herbaceous, slender, glabrous climbers with ash coloured branches. Leaves broadly ovate or ovate-triangular, hairy, petiolate, entire or 3-5-angled or shallowly to deeply lobed, glabrous. Flowers white, ax-

illary, solitary, Berries smooth, glabrous, green coloured. Seeds long, compressed, oblong, white, glabrous, smooth.

Fls. & Frs. : Almost around the year

Field note : common in the hedges.

3. Ctenolepis cerasiformis (Stocks.) Hk.f. in Oliver, Fl. Trop. Africa 2:558. 1871; Cooke 1: 576; Shah 1: 320 (ANKH FUTAMANI)

Annual climbers with glabrous, smooth branches. Leaves across petiolate, 3-5 lobed, broadly ovate or nearly orbicular. Flowers pale-yellow. Berries two-seeded. Seeds ovoid, smooth, glabrous.

Fls. & Frs. : Aug.-Nov. **Field note :** found in the hedges.

4. Cucumis collosus (Rottl.) Cogn. ex Cogn. & Harms in Pflazenr. 88:129. 1924; Cooke 1: 569; Shah 1: 321 (KOTHIMDU)

Prostrate, scabrid herbs. Leaves broadly ovate, ovate-triangular or nearly subglobose, entire, or shallowly 3-5-lobed, scabrid. Flowers axillary, solitary, pedicellate. Berries ellipsoid-oblong, or nearly orbicular, softly echinate, at length smooth, bright-yellow with green-stripes. Seeds ellipsoid-oblong, pale-brown, smooth, glabrous.

Fls. & Frs. : July-Feb.

Field note : throughout, a common weed in waste places and cultivated

5. Cucumis melo L. var. melo. Cucumis melo L. Sp. Pl. 1011. 1753; Cooke 1: 570; Shah 1: 322 (SAKKARTETI)

Prostrate, monoecious herbs. Leaves 8-15 cm broad, suborbicular or subreniform, softly hairy, 5-angled or shallowly 3-7-lobed. Flowers up to 2 cm across. Berries variable in size and shape. Seeds dirty white.

Fls. & Frs. : Sep.-Nov.

Field note : Cultivated in riverbeds,

6. Cucumis sativus L Sp. Pl. 1012. 1753; Cooke 1: 570; Shah 1: 323(KAKADI)

Scabrid, monoecious herbs, trailing or climbing. Leaves 5-10 cm across and almost as much broad, entire or shallowly 3-5-lobed, densely hairy. Flowers yellow, solitary axillary, Berries of various shapes, narrowly or broadly oblong, pale to dark green or pale-yellow. Seeds oblong, glabrous, white, subacute at end

Fls. & Frs. : Almost the year

Field note : cultivated

7. *Cucurbita maxima* Duch. In Lam. Encycl. 2:151. 1786; Cooke 1:582; Shah 1: 323 (KOLU)

Trailing or climbing, villous herbs with angular, hairy branching. Leaves entire or shallowly lobed, suborbicular or hairy. Flowers reddish-yellow or orange-coloured, pedicellate, unisexual, axillary, solitary. Berries oblong or nearly globose, yellowish-brown, glabrous, variable in size and weight, pulp yellow or orange. Seeds creamy-yellow, acute. **Fls. :** Aug.-Dec. **Frs. :** Throughout the year **Field note :** cultivated near the riverbed.

8. *Lagenaria leucantha* (Duch.) Rusby in Mem. Torr. Bot. Cl. 6:43. 1896; Cooke 1: 581; Shah 1: 325 (DUDHI)

Stout, climbing or trailing herb. Leaves shallowly 3-5-lobed, broadly ovate, pubescent. Flowers white, axillary, solitary. Berries light to dark-green, of various shapes and sizes. Seeds white, obovate or obovate triangular, flat, glabrous. **Fls. & Frs. :** Throughout the year. **Field note :** cultivated for vegetable.

9. *Luffa acutangula* (L.) Roxb. Cooke 1: 567; Shah 1: 327; S & S 267 (TURIYA)

Glabrous annuals. Leaves broadly ovate, angled or shallowly lobed. Flowers pale to bright-yellow, Berries linear-obovate or bluntly cylindrical-fusiform, pale to dark-green. Seed 0.4-0.7 cm long, black, ovate-oblong, flat.

Fls. & Frs. : Throughout the year, abundant in monsoon. **Field note :** cultivated for vegetable.

10. *Luffa cylindrica* (L.) M. J.Roem. Syn. Mon. 2:64. 1846; Cooke 1: 565; Shah 1: 327 (TURIYA)

Monoecious, slender, climbing stem glabrous, angular. Leaves broadly ovate, petiolate, hairy, glabrous. Flowers bright-yellow, males in short racemes, female solitary. Berries 10-30cm across cylindrical-oblong, pale to dark-green, with dark green, longitudinal stripes. Seeds flat, narrowly winged, glabrous.

Fls. & Frs. : Almost around the year

Field note : cultivated for vegetable

11. *Luffa echinata* Roxb. Hort.Beng. 104. 1814 (nomen) & Fl. Ind. 3:716. 1832; Cooke 1: 567; Shah 1: 327 (KUKADVEL)

Glabrous climbers, tendrils 3-branched, smooth, and green. Leaves obovate, hairy, shallowly 3-5 lobed. Berries ellipsoid or nearly globose, hairy.

Fls. & Frs. : Aug.-Nov.

Field note : on the hedges.

12. *Momordica charantia* L. Sp. Pl.1009. 1753; Cooke 1: 562; Shah 1: 329

(KARELA, KARELI)

Climbing herbs, branches hairy, angular. Leaves deeply 5-9 lobed, membranous, petiolate, hairy, glabrous. Flowers bright-yellow, solitary, axillary, Berries pendulous, green and red when ripe. Seeds pale-yellowish-brown, flat, rough.

Fls. & Frs. : Throughout the year

Field note : cultivated near houses.

13. *Momordica dioica* Roxb.ex Willd. Sp. Pl. 4:605. 1805; Cooke 1: 563; Shah 1: 329; S & S 267 (KANKODA)

Perennial climbers, stem glabrous. Leaves broadly ovate, petiolate, entire, 3-5-lobed, membranous. Flowers bright-yellow in axillary, solitary. Berries ovate or obovate. Seeds ovate, flat, smooth, pale-yellow

or red.

Fls. & Frs. : Aug.- Nov.

Field note : cultivated near houses.

14. *Mukia maderaspatana* (L.) M. Roem. Syn. Pep. 47. 1846; Cooke 1: 573; Shah 1:330 (CHANAK CHIBHDI)

Prostrate or climbing, hairy, monoecious annuals. Leaves petiolate, petioles short, entire or shallowly 3-5 lobed, ovate-triangular. Flowers pale to bright- yellow, male and female in same axis, male pedicellate while female sessile. Berries , smooth. Seeds gray or light black, ovoid-oblong.

Fls. & Frs. : July-Oct. **Field note :** common,

15. *Trichosanthes cucumerina* L. Sp. Pl. 1008.1753; Cooke 1: 560; Shah 1: 332 (JANGLI PARVAR)

Monoecious climbers with herbaceous, slender, green coloured tendrils. Leaves broadly ovate, deeply 3-7-lobed. Flowers white, male in 2-4.5cm long racemes, female solitary, in same or different axils. Berries glabrous.

Fls. & Frs.: July-Oct. **Field note :** common.

Table:1 : Plant list

No	BOTANICAL NAME	LOCAL NAME (In Gujarati)
1	<i>Citrullus lanatus</i> (Thunb.)Mats. & Nak.	Tarbuch
2	<i>Coccinia grandis</i> (L.) Voigt.	Ghilodi
3	<i>Ctenolepis cerasiformis</i> (L.) Cl.	Ankhputamni
4	<i>Cucumis collosus</i> (Rottl.) Cogn.	Kothimadu
5	<i>Cucumis melo</i> L.	Sakkarteti
6	<i>Cucumis sativus</i> L.	Kakadi
7	<i>Cucurbita maxima</i> Duch.	Kolu
8	<i>Lagenaria leucantha</i> (Duch.) Rusby	Dudhi
9	<i>Luffa acutangula</i> (L.) Roxb.	Turiya
10	<i>Luffa cylindrica</i> (L.) M.J.Roen.	Galku
11	<i>Luffa echinata</i> Roxb.	Kukadvel
12	<i>Momordica charantia</i> L.	Karela, Kareli
13	<i>Momordica dioica</i> Roxb.	Kankoda
14	<i>Mukia maderaspatana</i> (L.)M.Roem.	Chanak Chibadi
15	<i>Trichosanthes cucumerina</i> L.	Jangli Parval

DISCUSSION & CONCLUSION:

The analysis of the plant species gives the result that the total Cucurbits comprises of 15 species belong to 10 genera of the family . The most of the species as Cultivated as well as wild species in this study area. There are 05 cultivated plant species and 10 wild plant species .The species of cucurbits are found in the riverbed and riverside as hedges mostly during monsoon season .

STATISTICAL ANALYSIS OF FAMILY Family: Cucurbitaceae

Genera	10
Species	15

ANALYSIS OF CULTIVATED / WILD PLANTS

WILD PLANTS	CULTIVATED PLANTS
10	05

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