

Medicinal plants:

- 1) *Citrullus colocynthis* (L) Schard. (Kadu Indrawan)
- 2) *Melothria heterophylla* (Lour) Cogn.
- 3) *Melothria maderaspatana* (L.) Cogn. (Ghugari)
- 4) *Momordica carantia* L. (Karle)
- 5) *M. dioica* Roxb. ex willd (Kartoli)

Variations is observed in few cucurbits such as

- a) Dimorphic leaves in *Melothria hererophylla*.
- b) Dimorphic flowers - In dioecious as well as monoecious plants of many cucurbits viz. *Cucumis setosus*, *Momordica dioica* the male or female or bisexual flowers are morphologically very different. It is reported by Naik, (1998) that in cucurbitaceae it is the nutrition or edaphic condition together with moisture that control sex of the flowers.

Therefore it is necessary further to test or examine the causes of variations that are met with individual populations. The leaf dimorphism; unless assessed properly, can't be used as a good taxonomic parameter

2. Study Area.

Kolhapur is the southern district of Maharashtra state. It is situated between 15° 43' & 17° 17' N latitudes and 73° 40' & 74° 42' E longitudes. It is bordered by Sangli district on east and north, Belgaum district of Karnataka on east and south and Sindhudurga and Ratnagiri on west.

The area of study comprises about 14 localities covering the bordered districts viz. Amba, Bolavi, Chandoli, Dindewadi, Gargoti, Girgaon, Guhagar, Hasur, Katayani, Morewadi, Panhala, Patgaon, Radhanagari, Ujalawadi.

The present piece of work has been undertaken mainly to explore the potential cucurbits of this region for domestication and scientific purpose.

About cucurbitaceae

Scandent or prostrate herbs or undershrubs, rarely tree-like (*Dendrosicyos*) with watery juice, often scabrid. Leaves alternate, exstipulate, simple, palmately lobed, or compound, rarely pinnately divided or pinnately compound. Lamina variable in the same species or even in the same plant. Tendrils mostly present, solitary, lateral spirally coiled, simple or divided. Inflorescence axillary, racemose, umbellate or solitary, clustered or paniculate. Flowers small or large pentamerous, diclinous, in the same individual-monoecious (synoicous) or in different individuals-dioecious (heteroicous), rarely hermaphrodite. Sepals 5, tubular or campanulate, forming a hypanthium, free above the tube. Petals 5, inserted on the hypanthium (calyx tube) gamo or polypetalous, white, yellow, greenish or rarely blue or red. Stamens basically 5, usually 3, 2 twocelled, 1 one celled, but sometimes 4, 2 or even 1; anthers erect, curved but very often variously conduplicate; pistillode present or not. Carpels 3, ovary inferior, 1-3 locular, usually 1-locular, ovules 1- α , anatropous, , often ovary triplacentiferous with 2-seriate ovules; placenta parietal but sometimes intrude within the ovary chamber forming it spuriously 3-locular; style, stigmas as many as carpels, usually thick and forked; staminode present or not. Fruit a pepo, dehiscent or indehiscent, berry or capsule. Seed usually many, often compressed, horizontal, erect or pendulous, tuberculate, rarely winged, marginate, exalbuminous, embryo straight, cotyledons foliaceous, radicle short.

110 genera and ca 640 species distributed in the warmer parts of the world, most frequent in tropics and subtropics; very rare in temperate regions. 36 genera and ca. 100 species in India (Chakravarty, 1982).

Notes: Stamens basically 5, each one thecous, bisporangiate. Gradual union of the monothealous adjacent stamens gives rise to usual three staminate androecium—one stamen remain free. One vascular bundle is present in each monothealous stamen. In dithealous stamens 2 vascular bundles are present representing 2 simple stamens. Hence a 2-celled stamen of the cucurbits is homologous to a compound stamen and analogous to a normal stamen, identity being revealed by double vascular supply. Stages of union can be traced from

Fevillea, *Alsomitra*, *Hemslaya*, *Zanonia*, *Actinostemma*, *Neoluffa* etc. showing tendency of union though *Cucumis*, *Luffa*, *Lagenaria* etc. where union is completed. In *Cyclanthera* the stamens are all united into a single column and with a horizontal disposition of the anther lobes (Chakravarty in Lloydia 21(2): 49-87. 1958). Various stages of union of the stamens and their orientation are extremely interesting in this family.

1a. Ovules horizontal or erect; female flowers usually solitary; stamens 3:

2a. Ovules horizontal (Pendulous in *Herpetospermum*).

Stamens free1. Tribe **Cucumerinae**

2b. Ovules and seeds erect. Stamens free or united in to an annular ring2. Tribe **Orthospermeae**

1b. Ovules pendulous. Flowers small usually in panicles. Stamens 5.

....3. Tribe **Zanonieae**

CUCURBITACEAE Juss.

- | | | |
|------|---|----------------------|
| 1a. | Petioles with stipuliform, fimbriate bract at base | <i>Ctenolepis</i> |
| 1b. | Petioles without stipuliform, fimbriate bract at base | 2 |
| 2a. | Petals pure white | 3 |
| 2b. | Petals yellow greenish-yellow or dull-white yellow | 5 |
| 3a. | Petals fimbriate along their margins | <i>Trichosanthes</i> |
| 3b. | Petals entire along their margins | 4 |
| 4a. | Plants dioecious, glabrous; tendrils simple; calyx-tube of male flowers short; berries 3-6 cm long, red when ripe | <i>Coccinia</i> |
| 4b. | Plants monoecious, grey-tomentose; tendrils 2-3 branched; calyx-tube of male flowers elongate; berries much longer, green when ripe | <i>Lagenaria</i> |
| 5a. | Petals free or connate only at the base | 6 |
| 5b. | Petals united for half their length or more | 8 |
| 6a. | Stamens exserted; anthers free | 7 |
| 6b. | Stamens included; anthers more or less cohering | <i>Momordica</i> |
| 7a. | Fruits dry, fibrous, operculate | <i>Luffa</i> |
| 7b. | Fruits fleshy, pulpy, indehiscent | <i>Benincasa</i> |
| 8a. | Tendrils 2-3 branched. | 9 |
| 8b. | Tendrils unbranched. | 11 |
| 9a. | Plants glabrous; flowers fascicled; berries 1-2 cm in dia., dark red | <i>Diplocyclos</i> |
| 9b. | Plants softly or hispidly hairy; flowers solitary; berries more than 2.5 cm in dia., green or yellow | 10 |
| 10a. | Leaves deeply lobed; flowers 1-2 cm across. | <i>Citrullus</i> |
| 10b. | Leaves shallowly lobed; flowers 3-10 cm across. | <i>Cucurbita</i> |
| 11a. | Roots tuberous; stem zig-zag, glabrous; fruits green in the basal half, red in the upper half, operculate. | <i>Corallacarpus</i> |

11b. Roots not tuberous, stem not zig-zag, hairy or hispid; fruits not as above

12

Cucumis.

12a. Corolla deep yellow, more than 10 mm long; anther-cells conduplicate or flexuous, their connectives crested, prolonged beyond anther cells; berries more than 3 cm long, green or yellow

12b. Corolla often pale yellow, 1-4 mm long; anther cells straight or curved, their connectives neither crested nor prolonged; berries up to 1.5 cm long, deep red or brown.

13

Melothria.

13a. Styler disc cup-shaped; fruits globose or oblong, not rostrate.

13b. Styler disc absent; fruits aoid, rostrate

*Kedrostis.**Benincasa* Savi

Benincasa hispida (Thumb.) Cogn. In DC Monog. Phan 3:513.1881; Duthie, Fl. Upper Gang. Pl. 1:368.1903 (BSI reprint 1:338.1960); Naik, Fl. Osmanabad 145.1979; Chakrayarty in Fast. Fl. Ind. 11:9.1982. *Cucurbita hispida* Thunb. Fl. Jap. 322.1784. *Benincasa cerifera* Savi, Bibl. Ital. 9:158.1818; Clarke in Hook. F. fl. Brit. India 2:606.1879. KAWALU, KOHLA.

Large annual climbers; stem diffuse, softly hairy; tendrils slender. Leaves reniform-round, 10-25 cm across, deeply cordate, 5-7-lobed, sinuate-dentate along margins, scabrous above, hispid beneath; petioles 5-20 cm long, hirsute. Flowers large; peduncles hirsute, male 5-15 cm long, female 2-4 cm long. Probracts foliaceous, ovate, 6-15 x 5-10 mm. Calys tube (male) densely villous, 12-15 mm broad; teeth lanceolate, 8-12 x 3-5 mm. Petals yellow, obtuse, 3-5 cm long. Fruits 25-60 x 10-25 cm, densely hairy when young, thickly deposited with waxy bloom when mature. Seeds compressed aoid, 10-11-x-5-7 mm, white or pale yellowish, distinctly marginate.

Occasional, in cultivation for fruits used as vegetable and various other edible purposes. Fls and frts - December to April.

Uses - Fruits and seeds are used in Ayurvedic medicine.

Citrullus Schrad. Nom. cons.

- | | | |
|-----|---|---|
| 1a. | Perennials; leaves scabrid; fruits small, up to 7 cm in dia. | <i>C. colocynthis</i> |
| 1b. | Annuals; leaves softly hairy or more or less scabrid; fruits 10-25 cm in dia. | 2 |
| 2a. | Stem villous; fruits subglobose or ellipsoid, 15-25 cm in dia., pulp sweet, red | <i>C. lanatus</i>
var. <i>Lanatus</i> . |
| 2b. | Stem hispid; fruits globose, 10-12 cm in dia., pulp white | <i>C. lanatus</i>
var. <i>fistulosus</i> |

Citrullus colocynthis (L.) Schrad. In Linnaea 12:414.1838; Clarke in Hook. F. Fl. Brit. India 2:620.1879; Naik, Fl. Osmanabad 147.1979; Chakravarty in Fasc. Fl. India 11:20.1982. *Cucumis colocynthis* L. Sp. Pl. 1211.1753. INDRAYAN.

Monoecious, perennial herbs; stem diffuse, angular, hirsute, creeping or climbing; tendrils slender, short. Leaves ovate in outline, 5-12 x 3-8 cm, pinnately 5-7 lobed, each lobe again lobulate, cordate at base, hirsute on both surfaces; petioles 2-3 cm long, densely hirsute. Male flowers solitary or 2-4 together in leaf axils; peduncles 4-5 mm long, villous. Calyx tube campanulate, 4-8 long, hispid outside; teeth subulate, 2-3 mm long. Corolla pale yellow; petals ovate, 4-6 x 2-3 mm, acute. Fruits globose, depressed at apex, 5-7 cm in dia., variegated green and white, glabrous; pulp spongy, bitter. Seeds ovate-oblong, ca 6 x 3 mm, yellowish brown.

Frequent, along stream-banks.

Fls and frts - July to September.

Uses - Root and fruits are used in Ayurvedic medicine.

Citrullus lanatus (Thunb.) Mustsumura et Nakai in Cat. Sem. Hort. Bot Univ. Tokyo 1920:38, 1920; Hara in Taxon 28:346.1969; Naik, Fl. Osmanabad 148.1979; Chakravarty in Fasc. Fl. India 11:22.1982. *Momordica lanata* Thunb. Prodr. Fl. Cap. 13.1800 *Citrullus vulgaris* (Schrad.) Schrad. In Eckl. Et Zeyher, Enum Pl. Afr. Austr. 876.1894; Clarke in Hook. F. Fl. Brit. India 2:621.1879.

Zeyher, Enum Pl. Afr. Austr. 279.1834; Clarke in Hook. F. Fl. Brit. India 2:621.1879.

Var. *fistulosus* (Stocks) Chakravarty in Fasc. Fl. India 11:23.1982. *Citrullus fistulosus* Stocks in Hook. Kew J. Bot. 3:74. T. 3.1851. *Colocynthis citrullus* (L.) O. Ktze. Var. *fistulosus* (Stocks) Chakravarty in Rec. Bot. Surv. India 17(1):116.1959. DIL PASAND, DHEMSA.

Annual herbs; stems thick, creeping, hispid; tendrils 2 fid. Leaves triangular-ovate in outline, 8-20 x 5-15 cm. Cordate at base, 3-lobed; lobes ovate-oblong, pinnatifid, obtuse. Flowers axillary, solitary; bracts oblanceolate, 8-10 x 3-4 mm. Male flowers: peduncles 1-3 cm long, hispid. Calyx tube campanulate, hispid; teeth lanceolate. Petals pale or greenish-yellow, ovate-oblong, 1-1.5 cm long. Female flowers: peduncles 2-6 cm long. Calyx and corolla as in male. Fruits globose. Seeds black, ovate-oblong, 3-4 x 2 mm. A native of S. Africa, cultivated for fruits used as vegetable.

Fls and frts – April to July.

Var. *lanatus*; Chakravarty in Fasc., Fl. India 11:22.1982. KALINGAD, TARBOOZ.

Stem villous. Leaves deeply lobed. Fruits large.

Commonly cultivated in sandy river-beds for edible fruits.
Fls and frts – April to June.

Uses – Fruits and seeds are used in various Ayurvedic medicine.

Coccinia Wt. & Arn.

Coccinia grandis (L.) Voigt., Hort. Suburb. Calc. 59.1845; Bhandari, Fl. Ind. Des. 163.1978; Naik, Fl. Osmanabad 148. 1979; Chakravarty in Fasc., Fl. India 11:24.1982. *Bryonia grandis* L. Mant. 126.1767. *Coccinia Indica* Wt. & Arn. Prodr. 1:347.1834. *Cephalandra indica* Naud. Ann. Sc. Nat. Ser. V, 5:16.1879; Clarke in Hook. F. Fl. Brit. India 2:621. 1879. *Coccinia Cordifolia* Cogn. in DC. Monog. Phan. 3.529.1881 pro parte non *Bryonia Cordifolia* L. 1753. TONDLI. Perennial, glabrous, climbing herbs; stem angular, nodes

below; tendrils slender. Leaves broadly ovate, 5-10 cm across, 5-angled or 3-5-lobed, cordate at base, minutely denticulate along margin; petioles slender, 2-5 cm long. Flowers axillary, solitary. Male flowers: peduncles 2-6 cm long, striate. Calyx tube campanulate, 4-5 mm long; teeth ovate, acute. Corolla white, 2.5-3.5 cm long; lobes shorter than the tube; staminal column 2-3 mm long; anthers 6-7 mm thick. Female flowers: peduncles slender, 1-3 long. Calyx and corolla as in male. Staminalodes 3, subulate, 2-3 mm long. Ovary 12-15 mm long; style slender; stigma papillose. Fruits ellipsoid, 3-5 x 2-2.5 cm. Rounded at both ends. Red when ripe. Seeds oblong, 6-7 x 2-4 mm, yellowish.

Planted in hedges, also escaped.

Fls and frts – March to December.

Uses – Roots, stem and leaves are used in Ayurvedic medicine. Fruits are used as vegetable.

Corallocarpus Welw. Ex Hook. f

Corallocarpus epigaeus (Rottl. & Willd.) Hook. f. In Gen. Pl. 1:831.1862; Clarke in Hook. f. Fl. Brit. India 2:628.1879; Naik, Fl. Ozmanabad 151.1979. *Bryonia apigaea* Rottl. & Willd. Neue Schrift. Ges. Naturf. Freunde Berlin, 4:223.1803. MIRCHI KAND.

Climbing, monoecious herbs; roots tuberous; stem slender, glabrous, angular; branches zig-zag. Tendrils filiform. Leaves broadly ovate to orbicular in outline, 2-8 x 2.5-9 cm, 3-5-lobed, lobes often lobulate, glabrous above, pubescent beneath; petioles 2-3 cm long. Male flowers 5-15 at the apex of a glabrous peduncle 3-6 cm long; pedicels filiform, 1-2 mm long. Calyx tube 1-1.5 mm long; teeth minute, subulate. Petals greenish-yellow, ovate, 1 mm long. Anthers yellow; connective produced beyond the cells, bifid. Female flowers solitary, on short axillary peduncles. Fruits ellipsoid, 1.5-2.5 cm long, scarlet in the middle, base and beak green circumscissilely dehiscent in the middle. Seeds 6-9, pyriform, 3-4 x 2-2.5 mm, turgid, brown.

Frequent, in hill forests and along river-banks.

Fls and frts – June to August.

Uses – Roots, Stem and leaves are used in Ayurvedic medicine. Fruits are used as vegetable.

Corallocarpus Welw. ex Hook. f.

Corallocarpus epigaeus (Rottl. & Willd.) Hook.f.in Gen. Pl. 1:831.1862; Clarke in Hook. f. Fl. Brit. India 2:628.1879; Naik, Fl. osmanabad 151.1979. *Bryonia epigaea* Rottl. & Wild. Neue Schrift. Ges. Naturf. Freunde Berlin, 4:223. 1803. MIRCHI KAND.

Climbing, monoecious herbs; roots tuberous; stem slender, glabrous, angular; branches zig-zag. Tendrils filiform. Leaves broadly ovate to orbicular in outline, 2-8 x 2.5-9 cm, 3-5-lobed, lobes often lobulate, glabrous above, pubescent beneath; petioles 2-3 cm long. Male flowers 5-15 at the apex of a glabrous peduncle 3-6 cm long; pedicels filiform, 1-2 mm long. Calyx tube 1-1.5 mm long teeth minute, subulate. Petals greenish-yellow, ovate, mm long. Anthers yellow; connective produced beyond the cells, bifid. Female flowers solitary, on short axillary peduncles. Fruits ellipsoid, 1.5-2.5 cm long, scarlet in the middle, base and beak green circumscissilely dehiscent in the middle. Seeds 6-9, pyriform, 3-4 x 2-2.5 mm, turgid, brown.

Frequent, in hill forests and along river-banks.

Fls and frts – June to August.

Uses – It is an important medicinal plant used in Ayurvedic system as tonic, against syphilitic and venereal complaints, rheumatism and dysentery.

Ctenolepis Hook. f.

Ctenolepis garcinni (Burm.f.) Naud. in Ann. Sc. Nat. Ser. V, 6:13.1867; Clarke in Hook. f. Fl. Brit. India 2:629.1879 *Sicyos garcinii* Burm. f. Fl. Ind. 211.1768. *Blastania Garcinii* (Burm. F.) Cogn. in DC, Monog. Phan. 3:629.1881; Chakravarty in Fasc. Fl. India 11.13.1982.

Monoecious, glabrous, annual flimbers; branches filiform; tendrils simple, capillary. Leaves abovate in outline, 2-4.5 x 3.5-6.5 cm 3-5-lobed, lobes obovate-spathulate, retuse or acute, denticulate; petioles slender, 1.5-3.0 cm

long. Male flowers 2-4 in axillary racemes; bracts ovate, 4-7 mm long, subsessile; peduncles 0.5-1.0 cm long; pedicels 1-2 mm long. Calyx small, 0.5 mm long; teeth minute. Corolla greenish-yellow; petals 0.8-1.0 mm bright red, glabrous, subreniform or hammer-shaped. Seeds oblong. 6-8 x 3 mm. yellowish, rounded at apex, with a deep pit on one face.

Common, on hedges around fields.

Fls and frts – July to November.

Cucumis L.

- | | |
|--|---|
| 1a. Fruits smooth or pubescent | 2 |
| 1b. Fruits tuberculate, bristly or echinate | 6 |
| 2a. Wild plants, perennial; leaves deeply 5-7 lobed | <i>C. callosus</i> |
| 2b. Cultivated or escaped, annual herbs; leaves angular or shallowly lobed | 3 |
| 3a. Fruits without longitudinal ridges and furrows | 4 |
| 3b. Fruits with longitudinal ridges and furrows | <i>C. melo</i> Var.
<i>utilissimus</i> |
| 4a. Fruits indehiscent | 5 |
| 4b. Fruits breaking irregularly at maturity | <i>C. melo</i> var. <i>momordica</i> |
| 5a. Cultivated; Fruits large, Polymorphous of various shapes. | <i>C. melo</i> var.
<i>melo</i> |
| 5b. Escaped or even wild plants; fruits small, oblong, ellipsoid. | <i>C. melo</i> var.
<i>agrestis</i> |
| 6a. Wild plants; fruits bristly | <i>C. setosus</i> |
| 6b. Cultivated plants; fruits tuberculate when young | <i>C. sativus</i> |

Curcumis callosus (Rottl.) Cogn. in Engl. Pfreich. 4:275, 2:127, 1924; Bhandari, Fl. Ind. Des. 168, 1978; Naik, Fl. Osmanabad 146, 1979; Chakravarty in Fasc. Fl. India 11:31, 1982. *Bryonia callosa* Rottl. Neue Schrift. Ges. Naturf. Freunde Berlin 4:210, 1803. *Cucumis trigonus* Roxb. Fl. Ind. 2:619, 1824 & 3:722, 1832; Clarke in Hook. f. Fl. Brit. India 2:619, 1879.

Perennial herbs; stem slender, 1-1.5 m long, rough with short, rigid hairs. Leaves suborbicular in outline, 3-6 cm across, deeply 5-7-lobed, cordate at base; lobes ovate-oblong, narrowed at base, rounded at apex, dentate or lobulate, hispid on both surfaces; petioles 2-6 cm long, slender, hispid. Male flowers often solitary; peduncles 5-10 mm long. Calyx tube campanulate, 2-3 acute. Anthers 1.5-2 mm long; appendage of the connective shorter than the anthers; pistillode 1 mm long. Female peduncles 2-3 cm long, densely hairy. Fruits obovoid, round or obscurely trigonous, 3 X 2.5 cm, longitudinally variegated with 10 green stripes, pale yellow when ripe. Seeds ovate-oblong, compressed, smooth, pale-yellow.

Common, weed in cultivated and barren fields.

Fls and frts – June to October.

Uses- Bitter pulp of the fruits is drastic purgative. Seeds and roots are also used in Ayurvedic medicine.

Cucumis melo L. var. *agrestis* Naud. Ann. Sundry creditors. nat. 4. Ser. 11:73, 1859; Cooke, Fl. Pres. Bombay 1:569 (BSI reprint 1958); Naik, Fl. Osmanabad 147, 1979; Chakravarty in Fasc. Fl. India 11:35, 1982. *C. pubescens* Willd. Sp. Pl. 4:614, 1805; Clarke in Hook. f. Fl. Brit. India 2:619, 1879. **SHENDAD.**

Slender, annual herbs; stems prostrate, hirsute, terete. Leaves broadly ovate, 8-15 cm across, shallowly 3-7-lobed, cordate at base; lobes sub-orbicular, obtuse, denticulate, hispid on both surfaces; petioles as long as the blade,
 RIZKIA. MIZIA NIXWZIE IREKIZIEH, KZKHNKIZIE ZIKHNZIE, R-R-Z-R KIN IKHH. PZKZ IKH

hispid. Male flowers fascicled; peduncles slender, 0.5-3.0 cm long. Calyx tube narrow, campanulate, villous, 6-8 mm long; teeth subulate. Corolla yellow, ca 2 cm long; lobes ovate-oblong, acute. Filaments very short; anthers 3-4 mm long; appendage of the connective shorter than the anthers. Pistillode 1 mm long. Female flowers on 1-2 cm long, axillary peduncles. Fruits ellipsoid, ca. 3 cm long, smooth, pale yellow when ripe.

Often cultivated and also naturalized in many parts.

Fls and frts – September to January.

Cucumis melo L. var. *melon*; Clarke in Hook f. Fl. Brit. India 2:620.1879; Chakravarty in Fasc. Fl. India 11:34.1982. KHARBOOZ.

Very similar to var. *agrestis* Naud. but more robust with much larger polymorphous fruits.

Cultivated throughout the region for edible fruits. There are numerous horticultural varieties differing mainly in shape, size and taste of the fruits.

Fls and frts – June to September.

Cucumis melo L. var. *momordica* (Roxb.) Duthie & Fuller, Field & Gard. 2:50, 1.49.1882; Maheshwari, fl. delhi 170.1963. c. *momordica* Roxb. Fl. Ind. 3:720.1832. PHUT.

Fruits cylindrical, yellow mottled with green, breaking spontaneously. Otherwise similar to var. *agrestis* Naud.

Cultivated, on small scale.

fls and frts - June to September.

cucumis melo l. var. *utilissimus* (Roxb.) Duthie & Fuller, Field & Gard. Crops 2:55, ff 53, 54.1893; Maheshwari, Fl. Delhi 170.1963. C. *utilissimus* Roxb. Fl. Ind. 721.1832. KAKADI.

Fruits vary from short cylindrical to elongate, reaching 60 cm long, dark green to pale green, bright orange when ripe. Otherwise as var. *agrestis* Naud.

Cultivated, on small scale.

Fls and frts - April to August.

Cucumis sativus L. Sp. Pl. 1012.1753; Clarke in Hook. f. Fl. Brit. India 2:630.1879; Naik, Fl. Osmanabad 147.1979; Chakravarty in Fasc. Fl. India 11:36.1982. KHIRA KAKDI.

Annual herbs; stem prostrate, hirsute; tendrils slender, simple. Leaves broadly ovate, 12-18 cm wide, cordate at base, 3-5-lobed or angled; lobes triangular, acute, dentate, hispid-villous on both surfaces; petioles 8-20 cm long, hispid. Male flowers fasciculate; peduncles slender, 0.5-2.0 cm long. Calyx tube narrow campanulate, villous-hispid outside, 8-10 mm long; teeth subulate, spreading, Corolla yellow, 2-3 cm long; lobes acute. Filaments short; anthers 3-4 mm long; appendage of the connective *ch* 1 mm long. Female flowers solitary or fasciculate; peduncles robust, 1-2 cm long. Ovary fusiform, muricate. Fruits oblong, 10-25 x 3-7 cm, glabrous, reddish-brown when ripe. Seeds obovoid to oblong, 8-10 mm long, dull white, smooth.

Cultivated on a large scale throughout the region, for edible fruits.

fls and frts-April to November.

Cucumis setosus Cogn. in Monog. Phan. 3:491.1881; chakravarty in Rec. Bot. Surv. India 17(1):106.1959 et in Fasc. Fl. India 11:38.1982.

Annual, climbing herbs; stem slender, hispid. Tendrils hirsute. Leaves broadly ovate in outline, 1.5-4.5 x 2-4.5 cm, cordate at base, 3-5-lobed, denticulate, hispid on both surfaces; lobes triangular, acute. Male flowers fasciculate or subsolitary; peduncles filiform, 5-12 mm long. Calyx-tube narrowly campanulate, villous-hispid, 3 mm long; teeth subulate, erect. Corolla yellow, lobes oblong, 4 x 5 mm, obtuse. Filaments short; anthers oblong, 1-1.5 mm long, ciliate; appendage of the connective 2-3 mm long. Female flowers solitary on short peduncles. Ovary oblong, villous. Fruits oblong, 20-25 x 10-12 mm, sparsely long-setose seeds oblong, 4 x 2 mm, straw colored, smooth.

Frequent, weed in cultivated fields.
H2 8LX H12-888821 IX X10K21.

fls and frts-August to October.

Use- Useful for diabetic patients.

1a. Leaves chartaceous; sepals narrow and subulate----- 2

1b. Leaves soft; sepals broad, spatulate, foliaceous-----

-----C. moschata

2a. Petioles with rigid and pungent hairs; leaves with acute lobes;
peduncles 5-angular; corolla narrowed at base with erect lobes-----

-----C. pepo

2b. Petioles with soft hairs; leaves with rounded lobes; peduncles terete;
corolla lobes curved outwards-----

-----C. maxima

Cucurbita maxima Duch. ex Lamk. Encycl. 2:151.1786; Clarke in Hook. f. Fl. Brit. India 2:622.1879; Naik, Fl. Osmanabad 149.1979; Chkravarty in Fasc. Fl. India 11:40.1982. TAMBADA BHOPALA, KADDU

Prostrate or climbing annual herbs; stem grooved, hispid. Leaves reniform with 5, shallow rounded lobes, 6-19 x 7-30 cm, minutelydentate along margins, hispid on both the surfaces; petioles 5-19 cm long, hairy. Male flowers solitary, axillary; peduncles 10-15 cm long. Calyx tube 5-10 mm long; teeth linear, hairy. Corolla orange-yellow, campanulate, 5-10 cm long; lobes reflexed, ovate, acute. Filaments thick, glanduliform, 5-8 mm long; anthers 12-15 mm long. Female flowers on 5-7 cm long, axillary peduncles. Fruits large and of various shapes, often depressed globose, orange-yellow when ripe, 20-50 cm in dia. Seeds obovoid 2-2.5 x 1-1.5 cm, narrowly margined, rounded at apex, narrowed at base, white or pale yellow.

Cultivated, throughout the region for fruits used as vegetable.

fls and frts-September to January.

Uses: Tender shoots and leaves are used as vegetable. Fruits and seeds are used in Ayurvedic medicine.

Cucurbita moschata (Duch. ex Lamk.) Duch. ex Poir. Dict. Sci. Nat.. 8:234.1818; Clarke in Hook. f. Fl. Brit. India 2:622.1879; Naik, fl. Osmanabad 149.1979; Chakravarty in fasc. Fl. India 11:41.1982. *C. pepo* L. var. *moschata* Duch. ex Lamk. Encycl. 2:152.1786. KALA BHOPALA, KALA KADDU

Very similar to *C. maxima* Duch. ex Lank. but sepals foliaceous, fruits often green and mottled with white, pulp pale yellow, seeds 1-5.5 x 0.7-0.8 cm, distinctly margined, pale yellow.

Cultivated on a small scale.

fls and frts- March to December.

Uses- Same as those of *C. maxima* Duch. ex Lamk.

Cucurbita pepo L. Sp. Pl. 1010.1753; Clarke in Hook. f. Fl. Brit. India 2:622.1879; Naik, Fl. Osmanabad 149.1979; Chakravarty in Fasc. Fl. India 11:43.1982. KASHI BHOPALA.

Prostrate or climbing annual herbs; stem angular, covered with pungent hairs. Leaves oate reniform, 5-lobed, 8-10 x 9-10 cm, cordate at base, dentate along margins; lobes acute, scabrid above, glandular-hairy beneath; petioles 6-10 cm long, with pungent hairs near the base. Flowers axillary, solitary. Male flowers: peduncles 3-6 cm long, 5-angular. Calyx tube short. Corolla yellow, 5 cm long; lobes erect, acute. Filaments 10-15 mm long; anthers shorter than the filaments. Fruits variable in shape and size, often clavate or bottle-shaped, green; pulp fibrous. Seeds aloid, 7-20 mm long, margined, whitish-yellow.

Occasionally seen in cultivation.

fls and frts-December to April.

Uses- Tender fruits are used as vegetable, and in Ayurvedic medicine. Dry fruits are used as water bottles by the pilgrims. Seeds are edible and yield oil.

Diplocyclos (Endl.) von Post & Ktze.

Diplocyclos palmatus (L.) Jeffrey in Kew Bull. 15:352.1962; Exel in Bull. Brit.

Mus. (nat. Hist.) Bot. 3(3):101.1963; Naik, Fl. Osmanabad 150.1979; Chakravarty in Fasc. Fl. India 11:48.1982. *Bryonia palmata* L. Sp. Pl. 1012.1753 excl. syn. *Bryonopsis laciniosa* (L.) Naud. in Ann. Sci. nat. Ser. 4, Bot. 12:141.1859 pro parte. *Bryonia laciniosa* L. Sp. Pl. 1013.1753; Clarke in Hook. f. Fl. Brit. India 2:622.1879. SHIVLINGI.

Glabrous, annual, climbing herbs; stem much branched, slender, grooved. Tendrils slender, 2-fid. Leaves membranous, broadly ovate, 10-15 cm across, deeply cordate at base, 5-lobed, shining green above, paler beneath; lobes oblong-lanceolate, sinuate and distantly dentate along margins; petioles 2-8 cm long, striate, slender. Male flowers in fascicles; peduncles 5-15 mm long, filiform, glabrous. Calyx 2-2.5 mm long, glabrous; teeth subulate, shorter than the tube. Co-rola pale yellow, 3-4 mm long; lobes ovate-oblong, acute. Female flowers solitary or few together on axillary short peduncles. Fruits subsessile, globose, 1-2 cm in diam., bluish-red when ripe. Seeds ovoid, 5-6 mm long, yellowish-brown.

Common, in hedges and on bushes.

Fls and frts-August to December.

Uses- Leaves are used in Ayurvedic medicine. Plants contain bitter principle bryonin.

Kedrostis Medik.

Kedrostis rostrata (Rottl.) Cogn. in DC. Monog. Phan. 3:636.1881; Cooke Fl. Pres. Bombay 1:577 (BSI reprint 1958); Chkravarty in Fasc. Fl. India 11:64.1982. *Bryonia rostrata* Rottl. Fl. Brit. India 2:627.1879 non Schrad. 1838. Monoecious, succulent, viscous, climbing herbs; stem 30-90 cm long, sparsely pilose. Tendrils filiform. Leaves broadly ovate, 1.5-4.5 x 2.0-5.0 cm, cordate at base, entire or shallowly lobed, denticulate; petioles 10-2.5 cm long,

slender, densely villous. Male flowers on 2-nate, axillary peduncles 0.5-1.5 cm long; pedicels 2-10 mm long, capillary, bracteolate. Calyx tube hemispherical, cu 2 x 1.5 mm; teeth subulate, 0.5 mm long. Petals yellow, oblong-lanceolate, 3-4 mm long, acute. Anthers suborbicular; connectives shortly produced. Female flowers solitary, axillbeak. Seeds obovoid, 4-5 x 3-4 mm turgid, finely granular, marginate.

Rare, in hedges around fields.

fls and frts -October to January.

Uses- Roots and fruits are used in Ayurvedic medicine.

Lagenaria Ser.

Lagenaria siceraria (Molina) Standl. in Publ. Field Mus. nat.Hist. Chicago, Bor. Ser. 3:435.1930; Muzushima in Hara, Fl. E. Himal. 1:323.1966; Naik, Fl. Osmanabad 143.1979; Chakravarty in Fasc. Fl. India 11:65.1982. *Cucurbita siceraria* Molina. Sagg. Chile, 133:335.1782. c. *Leucantha* Duch. in Lamk. Encycl. 2:150.1786. *Lagenaria vulgaris* Ser. Mem. Soc. Phys. Hist. nat. Geneve, 3(1):25.t.2.1825; Clarke in Hook. f. Fl. Brit. India 2:613.1873. *L. Leucantha* (Duch.) Rusby, Mem. Tor. Bot. Club 6(1):43.1896. DUDHYA BHOPALA.

Large, climbing, annual herbs; stem thick, softly pubescent; tendrils bifid. Leaves broadly ovate orbicualr, 10-40 cm across, cordate at base, angular or shortly trilobed, acute or shortly acuminate, softly white pubescent on both the surfaces; petioles 5-30 cm long, thick, biglandular at apex. Male flowers on long axillary peduncles. Calyx tube 2-3 cm long; sepals narrow. Petals white, obovate, 3-4 x 2-3 cm, emarginate at paex, tomentose. Filaments 3-4 mm long; anthers 8-10 mm long. Female peduncles shorter than the male. Calyx tube 2-3 mm lon; ovary vilous. Fruits clavate, 30-60 x 6-15 cm, greenish-yellow turning brown. Seeds obovate-oblong, 7-20 mm long, white, truncate or dentate at apex.

Cultivated for fruits used as vegetable.

Fls and frts – September to January.

Uses- Fruits, both young and old are used for various purposes, medicine etc.

Luffa Mill.

- 1a. Roots not tuberous; leaves 18-30 cm across; fruits more than 10 cm long, with stopple -----2
- 1b. Roots tuberous; leaves 2.5-3 cm across; fruit upto 4 cm long without stopple -----*L. tuberosa*
- 2a. Stamens 5; fruit cylindric, not ribbed-----*L. cylindrica*
- 2b. Stamens 3; fruits 10-ribbed-----3
- 3a. Fruits 15-30 x 6-10 cm, clavate-oblong-----
-----*L. acutangula* var. *acutangula*
- 3b. Fruits 5.6 x 3-3.5 cm, obovoid----- *L. acutangula* var. *amara*

Luffa acutangula (L.) Roxb fl. Ind. 3:713.1832; Clarke in Hook. f. Fl. Brit. India 2:615.1879; Naik, Fl. Osmanabad 144.1979; Chakravarty in Fasc. Fl. India 11:67.1982. *Cucumis acutangula* L. Sp. Pl. 1011.1853.

var. *acutangula*; DODKA

Extensive, annual, climbers; stem 5-angular, glabrous, often with scabrous angles. Tendrils 3-fid. Leaves broadly ovate to roundish, 15-20 cm across, 5-7 angled or lobed, glabrous; petioles 8-12 cm long, scabrous. Male flowers on 10-15 cm long, 15-20 -flowered peduncles; pedicels 1-4 cm long; probract ovate, 3-7 mm long, fleshy green with 3-10 glistening glands on the upper surface. Calyx tube campanulate; teeth lanceolate, winged. Petals bright yellow, obcordate, 2.0 x 2-2.5 cm. Stamens 3, 1-unilocular, 2 bilocular, filaments 3-4 mm long. Female flowers on 10 cm long peduncles. Fruits 10-angled, constricted, black.

Cultivated on large scale throughout the region.

Fls and frts-August to January.

Uses- Tender fruits are used as vegetable. Leaves and seeds are used in Ayurvedic medicine. Fibrous mesocarp of ripe fruits is used for manufacture of ladies purse, bath sponge etc.

var. *amara* (Roxb.) Clarke in Hook. f. Fl. Brit. India 2:615.1879; Chakravarty in Fasc. Fl. India 11:70.1982. *Luffa amara* Roxb. Fl. Ind. 3:715.1832. KADU DODKA

Very similar to var. *acutangula* but every part of the plant is bitter. Fruits are smaller in size.

Fla and frts-June to October.

Use- This variety is more useful in Ayurvedic medicine.

Luffa cylindrica (L.) Roem. Synop. Pepon. 63.1846; Maheshwari, Fl. Delhi 168.1963; Naik, Fl. Osmanabad 144.1979; Chakravarty in fasc. Fl. India 11:70.1982. *Momordica cylindrica* L. sp. Pl. 1009.1753. *Luffa aegyptiaca* Mill. Dict. ed. 4:500.1785; Clarke in Hook. f. fl. Brit. Ind.w:614.1879. GHOSALE, GILKA.

Extensive, annual, climbers; stem 5-angular, glabrous. Tendrils 3-fid. Leaves broadly ovate, 15-25 cm across, 5-lobed, often gland-dotted; petioles 10-12 cm long, scabrous. Male flowers on 10-15 cm long, 15-20 flowered, axillary peduncles; pedicels 1-2 cm long. Calyx tube short, broadly campanulate; teeth oblong-cuneiform, 2-3 cm across, rounded or emarginate at apex. Stamens 3 with 1 unilocular and 2 bilocular anthers or 5 with 5 unilocular anthers; filaments 6-8 mm long, shortly villous at base. Female flowers on 2-10 cm long, axillary peduncles. Fruits fusiform, 15-40 x 6-10 cm, strongly fibrous when ripe. Seeds ovate, 10-12 x 8-9 mm, smooth.

Fls and frts-August to December.

Uses- Same as those of *L. acutangula* (L.) Roxb.

Luffa tuberosa Roxb. Fl. Ind. 3:717.1832; Chakravarty in Rec. Bot. Surv. India 17(1):81.1959 et in fasc. Fl. India 11:74.1982. *Momordica cymbalaria* Fenzl. in Kotschy, Iter. Nubic. no. 147.1859; Clarke in Hook. f. Fl. Brit. India 2:618.1879.

Prostrate or climbing, perennial herbs; roots tuberous. Stem slender, striate; tendrils simple, filiform. Leaves nearly orbicular, 1.5-3 x 2.5-3 cm, 5-7-lobed, entire. Male flowers in axillary, 2.5-flowered racemes; peduncles 0.5-3.0 cm long, filiform; pedicels 3-12 mm long. Calyx broadly campanulate; teeth lanceolate, 6-7 mm long, acuminate. Corolla pale yellow or white, 10-12 mm long. Stamens 2; filaments 0.5-2.0 mm long; anthers 2 mm long, one bipartite, the other 3-partite. Female flowers on slender, ebracteate, 2-8 cm long peduncles. Fruits angular, pyriform, 2-4 x 1.5 cm, with 8 sharp ridges, narrowed at base and apex. Seeds broadly ovoid, 6-7 mm long, smooth, blackish-grey.

Rare, weed on bunds of fields.

Fls and frts-September to November.

Uses- Roots are used in Ayurvedic medicine. Tender fruits are used as vegetable.

Melothria (L.)

Here this genus is taken to include *Zehneria* Endl. and *Mukia* Arn. following Cognianux (1881) and Chakravarty (1959, 1982).

1a. Plants monoecious; leaves monomorphic; petals bright yellow; fruits globose,

6-12 mm in diam.----- *M. maderaspatana*

1b. Plants dioecious; leaves polymorphic; petals dull whitish-yellow; fruits oblong, 4-5 cm long----- *M. heterophylla*

Melothria heterophylla (Lour.) Cogn. in DC. Monog. Phan. 3:618.1881; Chakravarty in Fasc. Fl. India 11:79.1982. *Solena heterophylla* Lour. Fl.

Cochinch. 1:514.1790. *Bryonia umbellata* Klein in Willd. Sp. Pl. 4618.1805. *Zehneria umbellata* (Klein ex Willd.) Thw. Enum. Pl. Zeyl. 125.1859; Clarke in Hook. f. Fl. Brit. India 2:625.1879. GOMETI.

Glabrous, perennial climbers; root tuberous; stem slender, furrowed. Tendrils simple. Leaves ovate, lobed or hastate, 5-15 cm long, entire or palmately 3-5-lobed, cordate at base, scabrid and pale green above, paler beneath, remotely denticulate along margins; lobes acute; petioles 6-10 mm long, pubescent. Male flowers sub-umbellate, 15-20, on 0.6-2.0 cm long peduncles; pedicels filiform, 3-8 mm long. Calyx tube campanulate, 4-6 mm long; teeth minute, subulate. Corolla small; lobes triangular, acute, 1-1.5 mm long. Filaments slender, 2-3 mm long. Female flowers solitary on 6-12 mm long axillary peduncles. Ovary oblong, 10-ribbed. Fruits oblong, tapering towards the apex, bright red when ripe. Seeds obovoid or sub-globose, smooth, white. Occasional, in hedges and on bushes.

Fls and frts-July to October.

Uses- Root is used in medicine. Fruits are edible.

Melothria maderaspatana (L.) Cogn. in DC. Monog. Phan 3:623.1881; Cooke, fl. Pres. Bombay 1:573 (BSI reprint 1958); Naik, Fl. Osmanabad 150.1979; Chakravarty in Fasc. Fl. India 11:83.1982. *Cucumis maderaspatana* L. Sp. Pl. 1012.1753. *Bryonia scabrella* L. f. Suppl. 424.1781. *Mukia scabrella* (L.f.) Arn. in Hook. J. Bot 3:276.1841; Clarke in Hook. f. fl. Brit. India 2:623.1879. *M. maderaspatana* (L.) Roem. Syn. Monog. 2:47.1846.

Climbing, annual herbs; stem hispid-scabrid. Tendril simple. Leaves ovate or subdeltoïd, 4-14 x 3-13 cm, 3-5-lobed, sinuate-cordate at base, minutely denticulate, scabrous above, pubescent beneath; petioles 1-8 cm long. Male flowers in axillary fascicles; pedicels short. Calyx tube ca 2.0 x 1.5 mm, villous, hirsute; teeth erect, subulate, 1-1.5 mm long. Corolla yellow, 2-4 mm long; lobes ovate-oblong, rounded at apex. Filaments short, pilose; anthers

oblong, ciliate, distinctly appendiculate at base. Female flowers solitary or subfasciculate; peduncles almost absent. Fruits red, smooth and shining. Seeds ovoid-oblong, 3-4 x 2-2.5 mm, gray, prominently scrobiculate.

Common, in hedges around fields.

Fls and frts-July to September.

Uses- Root, tender shoots and leaves are used in Ayurvedic Medicine.

Momordica L. (Plate - 1)

1a. Cultivated, monoecious plants; bracts of the male flowers about the middle of the peduncle;

fruits 8-20 cm long----- *M. charantia*

1b. Wild, dioecious plants; bracts of the male flowers at the apex of the peduncle; fruits 3-5 cm long ----- *M. dioica*

Momordica charantia L. Sp. Pl. 1009.1753; Clarke in Hook. f. Fl. Brit. India 2:616.1879; Naik, Fl. Osmanabad 145.1979; Chakravarty in fasc. Fl. India 11:89.1982. KARLA.

Var. *charantia*; Chakravarty loc. cit. 91.

Extensive, annual climbers; stem puberulous, tendrils simple, slender, pubescent. Leaves suborbicular-reniform, 5-12 cm across, 5-7-lobed, cordate at base, prominently nerved on both surfaces, glabrous; lobes ovate oblong, dentate, acute; petioles shorter than the blade, pubescent. Male flowers solitary on slender peduncles; bracts foliaceous, 5-15 mm across, reniform, entire. Calyx tube campanulate, 4-5 mm long; teeth subulate. Corolla yellow, 12-20 mm long; lobes obovate, obtuse. Female flowers solitary; peduncles 5-10 cm long, bracteate at base. Fruits oblong-ellipsoid, 8-25 cm long, muricate-tuberculate, dehiscing at apex. Seeds dull white, quadrate, 12-15 x 6-8 mm, subtridentate at apex, sculptured on face.

Cultivated and escaped throughout the region.

Plate : 1. Fruits of cucurbits
a) *Momordica cymbalaria*
b) *Cucumis setosus*
c) *Momordica dioica*



Fls and frts- June to October.

Uses- Fruits are used as vegetable as well as in many Ayurvedic applications.

var. *muricata* (Willd.) Chakravarty in fasc. Fl. India 11:92.1982. *Momordica muricata* Willd. Sp. Pl. 4:602.1805. *M. charantia* L. var. B L. Sp. Pl. 1009.1753.

Very similar to var. *charantia*, but fruits tapering at both ends and ribs with triangular murications.

More common than var. *charantia* in cultivation.

Fls and frts- June to October.

Uses- Same as var. *charantia*

Momordica dioica Roxb. ex Willd. Sp. Pl. 4:605.1805; Clarke in Hook. f. Fl. Brit. India 2:617.1879; Naik, Fl. Osmanabad 146.1979; Chakravarty in Fasc. Fl. India 11:94.1982. KARTOLI.

Perennial climbers; roots tuberous. Stem slender, 1-2 m long, glabrous. Tendrils simple. Leaves ovate-reniform, 4-10 cm across, cordate at base, entire or 3-5-lobed, remotely denticulate; petioles 1-3 cm long. Male flowers solitary on 4-14 cm long, slender peduncles; bracts sessile at the apex of the peduncle, cucullate. Calyx tube short; teeth linear-lanceolate, 5-7 mm long, acute, densely villous. Corolla yellow, 2-3.5 cm long; lobes oblong-obtuse, prominently black-veined. Female flowers ebracteate, on short peduncles. Fruits ovoid, 3-5 cm long, green-echinate, red when ripe. Seeds pale yellow, broadly ovoid, 5-7 x 4-6 mm, emarginate.

Common, around fields, along river banks etc.

Fls and frts-July to October.

(Plate - 2)

Trichosanthes L.

1a. Cultivated plants; fruits upto 1 m long, twisted, with white longitudinal stripes-----*T. anguina*

- 1b. Wild plants; fruits not as above----- 2
- 2a. Leaves nigro-punctate beneath; bracts foliaceous, lacinate; fruits globose----- *T. tricuspidata*
- 2b. Leaves not nigro-punctate abeneath; bracts minute or absent; fruits ovoid-fusiform ----- *T. cucumerina*

Trichosanthes anguina L.Sp. Pl. 1008.1753; Clarke in Hook. f. Fl. Brit. India 2:610.1879; Naik, Fl.

Osmanabad 143.1979; Chakravarty in Fasc. Fl. India 11:108.1982. PADWAL. Extensive, climbing, annual herbs; stem 5-angled, puberulous. Tendrils 2-3-fid. Leaves broadly ovate to orbicular-reniform, 10-15 x 12-18 cm, cordate at base, often 5-7 angled or lobed, distantly denticulate, pubescent; petioles 12-15 cm long, stout, striate, villous. Plants monoecious. Male flowers in 10-25 cm long, 8-15-flowered, axillary racemes; pedicels 0.5-2 cm long, slender, minutely bracteate. Calyx tube 2.5-3 cm long, subcylindric; teeth 1.5-2 mm long, reflexed. Petals white, oblong, 8-10 mm long. Filaments slender, 1-2 mm long; anthers aoid; pistillode 10-15 mm long. Female flowers solitary on 0.5-5 cm long peduncles. Fruits very long, smooth. Seeds oblong, 12-15 x 6-10 mm, finely rugulose, truncate at apex.

Fls and frts-June to September.

Uses- Fruit is used as vegetable; seeds are used in Ayurvedic Medicine.

Trichosanthes cucumerina L. Sp.Pl. 1008.1753; Clarke in Hook. f. Fl.Brit. India 2:609.1879; Chakravarty in Fasc. Fl. India 11:112.1982. RAN PADWAL. Extensive climbing, annual herbs. Tendrils 2-3-fid. Leaves broadly ovate to orbicular-reniform 7-10 x 8-12 cm, cordate at base, 5-7-lobed or angled, distantly denticulate, glabrous above, pubescent or scabrid beneath; petioles 2-8 cm long, striate, pubescent. Plants monoecious. Male flowers in 5-15 cm long, 8-15 flowered axillary racemes; pedicels 8-20 mm long, puberulous. Calyx tube 2-2.5 cm long; theeth sort, acutely triangular. Petals white, lanceolate-oblong, 8-10 mm long. Female flowers solitary on 5-15 mm long

peduncles. Fruit 3-8 cm long; tapering at both ends, with a long sharp beak, scarlet when ripe. Seeds semi-ellipsoid, 10-12 x 5-6 mm, compressed, truncate at apex, narrowed at base.

Common, in hedges around fields and on waste land.

Fls and frts-August to November.

Uses- Roots, leaves, fruits and seeds are used in Ayurvedic medicine.

Trichosanthes cucumerina Lour. Fl. Cochinch. 2:589.1790; Jeffrey in Kew Bull. 34:797.1980. *Modecca bracteata* Lamk. Encycl. 4:210.1797. *Trichosanthes palmata* Roxb. Fl. Ind. 3:704.1832; Clarke in Hook. f. Fl. Brit. India 2:606.1879. *T. bracteata* (Lamk.) Voigt, Hort. Sub. Calc. 58.1845; Chakravarty in Fasc. Fl. India 11:109.1982. KAUNDAL.

Robust, climbing herbs; stem woody below, grooved, glabrous. Tendrils 2-3-fid. Leaves broadly ovate, 5-12 cm long and as much broad, shallowly cordate at base, deeply or shallowly 3-5 lobed, dark green above, paler and with black glands beneath; lobes ovate-oblong, dentate-serrate, acute; petioles 2-8 cm long, striate. Plants monoecious. Male flowers in 15-20 cm long, 5-10-flowered axillary racemes; pedicels very short. Bracts broadly ovate, 2-2.5 cm long, fringed, dotted with dark green glandular spots. Calyx tube 2.5-3 cm long pubescent; teeth lanceolate, laciniate. Petals white, obovate-cuneate, 2-2.5 cm long. Filaments villous. Female flowers solitary on short, axillary peduncles. Fruits globose, 3-5 cm in dia., red with 10 orange colored stripes. Seeds obovoid, 10-15 mm long, smooth, brown or black.

Occasional, in hill forests.

Fls and frts- August to November.

Uses- Fruits are valuable in Ayurvedic medicine. The plant also has some repute in the remedy of certain diseases of cattle (Cooke, Fl. Pres. Bombay 1:560 reprinted ed. 1958.)