

SYSTEMATIC TREATMENT

MAGNOLIACEAE Juss.

Michelia L.

***Michelia champaca** L. Sp. Pl. 536. 1753; Hook.f. & Thorns, in Hook.f. Fl. Brit. India 1: 42. 1872; Cooke, Fl. Pres. Bombay 1: 8. 1958 (Repr. ed.); Raju in Sharma et al. Fl. India 1: 175. 1993; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 162. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 32. 2002. Chapha, Pivala Chapha, Sonchapha.

A tall, handsome, evergreen tree. Stem glabrous, cylindrical with a straight trunk. Leaves lanceolate, entire, acute at base and acuminate at apex; petioles 1-2cm long, glabrous. Inflorescence, solitary, axillary. Flowers pale yellow to brown yellow, sweet scented. Fruiting receptacle 7-16 cm long, follicles orbicular to ovate. Seeds 1-12, brown angled.

Fls. & Frts.: Sept.-Feb.

Specimen examined: AMJ 1273

Cultivated near temple.

ANNONACEAE Juss.

1. Ripe carpels free, forming separate fruitlets	<i>Polyalthia</i>
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1. Ripe carpels united, forming many loculed syncarpous fruits	<i>Annona</i>
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Annona L.

1. Leaves acuminate; fruits reticulate, areolate	<i>A. reticulata</i>
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1. Leaves obtuse; fruits tuberculate	<i>A. squamosa</i>
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***Annona reticulata** L. Sp. Pl. 537. 1753; Hook.f. & Thoms. in Hook.f. Fl. Brit. India 1: 78. 1872; Cooke, Fl. Pres. Bombay 1: 15. 1958 (Repr. ed.); Mitra in Sharma et al Fl.

India 1:207.1993; Mudaliar & Prasad in Singh et al. Fl. Maharashtra. St. Dicot. 1: 163. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 32. 2002. Ramphal.

A small tree, young branches tomentose, the old glabrous. Leaves oblong-lanceolate, acute or obtuse, rounded at base. Flowers in extra-axillary or terminal cymes, 2-3 together. Calyx and triangular; tomentose ; Corolla green. Fruit ovoid, reticulate, areolate, reddish green or yellowish brown. Seeds black, smooth, arillate.

Fls. & Frts.: Mar.-July

Specimen examined: AMJ 1263

Cultivated.

***Annona squamosa** L. Sp. Pl. 537. 1753; Hook.f. & Thorns, in Hook.f. Fl. Brit. India 1: 78. 1872; Cooke, Fl. Pres. Bombay 1: 15. 1958 (Repr. ed.); Mitra in Sharma et al. Fl. India 1: 207. 1993; Mudaliar & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 1: 165. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 34. 2002. Sitaphal.

Small trees. Leaves oblong- lanceolate, Flowers green, axillary solitary or few, leaf opposed. Calyx triangular, minute. Corolla fleshy. Stamens numerous. Carpels numerous, pubescent, 1-ovuled; style oblong; stigma entire. Fruits globose, tuberculate with rounded tips. Seeds many, brownish-black, shiny, oblong.

Fls. & Frts.: May-Aug.

Specimen examined: AMJ 1278

Cultivated.

Polyalthia Bl.

***Polyalthia longifolia** (Sonnet.) Thw., Enum. Pl. Zeyl. 398. 1864; Hook.f. & Thorns, in Hook.f. Fl. Brit. India 1: 62. 1872; Cooke, Fl. Pres. Bombay 1: 13. 1958 (Repr. ed.); Mitra in Sharma et al. Fl. India 1: 274. 1993; Mudaliar & Prasad in Singh et al. Fl.

Maharashtra St. Dicot. 1: 175. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 35. 2002.

Uvaria longifolia Sonnet. Voy. Aux. Indes. 2: 233, t. 131. 1782. Ashok.

Tree with straight trunk. Leaves oblong-lanceolate, undulate. Flowers greenish yellow, in clusters. Calyx 3. Corolla 6. Ripe carpels numerous, ovoid to ellipsoid, glabrous, turning reddish black on ripening. Seed 1, smooth or longitudinally grooved, ovoid to ellipsoid, shiny.

Fls. & Frts.: Feb.-Aug.

Specimen examined : AMJ 1230

Grown as avenue tree.

MENISPERMACEAE Juss.

1. Leaves glabrous ; flowers in panicles *Tinospora*

1. Leaves hirsute or villous; flowers in small fascicles or cymose *Cocculus*

Cocculus DC. (nom. cons.)

Cocculus hirsutus (L.) Theob. in Masion, Burma ed. Theob. 2: 657. 1883; Gang, in Sharma et al. Fl. India 1: 318. 1993; Kulkarni in Singh et al. Fl. Maharashtra St. Dicot. 1: 179. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 37. 2002. *Menispermum hirsutum* L. Sp. Pl. 341. 1753. *Cocculus villosus* (Lam.) DC. Syst. Nat. 1: 525. 1817; Hook.f. & Thoms. in Hook.f. Fl. Brit. India 1: 101. 1872; Cooke, Fl. Pres. Bombay 1: 22. 1958 (Repr. ed.). Wasan Vel. Fig. 1.

Scandent shrubs; young parts densely hairy. Leaves softly villous on both surface, usually ovate. Male flowers in small axillary cymose panicles. Female flowers in axillary clusters, 2-3 together. Drupes compressed, seeds black.

Fls. & Frts.: Aug.-Feb.

Specimen examined : CBS 1151

Occasional on bushes and in hedges.

Tinospora Miers

Tinospora cordifolia (Willd.) Miers ex Hook.f. & Thoms. in Hook.f. Fl. Brit. India 1: 97. 1872; Cooke, Fl. Pres. Bombay 1: 20. 1958 (Repr. ed.); Pramanik in Sharma et al. Fl. India 1: 347. 1993; Kulkarni in Singh et al. Fl. Maharashtra St. Dicot. 1: 184. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 38. 2002. *Menispermum cordifolium* Willd. Sp. Pl. 4: 826. 1806. Amrut Vel, Gul Vel.

Woody twiner with lenticulate branches; bark green, corky. Leaves as broad as long, glabrous, 6-7-nerved. Flowers yellowish-green, in raceme, usually in the axils of fallen leaves. Male flowers fascicled, yellow. Female flowers solitary. Drupes 1-3, globose, red when ripe.

Fls. & Frts.: Aug.-Jan.

Specimen examined ∴ CBS 1166

Occasional on bushes and in hedges.

PAPAVERACEAE Juss.

Argemone L.

Argemone mexicana L. Sp. Pl. 508. 1753; Hook.f. & Thoms. in Hook.f. Fl. Brit. India 1: 117. 1872; Cooke, Fl. Pres. Bombay 1: 29. 1958 (Repr. ed.); Debnath & Nayar in Sharma et al. Fl. India 2: 2. 1993 ; Rao in Singh et al. Fl. Maharashtra St. Dicot. 1: 187. 2000; Yadav and Sardesai, Fl. Kolhapur Dist. 39. 2002. Pivala Dhotra.

Annual prickly herb with yellow latex. Leaves sessile, pinnatifid, sinuate, lobulate, segments inciso-dentate, spiny along margins. Flowers bright yellow. Corolla 4-6. Capsules ellipsoid; seeds many, deeply reticulate, globose.

Fls. & Frts.: Feb.-June

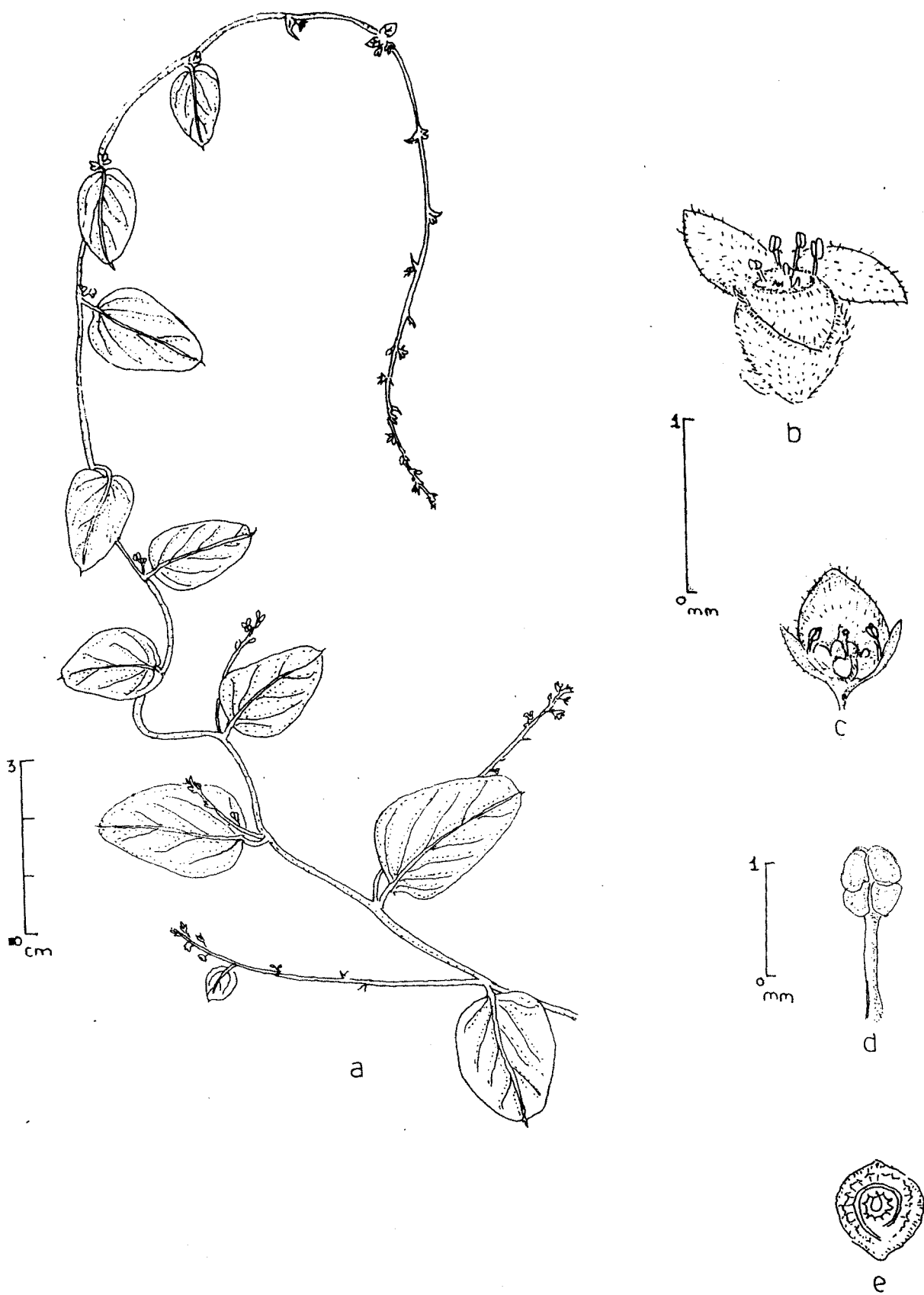


Fig. No. 1.: *Cocculus hirsutus* (L.) Theob.

a. Habit; b. Flower; c. V. S. of Flower; d. Stamen; e. C. S. of ovary,

Specimen examined: AMJ 1083

Common on waste places.

BRASSICACEAE Burn. (nom. alt.)

Brassica L.

***Brassica juncea** (L.) Czern. & Coss. in Czern., Consp. Fl. Chark. 8. 1959; Hook.f. & Anders. in Hook.f. Fl. Brit. India 1: 157. 1872; Cooke, Fl. Pres. Bombay 1: 37. 1958 (Repr. ed.); Hajara et al. in Sharma et al. Fl. India 2: 134. 1993 ; Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 1: 192. 2000. *Sinapis juncea* L. Sp. Pl. 668. 1753; Yadav and Sardesai, Fl. Kolhapur Dist. 40. 2002. Mohari.

Erect, annual herbs, 30-90 cm tall. Lower leaves lyrate-pinnatifid, obovate. Flowers in terminal racemes. Corolla bright yellow, clawed rounded at apex. Siliqua erect patent, many seeded. Seeds brown.

Fls. & Frts.: Through out the year.

Specimen examined: AMJ 1038

Found as escape.

CLEOMACEAE (Pax) Airy Shaw

Cleome L.

Cleome simplicifolia (Camb.) Hook.f. & Thoms. in Hook.f. Fl. Brit. India, 1: 169. 1872; Cooke, Fl. Pres. Bombay 1: 40. 1958 (Repr. ed.); Raghavan in Sharma et al. Fl. India 2: 314; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 222. 2000. *Polanisia simplicifolia* Camb. in Jacq. Voy. Bot. 20, t. 20. 1844; Yadav & Sardesai, Fl. Kolhapur Dist. 44. 2002.

Annual, erect or procumbent herbs, strigose hairy herbs. Leaves simple, scabrid; petioles long. Flowers solitary, on elongate racemes; Corolla pink or rosy. Stamens often

10-16. Capsules glabrous, 1.5-3 cm long, longitudinally striate. Seeds reniform-globose, dark brown, pitted.

Fls. & Frts.: July-Nov.

Specimen examined: AMJ 1058

Common on rocky soils.

CAPPARACEAE Juss

Capparis L.

1. Leaves large, deciduous during late winter; plants leafy; petals white, yellowish or purplish brown:

2. Flowers axillary, solitary or in fascicles of 2-3 *C. divaricata*

2. Flowers corymbose *C. grandis*

1. Leaves small, early deciduous; plants leafless for major part of year; petals red

C. decidua

Capparis decidua (Forssk.) Edg. in J. Linn. Soc. Lond., Bot. 6: 184. 1862; Raghavan in Sharma et al. Fl. India 2: 265. 1993; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 209. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 47. 2002. *Sodada decidua* Forssk., Fl. Aeg.-Arab. 81. 1775. *Capparis aphylla* Roth, Nov. Sp. Pl. Ind. Or. 238.1821; Hook.f. & Thoms. in Hook.f. Fl. Brit. India 1: 174. 1872; Cooke, Fl. Pres. Bombay 1: 49. 1958 (Repr. ed.). Nepti. Fig. 2.

Armed scandent shrub; branches scrambling; twigs zigzag. Leaves small, on young branches only, linear-oblong, acute, stipular thorns sharp, yellow. Flowers in racemes. Corolla puberulous, included within hooded Calyx. Stamens 10-16, filaments reddish. Gynophore glabrous, ovary glabrous, globose, beaked. Fruits berry, many seeded.

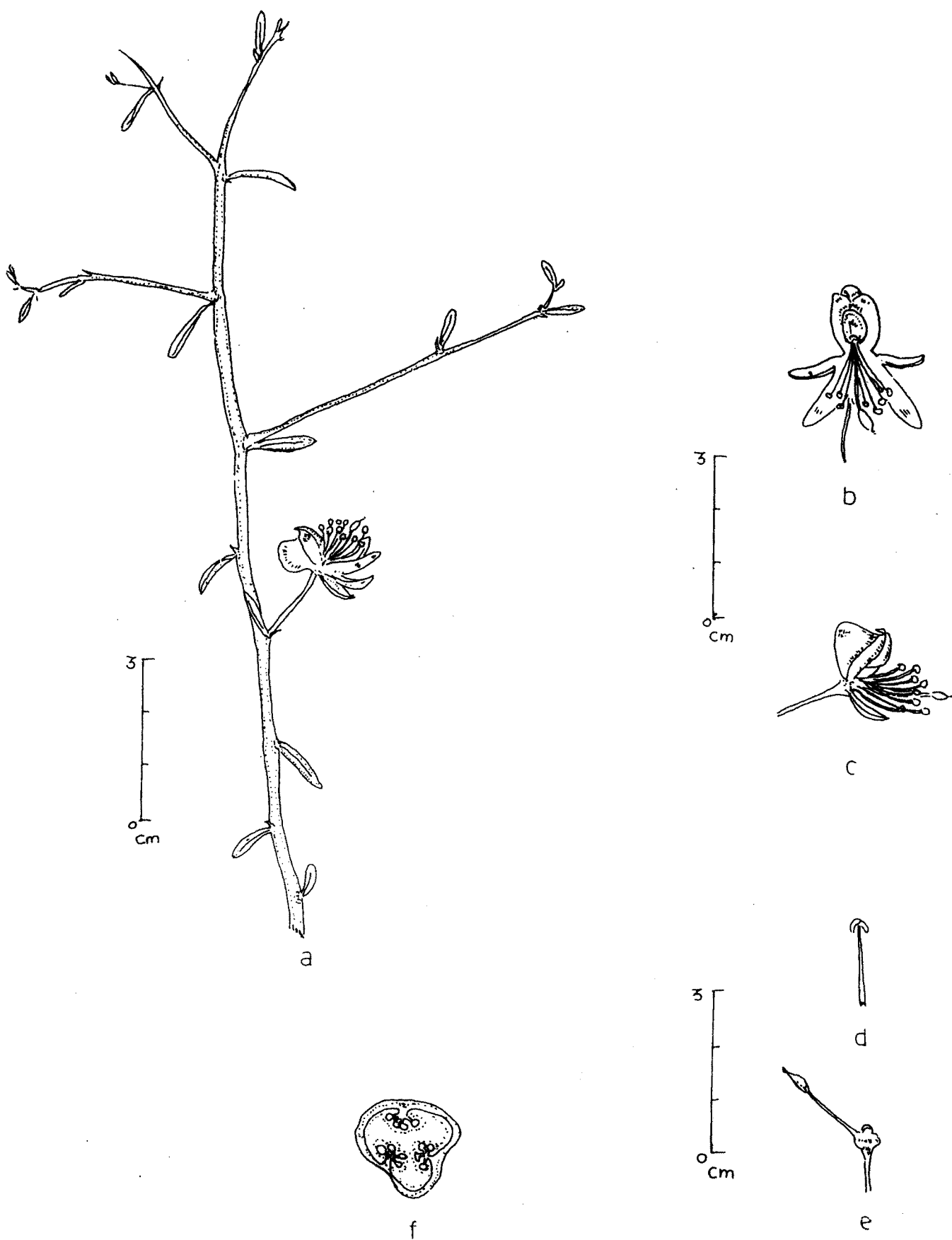


Fig. No. 2.: *Capparis decidua* (Forssk.) Edg.

a. Habit; b. Flower; c. V. S. of Flower; d. Stamen; e. Pistil; f. C. S. of ovary.

Fls. & Frts.: Feb.-May.

Specimen examined: AMJ 1212

Occasional on rocky soil.

Capparis divaricata Lam. *Encycl.* 1: 606. 1785; Hook.f. & Thoms. in Hook.f. *Fl. Brit. India* 1: 174. 1872; Cooke, *Fl. Pres. Bombay* 1: 48. 1958 (Repr. ed.); Raghvan in Sharma et al. *Fl. India* 2: 266. 1993; Londhe in Singh et al. *Fl. Maharashtra St. Dicot.* 1: 209. 2000; Yadav & Sardesai, *Fl. Kolhapur Dist.* 47. 2002.

Large shrubs, stems and branches zigzag; stipular spines, curved. Leaves elliptic to linear lanceolate, acuminate at apex. Stamens many; filaments yellowish or purplish. Fruits globose, beaked, red. Seeds globose, red to brown.

Fls. & Frts.: Mar.-July

Specimen examined: CBS 1290

Occasional along roadsides and on hill slopes.

Capparis grandis L.f. *Suppl. Pl.* 263. 1781; Hook.f. & Thoms. in Hook.f. *Fl. Brit. India* 1: 176. 1872; Cooke, *Fl. Pres. Bombay* 1: 50. 1958 (Repr. ed.); Raghvan in Sharma et al. *Fl. India* 2: 274. 1993; Londhe in Singh et al. *Fl. Maharashtra St. Dicot.* 1: 210. 2000; Yadav & Sardesai, *Fl. Kolhapur Dist.* 47. 2002.

Erect shrubs or small trees, bark fissured. Leaves ovate, acuminate, velvety tomentose on both surfaces when young. Flowers in terminal cymose racemes. Calyx green, boat shaped, glabrous on the back, ciliate on margins. Corolla white, glabrous. Stamens many; filaments white. Gynophore 1-3 cm long. Fruit subglobose, red, glabrous. Seeds compressed.

Fls. & Frts.: Feb.-July

Specimen examined: CBS 1283

Occasional along hill slopes.

FLACOURTIACEAE DC.

1. Drupe a size of cherry; leaves on drying turn reddish brown *F. montana*

1. Drupe a size of pea; leaves on drying do not turn reddish
brown

F. indica

Flacourtia Commers. ex L' Herit.

Flacourtia indica (Burm.f.) Merr., Interpr. Rumph. Herb. Amb. 377. 1997; Mitra in Sharma et al. Fl. India 2: 402. 1993; Jadhav in Singh et al. Fl. Maharashtra St. Dicot. 1: 235. 2000; Yadav and Sardesai, Fl. Kolhapur Dist. 53. 2002. *Gmelina indica* Burm.f. Fl. Ind. 132. t. 39, f.5. 1768. *Flacourtia ramontchii* L.' Herit., Strip. Nove. 3; 59, t. 30 & 30 B. 1785; Hook.f. & Thoms. in. Hook.f. Fl. Brit. India 1: 193. 1872 excl. var. *latifolia*; Cooke, Fl. Pres. Bombay 1: 59. 1958 (Repr.). *F. ramontchi* var. *occidentalis* Hook.f. & Thoms. in. Hook.f. & Thoms. op.cit. *F. ramontchi* var. *sapida* (Roxb.) Hook.f. & Thoms. in. Hook.f. & Thoms. op.cit.; Cooke, op.cit. *F. sepiaria* Roxb. Pl. Corom. 1: 48, t. 68. 1796; Hook.f. & Thoms. in. Hook.f. & Thoms. op.cit. 194; Cooke, op.cit. 60. *F. occidentalis* Blatt. in. J. Bombay nat. Hist. Soc. 31: 914. 1927. *F. sepiaria* var. *integrifolia* Blatt. op.cit.

Large shrubs or small trees. Leaves fascicled at the end of branches. Flowers in axillary, bracteolate, racemose clusters; pedicels articulated near middle. Male flowers: Stamens numerous, anthers versatile, disc lobed. Female flowers: Disc entire, ovary with 3-6 radiating styles. Berries ellipsoid with pyrenes; seeds trigonal.

Fls. & Frts.: Dec.-July

Specimen examined: AMJ 1298

Frequent in dry deciduous forests.

Flacourtia montana Grah. Cat. Bombay Pl. 10. 1839; Hook.f. & Thoms. in. Hook.f. Fl. Brit. India 1: 192. 1872; Cooke, Fl. Pres. Bombay 1: 58. 1958 (Repr. ed.); Mitra in Sharma et al. Fl. India 2: 406. 1993; Jadhav in Singh et al. Fl. Maharashtra St. Dicot. 1: 237. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 54. 2002.

A very thorny armed tree. Leaves alternate, coarsely serrate, dentate, coriaceous. Flowers small, unisexual, pubescent, in lax racemes or dense panicle clusters. Stamens numerous, filaments glabrous. Ovary urceolate; styles 5 (6), spreading and recurved, bifid at apex. Berries globose, obtusely ribbed, reddish purple when ripe, seeds 6 in 2 rows, compressed.

Fls. & Frts.: Nov.-May

Specimen examined: AMJ 1194

Occasional on hill slopes.

POLYGALACEAE R. Br.

Polygala L.

1. Stems and racemes not dichotomously branched; wing sepals

a symmetric, elliptic-oblong, obtuse and mucronate at apex:

2. Corolla yellow

P. arvensis

2. Corolla rosy-pink

P. erioptera

1. Stems and racemes dichotomously branched; wing sepals

symmetric, suborbicular, rounded not mucronate at apex *P. persicariifolia*

Polygala arvensis Willd. Sp. Pl. 3(2): 876. 1803; Banerjee in Sharma et al. Fl. India 2: 460. 1993; Lakshmi. & Venkanna in Singh et al. Fl. Maharashtra St. Dicot. 1: 246. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 55. 2002. *P. chinensis* auct. non L. 1753;

Bennet. in Hook.f. Fl. Brit. India 1: 204. 1872; Cooke, Fl. Pres. Bombay 1: 64. 1958 (Repr. ed.).

Annual herbs, glabrous or pubescent. Leaves sessile, elliptic-oblong. Flowers in axillary or extra axillary, few flowered racemes. Corolla yellow. Staminal sheath free. Capsules compressed, emarginate, narrowly winged along margins. Seeds black, pilose.

Fls. & Frts.: Jun.-Feb.

Specimen examined: CBS 1036

Frequent in grasses on rocky soil.

Polygala erioptera DC. Prodr. 1: 326. 1824; Bennet. in Hook.f. Fl. Brit. India 1: 203. 1872; Cooke, Fl. Pres. Bombay 1: 63. 1958 (Repr.); Banerjee in Sharma et al. Fl. India 2: 467. 1993; Lakshmi. & Venkanna in Singh et al. Fl. Maharashtra St. Dicot. 1: 247. 2000; Yadav and Sardesai, Fl. Kolhapur Dist. 58. 2002.

Annual erect herbs, appressed hairy. Leaves minutely hairy on both sides. Flowers in leaf opposed racemes. Corolla 3-lobed, pink; midlobe keeled, with a filiform pink appendage. Capsules obliquely notched, pubescent. Seeds oblong, black, densely clothed with brown hairs; strophiole glabrous, 3-fid.

Fls. & Frts.: Jun.-Jan.

Specimens examined: AMJ 1045

Frequent in grasses on rocky soils.

Polygala persicariifolia DC. Prodr. 1: 326. 1824; Bennet. in Hook.f. Fl. Brit. India 1: 202. 1872 (as *persicariifolia*); Cooke, Fl. Pres. Bombay 1: 63. 1958 (Repr. ed.); Banerjee in Sharma et al. Fl. India 2: 480. 1993; Lakshmi. & Venkanna in Singh et al.

Fl. Maharashtra St. Dicot. 1: 249. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 58. 2002.

Annual herbs. Leaves elliptic-lanceolate, mucronate, ciliate along margins. Flowers in terminal and extra axillary racemes. Calyx wings conspicuously nerved, petaloid. Corolla pink or rose coloured, as long as wings.. Capsules strongly ciliated on margins. Seeds oblong-elliptic, 3-4 mm long, black, densely covered with white hairs.

Fls. & Frts.: June-Feb.

Specimen examined: CBS 1051

Ocassional in shady places.

CARYOPHYLLACEAE Juss.

Polycarpea Lam. (nom. cons.)

Polycarpea corymbosa (L.) Lam. Tab. Encycl. 2: 129. 1797; Edg. in Hook.f. Fl. Brit. India 1: 245. 1874; Cooke, Fl. Pres. Bombay 1: 70. 1958 (Repr. ed.); Majumdar in Sharma et al. Fl. India 2: 549. 1993; Shirodkar in Singh et al. Fl. Maharashtra St. Dicot. 1: 253. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 58. 2002. *Achyranthus corymbosa* L. Sp. Pl. 205. 1753.

Annual erect, dichotomously branched, pubescent herbs. Leaves mucronate, pseudovercillate. Flowers small, numerous, in dense terminal dichotomous cymes arranged in corymbis, Corolla-5, reddish brown. Stamens-5. Capsules 3-valved; entire, brown. Seeds reniform.

Fls. & Frts.: Aug.-Nov.

Specimen examined: AMJ 1253

Ocassional on hill slopes.

PORTULACACEAE Juss.

Portulaca L.

Portulaca oleracea L. Sp. Pl. 445. 1753; T. Dyer in Hook.f. Fl. Brit. India 1: 246. 1874; Cooke, Fl. Pres. Bombay 1: 72. 1958 (Repr. ed.); Rao in Sharma et al. Fl. India 3: 4. 1993; Shirodkar in Singh et al. Fl. Maharashtra St. Dicot. 1: 261. 2000. 1753; Yadav & Sardesai, Fl. Kolhapur Dist. 60. 2002. Ghol.

Annual erect herbs or decumbent, succulent herbs; stem reddish, 10-40 cm long. Leaves subopposite. Flowers in terminal clusters subtended by 2-8 involucral leaves. Corolla yellow. Stamens 7-12. Capsules ovoid. Seeds many, reniform, shining.

Fls. & Frts.: Through out year.

Specimen examined: AMJ 1052

Occasional in moist places.

ELATINACEAE Dumortier

Bergia L.

Bergia ammannioides Roxb. ex Roth, Nov. Pl. Sp. 219. 1821; T. Dyer in Hook.f. Fl. Brit. India 1: 251. 1874; Cooke, Fl. Pres. Bombay 1: 77. 1958 (Repr. ed.); Bhattacharya in Sharma et al. Fl. India 3: 33. 1993; Cooke, Aquat. Wed. Pl. India 184. 1996; Godbole & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 1: 268. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 60. 2002.

Annual herbs, erect; stem glandular-pubescent, swollen at nodes. Leaves elliptic-lanceolate. Flowers few to many in axillary fascicles. Corolla reddish-pink. Stamens usually 5. Ovary subglobose, sulcate. Capsules reddish, 5-valved. Seeds numerous, minute, reticulated, pale brown.

Fls. & Frts.: Aug.-Apr.

Specimen examined: AMJ 1136

Occasional in marshy places.

MALVACEAE Juss.

1. Staminal column 5-toothed or armed at apex; antheriferous

throughout; fruit a capsule

Thespesia

1. Staminal column without teeth, apex split-up into filaments;

fruits a schizocarp, breaking into mericarps at maturity:

Sida

Sida L.

1. Mericarps indehiscent

S. acuta

1. Mericarps dehiscent

S. rhombifolia

Sida acuta Burm.f., Fl. Ind. 147. 1768; Cooke, Fl. Pres. Bombay 1: 98. 1958 (Repr. ed.); Paul in Sharma et al. Fl. India 3: 281. 1993; Venkanna & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 1: 325. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 73. 2002. *S. carpinifolia* auct. non L.f. 1785; Mast, in Hook.f. Fl. Brit. India 1: 323. 1874. Bala, Chikana.

Branched undershrubs. Leaves 1-9 x 0.5-2.5 cm, elliptic-lanceolate, serrate covered with minute stellate and rigid hairs. Flower solitary, axillary or in clusters of 2-3; calyx accrescent; corolla light yellow. Mericarps mostly with two mucros, occasionally with 2 awns. Seeds glabrous, dark brown.

Fls. & Frts.: Sept.-Feb.

Specimens examined: AMJ 1158

Frequent along roadsides and on wastelands.

Sida rhombifolia L. Sp. Pl. 684. 1753 emend Mast, in Hook.f. Fl. Brit. India 1: 323. 1874 var. ***rhombifolia***; Paul in Sharma et al. Fl. India 3: 289. 1993; Venkanna & Das

Das in Singh et al. Fl. Maharashtra St. Dicot. 1: 327. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 74. 2002. Bala.

Herbs or under shrubs, erect. Branches minutely stellately hairy. Leaves rhomboid, crenate-serrate. Flowers axillary, solitary or 1-2 together. Corolla yellow to pale orange. Fruits 5-6 mm across. Seeds smooth, black.

Fls. & Frts.: Sept.-Jan.

Specimens examined: AMJ 1176

Frequent along roadsides.

Thespesia Soland. ex Corr. (nom. cons.)

****Thespesia populanea*** (L.) Soland ex Corr. in Ann. Mus. Herb. Paris 9: 290, t. 8, f. 1. 1807; Mast. in Hook.f. Fl. Brit. India 1: 345. 1874; Cooke, Fl. Pres. Bombay 1: 121. 1958 (Repr. ed.); Paul in Sharma et al. Fl. India 3: 352. 1993; Venkanna & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 1: 330. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 74. 2002. *Hibiscus populneus* L. Sp. Pl. 694. 1753. Gul-Bhendi.

Trees large, evergreen, 5-6 m tall. Leaves 7-nerved, broadly ovate, Flowers axillary, solitary, 5-6 cm across. Epicalyx segments 3. Corolla yellow with pink purple center. Capsules globose. Seeds obovoid, angular, rounded at apex covered with yellowish brown hairs.

Fls. & Frts.: Aug.-Jan.

Specimen examined: AMJ 1236

Cultivated as an avenue tree.

BOMBACACEAE Kunth

Bombax L. (nom. cons.)

Bombax ceiba L. Sp. Pl. 511. 1753 p.p; Nayar & Biswas in Sharma et al. Fl. India 3: 398.1993; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 343. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 75. 2002. *B. malabaricum* DC. Prodr. 1: 479. 1824. Mast. in Hook.f. Fl. Brit. India 1: 349. 1874; Cooke, Fl. Pres. Bombay 1: 127. 1958 (Repr. ed.). *Salmaalina malabarica* (DC). Schott in Schott. & Endl. Melet. Bot. 35. 1832. Kate Savar.

A tall deciduous tree. Leaves large; leaflets 3-7, entire, glabrous. Flowers solitary or in clusters, showy. Calyx thick, usually 3-lobed, glabrous. Corolla lobes 5, bright or faint red, imbricate. Stamens 60-80 in 5 bundles. Ovary globose, stigma 5. Seeds pyriform, smooth embedded in creamy white fiber.

Fls. & Frts.: Jan.-June.

Specimen examined: CBS 1281

Occasional along the roadsides and on hills slopes.

TILIACEAE Juss.

- | | |
|--|-------------------|
| 1. Fruits prickly | <i>Triumfetta</i> |
| 1. Fruits not prickly | |
| 2. Petals glandular at base; fruits drupaceous | <i>Grewia</i> |
| 2. Petals eglandular at base; fruits capsular | <i>Corchorus</i> |

Corchorus (Tourn.) L.

Corchorus aestuans L. Syst. Nat. ed.10, 1079. 1759; Daniel & Chandra. in Sharma et al. Fl. India 3: 485. 1993; Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 1: 377. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 80. 2002. *C. acutangulus* Lam. Encycl. 2: 104. 1786; Mast, in Hook.f. Fl. Brit. India 1: 398. 1874; Cooke, Fl. Pres. Bombay 1: 160. 1958 (Repr. ed.).

Annual herb. Leaves ovate, hairy on both surfaces, apex acute. Inflorescence in leaf opposed cymes. Flowers yellow. Corolla notched at apex, spathulate. Capsules solitary or paired, 6-angled, 3 angles winged, truncate. Seeds truncate, dark brown.

Fls. & Frts.: Aug.-Feb.

Specimen examined: CBS 1187

Occasional along moist places.

Grewia L.

Grewia orbiculata Rott. in Ges. Naturf. Fr. Ber., Neue. Schr. 4: 205. 1803; Mast. in Hook.f. Fl. Brit. India 1: 386. 1874; Cooke, Fl. Pres. Bombay 1: 149. 1958 (Repr. ed.); Daniel & Chandra. in Sharma et al. Fl. Maharashtra St. Dicot. 1: 388. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 82. 2002.

Shrubs or small trees; young branches softly pubescent. Leaves broadly ovate to orbicular, minutely and irregularly serrate. Flowers in axillary, long peduncled cymes. Petals yellow, half as long as sepals; glands minute or obscure. Drupes globose, pilose, slightly 2-lobed, 8-10 mm in diam..

Fls. & Frts.: May-Oct.

Specimen examined: AMJ 1200

Occasional on hill slopes.

Triumfetta L.

Triumfetta rhomboidea Jacq., Enum. Syst. Pl. 22. 1760; Mast. in Hook.f. Fl. Brit. India 1: 395. 1874; Cooke, Fl. Pres. Bombay 1: 156. 1958 (Repr. ed.); Daniel & Chandra. in Sharma et al. Fl. India 3: 520. 1993; Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 1: 399. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 85. 2002.

PLATE - II



← **Capparis decidua**

Capparis divaricata →



← **Bombax ceiba**

Tribulus terrestris →



Perennial herbs. Leaves variable, rhomboid-ovate, stellate hairy, upper leaves shortly petiolate. Flowers in terminal or leaf opposed cymes. Corolla bright yellow, hairy at base. Stamens 8-15. Carpels globose, spines glabrous, bristle points hooked. *Fls. & Frts.*: July-Dec.

Specimen examined: AMJ 1184

Occasional along roadsides.

ELAEocarpaceae DC.

Muntingia (Plum.) L.

***Muntingia calabura** L. Sp. Pl. 509. 1753; Murthy in Singh et al. Fl. India 3: 570. 1993; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 411. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 87. 2002. Singapore cherry.

Small trees, branches spreading forming a crown; densely villous, glandular, pubescent. Leaves distichous, linear-lanceolate, acute at apex. Inflorescence sessile, supra axillary or solitary. Calyx 5, green, short, deciduous. Corolla 5, white. Stamens many. Berries green-red or yellowish; pulp juicy, sweet.

Fls. & Frts.: Through out year.

Specimen examined: AMJ 1251

Cultivated in gardens for shade.

ZYGOPHYLLACEAE R. Br.

Tribulus Tourn. ex L.

Tribulus terrestris L. Sp. Pl. 387. 1753; Edg. & Hook.f. in Hook.f. Fl. Brit. India 1: 423. 1874, p.p.; Cooke, Fl. Pres. Bombay 1: 170. 1958 (Repr. ed.); Singh & Singh in Hajra et al. Fl. India 4: 55. 1997; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 427. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 89. 2002. Sarata. Fig. 3.

Prostrate or suberect silky-pubescent herb. Leaves opposite; abruptly pinnate, leaflets elliptic-oblong, hairy. Flowers axillary or leaf opposed. Corolla yellow, obovate, twice as long as Calyx. Fruits globose with 5 wooly, mericarps; lateral spines much longer. Seeds many, minute, oblong.

Fls. & Frts.: Feb.-Nov.

Specimen examined : CBS 1209

Common on rocky soil.

OXALIDACEAE R. Br.

1. Erect plants with a crown of leaves; leaves pinnate;

capsules ellipsoid; seeds tubercled

Biophytum

1. Prostrate plants with scattered leaves; leaves

3-foliolate; capsules linear-oblong; seeds striated

Oxalis

Biophytum DC.

Biophytum sensitivum (L.) DC. Prodr. 1: 690. 1824; Edg. & Hook.f. in Hook.f. Fl. Brit. India 1: 436. 1874, p.p.; Cooke, Fl. Pres. Bombay 1: 177. 1958 (Repr. ed.); Manna in Hajra et al. Fl. India 4: 238. 1997; Kulkarni in Singh et al. Fl. Maharashtra St. Dicot. 1: 436. 2000. *Oxalis sensitiva* L. Sp. Pl. 434. 1753; Yadav & Sardesai, Fl. Kolhapur Dist. 91. 2002.

Annual herbs, erect, pubescent herbs. Leaves abruptly pinnate; leaflets 4-15 pairs, oblong entire, glabrous. Flowers in terminal or axillary peduncled cymes. Corolla yellow, shortly clawed. Filaments in 2-whorls of 5 each, connate at base. Capsules slightly longer than the sepals. Seeds globose, irregularly tubercled.

Fls. & Frts.: July-Dec.

Specimen examined : CBS 1092

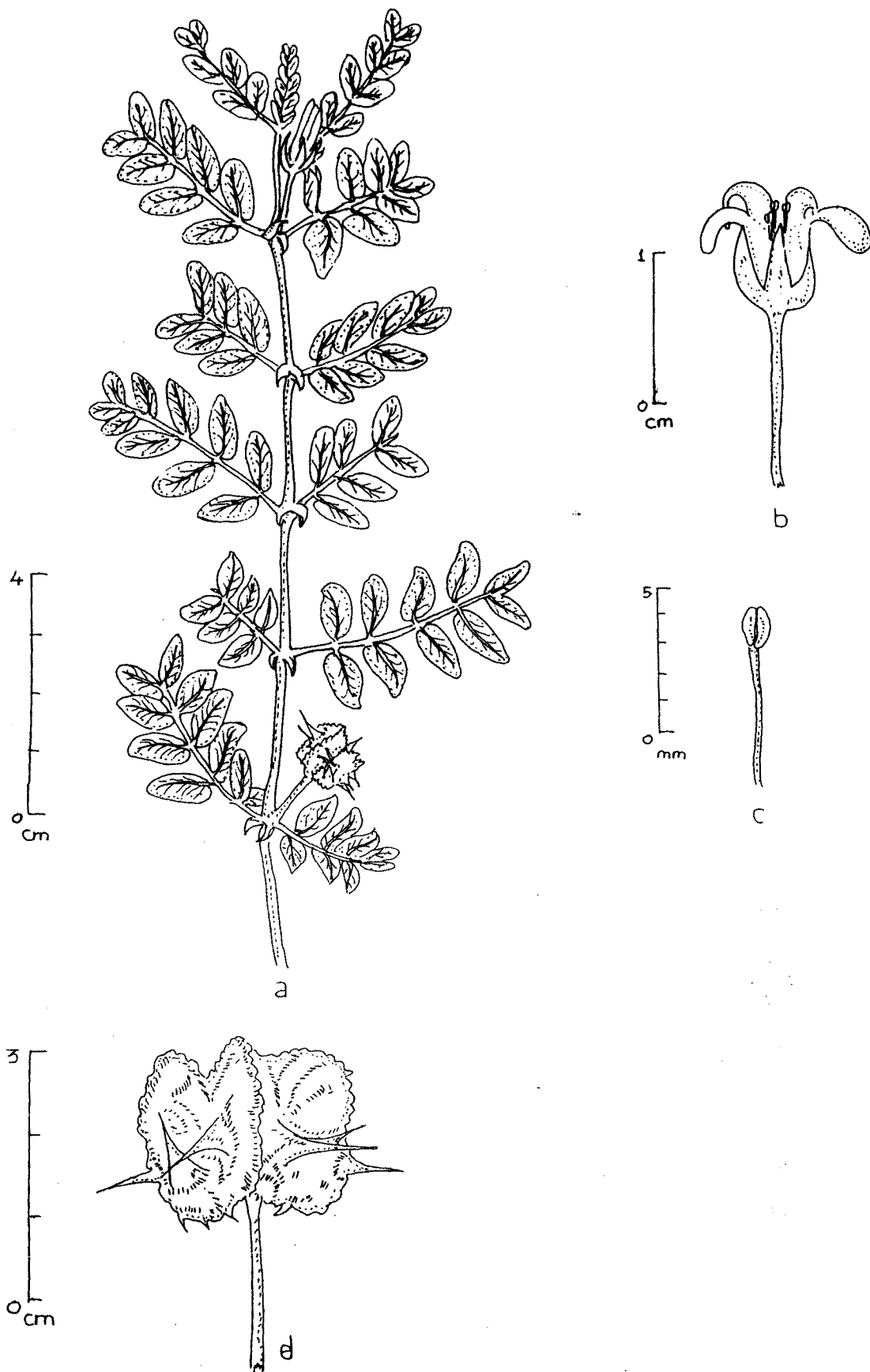


Fig. No. 3.: *Tribulus terrestris* L..

a. Habit; b. Flower; c. Stamen; d. Fruit.

Occasional in grasslands and in wet fields.

Oxalis L.

Oxalis corniculata L. Sp. Pl. 435. 1753 var. **corniculata**; Edg. & Hook.f. in Hook.f. Fl. Brit. India 1: 436. 1874; Cooke, Fl. Pres. Bombay 1: 177. 1958 (Repr. ed.); Manna in Hajara et al. Fl. India 4: 242. 1997; Kulkarni in Singh et al. Fl. Maharashtra St. Dicot. 1: 437. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 91. 2002. Ambuti.

Perennial herbs, procumbent. Stems creeping and rooting at the nodes, branches erect or ascending. Leaves digitately 3-foliolate; leaflets subsessile. Flowers in umbellate cymes. Calyx lanceolate-oblong, hairy outside. Corolla yellow. Filaments in 2 whorls of 5 each, connate at base. Ovary oblong; styles distinct, stigma papillose. Capsules oblong, narrowed at apex, pubescent. Seeds transversely ribbed.

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1260

Occasional in wet, shady places.

BALSAMINACEAE Rich.

Impatiens L.

Impatiens balsamina L. Sp. Pl. 938. 1753; Edg. & Hook.f. Fl. Brit. India 1: 453. 1874; Cooke, Fl. Pres. Bombay 1: 184. 1958 (Repr. ed.); Vivekananthan et al. in Hajara et al. Fl. India 4: 123. 1997; Mudliar & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 1: 445. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 93. 2002.

Annual herbs. Leaves alternate, elliptic-lanceolate, narrowed, acuminate. Flowers 1-3 together, in leaf axils. Corolla often pink or rosy, unequal, small, orbicular, horned; wings broad, the lateral lobes rounded, lip small boat shaped.

Stamens 5. Capsules tomentose. Seeds reticulate, grey-brown.

Fls. & Frts.: Mar-Oct.

Specimen examined: CBS 1094

Frequent in moist places.

RUTACEAE Juss.

1. Leaves pinnate

Limonia

1. Leaves 1-3-foliolate

Aegle

Aegle Corr. (nom. cons.)

****Aegle marmelos*** (L.) Corr. in Trans. Linn. Soc. London 5: 223. 1800; Hook.f. Fl. Brit. India 1: 516. 1875; Cooke, Fl. Pres. Bcmabay 1: 204. 1958 (Repr. ed.); Jadhav in Singh et al. Fl. Maharashtra 1: 464. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 97. 2002. *Crateva marmelos* L. Sp. Pl. 444. 1753. Bel.

Trees, armed with strong straight sharp spines. Leaves usually 3-foliolate; lateral leaflets subsessile, terminal one long petioluled. Flowers greenish white in axillary short panicles. Calyx lobes pubescent, 4-lobed, lobes rounded. Corolla lobes-4, distinct, greenish white. Stamens numerous. Ovary glabrous, ovoid. Fruit globose, rind yellowish green; pulp sweet, orange colcured.

Fls. & Frts.: Apr.-Sept.

Specimen examined:

Cultivated near temple.

Limonia L.

****Limonia acidissima*** L. Sp. Pl. ed. 2, 1: 554. 1762; Cooke, Fl. Pres. Bombay 1: 184. 1958 (Repr. ed.); Nayar in Hajra et al. Fl. India 4: 294. 1997; Jadhav in Singh et al. Fl. Maharashtra St. Dicot. 1: 471. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 100. 2002.

Feronia elephantum Corr. in Trans. Linn. Soc. London 5: 225. 1800; Hook.f. Fl. Brit. India 1: 516. 1875; Cooke *loc. cit.* 203. Kavath.

Trees, 10-15 m tall; branchlets with sharp, straight, long spines. Leaves imparipinnate; petiole and rachis flat, narrowly winged; leaflets 3-9. Flowers in lateral or terminal, lax panicles. Calyx small, with 5-6 triangular lobes. Corolla greenish or dull red. Fruits globose; pericarp woody. Seeds ovoid, compressed, embedded in brownish pulp.

Fls. & Frts.: Mar.-Sept.

Specimen examined: AMJ 1219

Cultivated.

SIMAROUBACEAE DC.

Ailanthus Desf. (nom. cons.)

**Ailanthus excelsa* Roxb. Pl. Corom. 1: 24, t. 23. 1795; Bennet. in Hook.f. Fl. Brit. India 1: 518. 1875; Cooke, Fl. Pres. Bombay 1: 205. 1958 (Repr. ed.); Basak in Hajra et al. Fl. India 4: 410. 1997; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 489. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 102. 2002.

Trees. Leaves pinnate, 20-50 cm long or more; leaflets 8-14 pairs, alternate or subopposite, variable in shape, apex acute or acuminate, base unequal. Flowers in large, lax much branched panicles. Samara lanceolate, acute at both ends, reddish brown. Seed solitary.

Fls. & Frts.: Nov.-Apr.

Specimen examined: AMJ 1198

Cultivated.

BALANITACEAE Endl.

Balanites Del.

Balanites aegyptiaca (L.) Del. in Descr. Egypt. Hist. nat. 2: 221, t. 28. f. 1.1813; Singh & Singh in Hajra et al. Fl. India 4: 40. 1997; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 491. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 102. 2002. *Ximenia aegyptiaca* L. Sp. Pl. 1194. 1753. *Balanites roxburghii* Planch., Ann. Sci. Nat. Bot. ser. 4. 2: 258. 1854; Bennet. in Hook.f. Fl. Brit. India 1: 522. 1875; Cooke, Fl. Pres. Bombay 1: 207. 1958 (Repr. ed.). Hinganbet.

Shrubs or trees; younger parts pubescent, spines axillary, straight. Leaves bifoliolate; leaflets elliptic-obovate, apex acute, base rounded. Flowers small, greenish-white, fragrant, in axillary cymes or fascicles. Drupes, ovoid, woody, 5-grooved, yellowish. Seeds ovoid.

Fls & Frts.: Nov.-Apr.

Specimen examined: CBS 1195

Occasional along roadsides.

BURSERACEAE Kunth.

Boswellia Roxb. ex Colebr.

Boswellia serrata Roxb. ex Colebr. in Asiat. Res. 9: 379. t. 5. 1807; Bennet. in Hook.f. Fl. Brit. India 1: 518. 1875; Cooke, Fl. Pres. Bombay 1: 210. 1958 (Repr. ed.); Chitra & Henry in Hajra et al. Fl. India 4: 432. 1997; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 494. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 103. 2002. Salai.

Deciduous middle-sized trees with thin papery bark. Leaves odd pinnate; leaflets 8-15 pairs; opposite, basal pair much smaller than others, crenate, pubescent. Flowers in

axillary racemes. Corolla dull or greenish white. Stamen-10. Capsules trigonous, 3-valved, valves separating from the pyrenes; pyrenes bony, 1-seeded.

Fls & Frts.: Jan.-June.

Specimen examined: CBS 1272

Common on hill slopes.

MELIACEAE Juss.

- | | |
|--|--------------------|
| 1. Locules of ovary many ovuled; seeds winged | <i>Swietenia</i> |
| 1. Locules with 1-2 ovules; seeds not winged: | |
| 2. Fruits more than 1-seeded; seeds albuminous | <i>Melia</i> |
| 2. Fruits 1-seeded; seeds exalbuminous | <i>Azadirachta</i> |

Azadirachta Juss.

Azadirachta indica Juss. in Mem. Mus. Hist. Nat. 19: 220. t. 12. f. 5. 1830; Cooke, Fl. Pres. Bombay 1: 220. 1958 (Repr. ed.); Jain & Bennet. in Hajra et al. Fl. India 4: 478. 1997; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 502. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 105. 2002. *Melia azadirachta* L. Sp. Pl. 385. 1753; Hiern in Hook.f. Fl. Brit. India 1: 544. 1875. Kadu Nimb, Neem.

Tall trees; bark cracked. Leaves simply pinnate; leaflets ovate lanceolate, oblique at base, crowded at the ends of branches. Flowers in axillary panicles. Stamens 10, united. Ovary glabrous, 3-celled, ovules 2 in each cell. Stigma 3-toothed. Drupes yellow, 1-seeded, ovoid. Seeds solitary, ellipsoid.

Fls. & Frts.: Feb.-Sept.

Specimen examined: AMJ 1191

Common along roads sides.

Melia L.

Melia azedarach L. Sp. Pl. 384. 1753; Hiern in Hook.f. Fl. Brit. India 1: 544. 1875; Cooke, Fl. Pres. Bombay 1: 218. 1958 (Repr. ed.); Jain & Bennet. in Hajra et al. Fl. India 4: 494. 1997; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 505. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 107. 2002. Limbara.

Moderate sized trees. Leaves alternate, 2-3 pinnate; pinnae alternate or opposite, leaflets 3-11, opposite. Flowers fragrant, in axillary panicles. Corolla 5, white with purple tips. Stamens 10, tube dark purple, toothed. Ovary globose, 5-6 locular. Drupes subfleshy. Seeds elliptic.

Fls. & Frts.: Feb.-Aug.

Specimen examined: AMJ 1100

Occasional along road side.

Swietenia Jacq.

***Swietenia mahogoni** (L.) Jacq. Enum. Pl. Carib. 20. 1760; Jain & Bennet. in Hajra et al. Fl. India 4: 525. 1997; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 513. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 108. 2002. *Cedrela mahogani* L. Syst. Nat. ed. 10. 940. 1759. Mahogani.

Tall trees. Leaves unipinnate; leaflets 3-4 pairs. Flowers sweet smelling, in narrow, supra-axillary panicles. Corolla greenish-white. Staminal tube urceolate, toothed. Fruit woody, Seeds winged, dark brown.

Fls. & Frts.: Mar.-Oct.

Specimen examined: CBS 1293

Cultivated as an avenue tree.

CELASTRACEAE R. Br.

1. Fruits capsular, dehiscent:

2. Scandent shrubs; flowers paniculate, polygamous;

ovary free

Celastrus

2. Erect shrubs; flowers solitary, axillary or fascicled,

hermaphrodite; ovary confluent with disc

Maytenus

1. Fruits drupaceous, indehiscent

Cassine

Cassine L.

Cassine glauca (Rottb.) O. Ktze. Rev. Ge. Pl. 1: 114. 1891; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 520. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 111. 2002. *Mangifera glauca* Rottb. Nye. Samml. Kongel. Norske Vid. Selsk. Skr. 2: 534, t. 4. f. 1. 1783. *Elaeodendron glaucum* (Rottb.) Pers. Syn. 1: 241. 1805; Law. in Hook.f. Fl. Brit. India 1: 623. 1875, p.p.; Cooke, Fl. Pres. Bombay 1: 248. 1958 (Repr. ed.).

Shrubs. Leaves opposite and alternate. Flowers numerous in axillary or extra axillary, paniculate, dichotomously branched cymes. Corolla greenish white. Stamens 4-5, inserted beneath the margin of disk. Drupes ovoid, apiculate. Seeds 2.

Fls. & Frts.: Mar.-Oct.

Specimen examined: AMJ 1199

Occasional on hill slopes.

Celastrus L.

Celastrus paniculatus Willd. Sp. Pl. 1: 1125. 1798; Law. in Hook.f. Fl. Brit. India 1: 617. 1875; Cooke, Fl. Pres. Bombay 1: 245. 1958 (Repr. ed.); Londhe in Singh et al. Fl. Maharashtra 1 : 521. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 111. 2002. Malkangani.

A climbing unarmed scandent shrub; branches covered with pale lenticular warts. Leaves alternate, crenate-serrate in upper half, entire in lower half. Flowers in terminal

panicles. Stamens inserted on the margin of the disc. Ovary globose, stigma 3-lobed. Capsules subglobose, transversely wrinkled, 3- valved. Seeds ovoid, dark brown.

Fls. & Frts.: Feb. -Dec.

Specimen examined: AMJ 1189

Occasional along road side.

Maytenus Molina emend Bose

Maytenus senegalensis (Lam.) Excell. in Bot. Soc. Brot. 2, 26: 223. 1952; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 525. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 113. 2002. *Celastrus senegalensis* Lam. Encycl. 1: 400. 1763. *Maytenus emarginata* (Willd.) Ding Hou in van Steenis, Fl. Malesiana ser. I, 6 (2): 241. 1962. *Celastrus montana* Roth, in R. & S. Syst. Veg. 5: 427. 1819. *Gymnosporia montana* Benth., Fl. Austral. 1: 400. 1863; Law. in Hook.f. Fl. Brit. India 1: 621. 1875; Cooke, Fl. Pres. Bombay 1: 247. 1958 (Repr. ed.). Hekal.

Shrubs; branches spinescent bearing leaves and flowers. Leaves broadly elliptic, coriaceous, rounded at apex. Flowers in short axillary, branched cymes. Corolla white. Stamens 4-5, filaments dilated at the base. Disk fleshy, 10-lobed. Fruits fleshy, pericarp black, globose, 3-valved. Seeds brown, arillate.

Fls. & Frts.: Sept.-Feb.

Specimen examined: CBS 1186

Occasional on hill slopes.

RHAMNACEAE Juss.

Ziziphus Mill.

1. Flowers in sessile cymes; styles 2-cleft, connate middle:

2. Plants unarmed; leaves glabrous beneath; disc not pitted *Z. glabrata*

2. Plants armed; leaves tomentose beneath; disc pitted

Z. mauritiana

1. Flowers in pedunculate cymes; styles 3-cleft, distinct

Z. xylopyra

Zizyphus glabrata Heyne. ex Roth, Nov. Pl. Sp. 159. 1821; Law in Hook.f. Fl. Brit. India 1: 633. 1875; Bhandari & Bhansal in Nayar Fasc. Fl. India 20: 96. 1990; Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 1: 543. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 116. 2002. *Z. trinervia* Roxb. Fl. Ind. 606. 1820 and 1: 606. 1832 non poir 1813; Cooke, Fl. Pres. Bombay 1: 256. 1958 (Repr. ed.).

Small unarmed trees; young branches pubescent. Leaves ovate-oblong, glabrous on both surfaces. Flowers in axillary peduncled cymes. Corolla greenish-yellow. Stamens-5, slightly longer than petals. Disk 10-lobed. Drupes globose. Stone rugose, 2-celled.

Fls. & Frts.: June-Oct.

Specimen examined: CBS 1266

Occasional along hill slopes and stream banks.

Zizyphus mauritiana Lam. Encycl. 3: 319. 1789; Pradhan in Singh et al. Fl. Maharashtra 1: 544. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 116. 2002. *Zizyphus jujuba* (L.) Gaertn. Fruct. 1: 203. 1788 non Mill. 1768; Law. in Hook.f. Fl. Brit. India 1: 632. 1875; Cooke, Fl. Pres. Bombay 1: 256. 1958 (Repr. ed.). *Rhamnus jujuba* L. Sp. Pl. 194. 1753. Bor.

A small much branched thorny tree; young branches softly white tomentose. Leaves ovate-elliptic, rounded at both ends, glabrous above. Flowers in axillary, many flowered, sub-umbellate cymes. Calyx lobes pubescent. Corolla lobes greenish, spatulate, deflexed with the stamens. Disk 10 lobed. Drupes yellow or orange, stone longitudinally grooved, 2-celled.

Fls. & Frts.: Sept. -Jan.

Specimen examined: AMJ 1307

Occasional along hill slopes.

Zizyphus xylopyra (Retz.) Willd. Sp. Pl. 1: 1104. 1798; Law. in Hook.f. Fl. Brit. India 1: 634. 1875; Cooke, Fl. Pres. Bombay 1: 258. 1958 (Repr. ed.); Bhandari & Bhansal in Nayar et al. Fasc. Fl. India 20: 112. 1990; Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 1: 546. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 118. 2002. *Rhamnus xylopyra* Retz. Obs. Bot. 2: 11. 1781.

A small glabrescent trees; young branches armed with stipular spines. Leaves elliptic-oblong or suborbicular; oblique at base; stipular spines in pairs of one straight and other hooked. Flowers 4-5 merous, in short axillary cymes. Corolla greenish-white, spathulate with long claws, shorter than the calyx. Disk 5-angled. Drupes globose, woody, grey, tomentose. Stone hard, 2-3 celled, 2-3 seeded.

Fls. & Frts.: Mar.-June

Specimen examined: AMJ 1297

Occasional on hill slopes.

VITACEAE Juss.

Cissus L.

Cissus repens Lamk. Encycl. 1: 31. 1789; Kulkarni in Singh et al. Fl. Maharashtra St. Dicot. 1: 559. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 121. 2002. *Vitis repens* (Lam.) Wight & Arn. Prodr. 125. 1834; Law in Hook.f. Fl. Brit. India 1: 646. 1875; Cooke, Fl. Pres. Bombay 1: 265. 1958 (Repr. ed.).

Slender, scandent, glabrous shrubs; tendrils forked. Leaves ovate-oblong, membranous, acuminate. Flowers in compound umbellate, extra axillary cymes. Calyx

membranous, truncate. Corolla-4, greenish-white. Berries pyriform, black when ripe, 1-seeded, smooth.

Fls. & Frts.: Feb.-Apr.

Specimen examined: AMJ 1180

Occasional on rocky soil.

SAPINDACEAE Juss.

1. Leaves compound; petals present; stamens inserted

within the disc.

Cardiospermum

1. Leaves simple; petals absent; stamens inserted

outside the disc

Dodonea

Cardiospermum L.

Cardiospermum helicacabum L. Sp. Pl. 366. 1753; Hiern in Hook.f. Fl. Brit. India 1: 670. 1875; Cooke, Fl. Pres. Bombay 1: 280. 1958 (Repr. ed.); Kulkarni in Singh et al. Fl. Maharashtra St. Dicot. 1: 571. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 124. 2002. Kapal Phodi. Fig. 4.

Slender, climbing tendrilar herb. Leaves alternate, 2-ternate. Leaflets ovate-lanceolate. Flowers in umbellate tendriferous cymes on axillary peduncles; peduncles with 2 tendrils at top. Corolla 4, white. Stamens 8. Capsules trigonous, brown. Seeds globose, arillate.

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1172

Occasional in shady places.

Dodonea Miller

Dodonea angustifolia L.f. Suppl. Pl. 218. 1781; Yadav & Sardesai, Fl. Kolhapur Dist. 124. 2002. *D. burmanniana* DC. Prodr. 1: 616. 1824. *D. viscosa* auct. non Jacq. 1760; Hiren in Hook.f. Fl. Brit. India 1: 697. 1875; Cooke, Fl. Pres. Bombay 1: 287. 1958 (Repr. ed.). Bandukicha pala.

Shrubs or small trees; young parts glandular-pubescent. Leaves oblanceolate, subsessile, entire, margins often revolute. Flowers unisexual, in axillary or terminal cymes. Corolla absent. Stamens 5-10. Ovary 3-angled. Capsules orbicular, with wide marginal wings, glabrous. Seeds compressed, brown or black.

Fls. & Frts.: June-Jan.

Specimen examined: CBS 1211

Occasional on hill slopes.

ANACARDIACEAE Lindl.

1. Leaves simple:

2. Styles 3 or more:

3. Flowers unisexual; stamen 5-6; style 3; carpel 3;

drupe seated on fleshy receptacle

Semecarpus

3. Flowers bisexual; stamens 8-10; style 5-6; carpels

5; drupe not seated on fleshy receptacle

Buchanania

2. Style single

Mangifera

1. Leaves compound:

4. Unarmed trees

Lannea

4. Armed shrubs

Rhus

Buchanania Spreng.

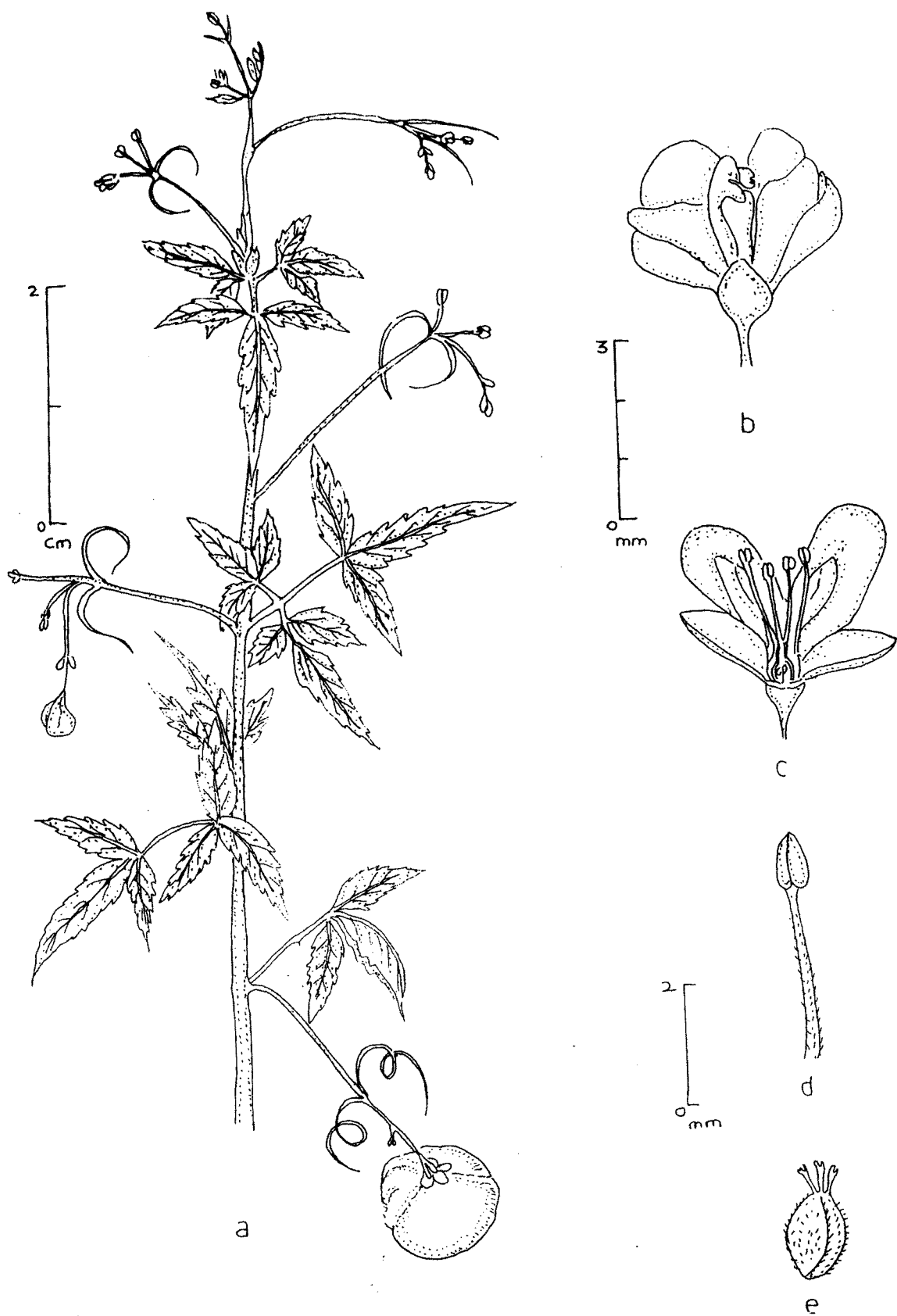


Fig. No. 4.: *Cardiospermum helicacabum* L.

a. Habit; b. Flower; c. V. S. of Flower; d. Stamen; e. Pistil.

Buchanania cochinchinensis (Lour.) Almeida, Fl. Mah. 1: 287. 1996; Prasanna in Singh et al. Fl. Maharashtra St. Dicot. 1: 582. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 128. 2002. *Toluifera cochinchinensis* Lour. Fl. Cochinch. 262. 1790. *Buchnanian lanzan* Spreng. J. Bot. (Schrard.) 2: 234. 1800; Cooke, Fl. Pres. Bombay 1: 293. 1958 (Repr. ed.). *B. latifolia* Roxb. Fl. Ind. 2: 385. 1832; Hook.f. Fl. Brit. India 2: 23. 1876. Charoli.

Small trees; young parts silky pubescent. Leaves thickly coriaceous, broadly oblong, glabrous above, densely pubescent beneath. Flowers sessile, in terminal and axillary panicles. Bracts small, caducous. Corolla-5, greenish-white. Stamens 10, shorter than petals. Disk fleshy, 5-crenate. Drupes obliquely reniform, black. Stone hard, 2-valved.

Fls. & Frts.: Feb.-May

Specimen examined: AMJ 1238

Frequent on hill slopes.

Lannea Rich. (nom. cons.)

Lannea coromandelica (Houtt.) Merr., J. Arn. Arb. 19: 353. 1939; Prasanna in Singh et al. Fl. Maharashtra St. Dicot. 1: 584. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 128. 2002. *Dialium coromandelicum* Houtt., Nat. Hist. II, 2. 39, t. 5, f. 2. 1774. *Odina wodier* Roxb. Fl. Ind. 2: 293. 1832; Hook.f. Fl. Brit. India 2: 29. 1876; Cooke, Fl. Pres. Bombay 1: 296. 1958 (Repr. ed.). Shimati.

Small trees; bark ash colored. Leaves imparipinnate; leaflets ovate-oblong, 3-5 pairs and an odd one. Flowers crowded in cymose fascicles along racemes; male racemes compound, pendulous; female raceme simple, pedicels very short, bracts ovate, pubescent outside. Calyx divided to the base; lobes ovate. Ovary ovoid-oblong, in the males rudimentary. Drupes reniform, compressed, reddish-brown.

Fls. & Frts.: Feb.-Apr.

Specimen examined: AMJ 1172

Frequent on hill slopes.

Mangifera L.

***Mangifera indica** L. Sp. Pl. 200. 1753; Hook.f. Fl. Brit. India 2: 13. 1876; Cooke, Fl. Pres. Bombay 1: 291. 1958 (Repr. ed.); Prasanna in Singh et al. Fl. Maharashtra 1: 584. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 128. 2002. Amba.

Large evergreen trees. Leaves crowded at the ends of branches, oblong-lanceolate, coriaceous. Flowers polygamous in terminal panicles. Calyx lobes ovate, pubescent. Corolla lobes 4-5, oblong, free or adnate to disc. Stamens 1-5, inserted just within disk or on it, usually only one perfect and much longer than others. Drupe large, fleshy, obliquely pyriform, stone compressed, fibrous; seed oblong, very hard.

Fls. & Frts.: Dec.-Feb.

Specimen examined: AMJ 1203

Cultivated.

Rhus L.

Rhus sinuata Thunb. Prodr. Fl. Ceylon. 52. 1794; Naik. Fl. Marathwada 1: 234. 1998. *R. mysurensis* G. Don, Gerr. Syst. 2: 74. 1832; Hook.f. Fl. Brit. India 2: 9. 1876; Cooke, Fl. Pres. Bombay 1: 290. 1958 (Repr. ed.); Prasanna in Singh et al. Fl. Maharashtra St. Dicot. 1: 585. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 129. 2002.

Shrubs. Branches thorny; young parts densely pubescent. Leaves 3 or rarely 5-foliate; leaflets obovate, cuneate at base, pubescent on both surfaces. Flowers minute, in small axillary panicles. Calyx pubescent outside with 4-6 ovate lobes. Corolla greenish

PLATE - III



← **Boswellia serrata**

**Celastrus
paniculatus** →



← **Buchanania
cochinchinensis**

**Semecarpus
anacardium** →



white, 4-6, subacute. Disk 5-lobed. Ovary globose, 1-locular. Drupes globose, brownish-black, glabrous, shining. Seeds reniform, yellowish.

Fls. & Frts.: June-Sept.

Specimen examined: AMJ 1220

Common on hill slopes.

Semecarpus L.f.

Semecarpus anacardium L.f. Suppl. Pl. 182. 1781; Hook.f. Fl. Brit. India 2: 30. 1876; Cooke, Fl. Pres. Bombay 1: 296. 1958 (Repr. ed.); Prasanna in Singh et al. Fl. Maharashtra St. Dicot. 1: 586. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 129. 2002. Bibba.

Trees. Leaves alternate, coriaceous, obovate-oblong, grey-tomentose beneath. Flowers small, polygamous in terminal panicles. Calyx lobes hairy outside. Corolla lobes 5-6. Stamens 5-6, inserted at the base of disc, imperfect in female flowers. Ovary subglobose, densely pilose, crowned with 3 styles. Drupes smooth and shining, black when ripe, seated on a fleshy, edible, orange coloured thalamus.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1239

Occasional along road sides.

MORINGACEAE Dumort.

Moringa Adans.

***Moringa oleifera** Lamk. Encycl. 1: 398. 1785; Prasanna in Singh et al. Fl. Maharashtra 1: 590. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 130. 2002. *M. pterygosperma* Gaertn., Fruct. 2: 314. 1791; Hook.f. Fl. Brit. India 2: 45. 1876; Cooke, Fl. Pres. Bombay 1: 301. 1958 (Repr. ed.). Shevaga.

A small or middle sized tree with corky bark. Leaves 3-4 pinnate and pinnules opposite, elliptic, obovate. Flowers in large lax terminal panicles. Calyx cup shaped 5 lobed; segments petaloid. Corolla lobes white, spathulate. Stamens 5, fertile, alternating with staminodes. Pods obtusely triangular, ribbed. Seeds 3-angled, winged.

Fls. & Frts.: Almost throughout year.

Specimen examined: AMJ 1081

Cultivated.

FABACEAE Lindl. (nom.alt.)

[PAPILIONACEAE Giseke (nom. cons.)]

1. Stamen monadelphous:

2. Anthers dimorphous:

3. Pods dehiscent, not jointed *Crotalaria*

3. Pods indehiscent, jointed:

4. Leaves 2-foliolate; calyx tube short;

joints of pod 2-6; echinate *Zornia*

4. Leaves 3-foliolate; calyx tube long;

joints of pod 1-12; rugose *Stylosanthes*

2. Anthers unimorphous:

5. Trees:

6. Leaflets alternate; pods not woody *Dalbergia*

6. Leaflets opposite; pods woody *Pongamia*

5. Herbs or shrubs:

7. Leaves imparipinnate; pods flat *Dalbergia*

7. Leaves abruptly pinnate; pods turgid *Abrus*

1. Stamens diadelphous:

8. Large, erect shrubs or trees:

9. Leaves 3-foliolate:

10. Petals very unequal in length; pods

turgid, moniliform

Erythrina

10. Petals subequal in length; pods flat

Butea

9. Leaves pinnate

Gliricidia

8. Herbs or twining shrubs:

11. Pods distinctly jointed:

12. Calyx not glumaceous; pods flattened

Desmodium

12. Calyx glumaceous; pods turgid or if

compressed then sutures not indentate

Alysicarpous

11. Pods not jointed:

13. Pods turgid

Indigofera

13. Pods flattened

Tephrosia

Abrus Adans.

Abrus precatorius L. Syst. Nat. ed. 2, 2: 472. 1767; Baker in Hook.f. Fl. Brit. India 2: 175. 1876; Cooke, Fl. Pres. Bombay 1: 382.1958 (Repr. ed.); Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 597. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 133. 2002. Gunj.

Perennial twinner. Stem scarcely woody, slender with terete branches. Leaves pinnate, thickened and hairy at base; leaflets 10-20 pairs, opposite. Flowers in many flowered raceme. Calyx lobes glabrous or silky, teeth very short. Corolla lobes pink or white with a pink tinges. Stamens monadelphous. Pods oblong, turgid with sharp

deflexed beak, silky pubescent. Seeds globose, red or white and with or without black spot, shining.

Fls. & Frts.: Sept.-Jan.

Specimen examined: CBS 1099

Rare in hedges.

Alysicarpus Desvaux (nom. cons.)

- | | |
|---|---------------------|
| 1. Calyx much shorter than first joint of pod | <i>A. vaginalis</i> |
| 1. Calyx much longer than first joint of pod: | |
| 2. Plants diffuse or procumbent; stem glabrescent | |
| or sparsely pubescent; racemes | |
| dense axillary | <i>A. glumaceus</i> |
| 2. Plants stout; stem densely pubescent or villous; | |
| racemes lax, axillary and terminal | <i>A. heyneanus</i> |

Alysicarpus glumaceus (Vahl) DC. Prodr. 2: 353. 1825; Sanjappa. Legumes of India 78.1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 601. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 135. 2002. *Hedysarum glumaceum* Vahl, Symb. Bot. 2: 106. 1791. *Alysicarpus rugosus* (Willd.) DC. Prodr. 2: 353. 1825; Baker in Hook.f. Fl. Brit. India 2: 159. 1876; Cooke, Fl. Pres. Bombay 1: 371. 1958 (Repr. ed.). *Hedysarum rugosum* Willd. Sp. Pl. 3: 1172. 1802.

Annual herbs. Leaves 1-foliolate; leaflets ovate-lanceolate. Flowers appressed to rachis, crowded in dense spicate racemes. Corolla deep pink. Pods moniliform, turgid, 3-6-jointed, joints transversely ribbed, glabrous.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1075

Common along roadsides.

Alysicarpus heyneanus Wight & Arn., Prodr. 1: 234. 1834; Sanjappa, Legumes of India 78. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 601. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 135. 2002. *A. rugosus* (Willd.) DC. var. *heyneanus* (Wight & Arn.) Baker in Hook.f. Fl. Brit. India 2: 159. 1876; Cooke, Fl. Pres. Bombay 1: 371. 1958 (Repr. ed.).

Annual herbs. Suberect or diffuse. Leaves 1-foliolate, elliptic-oblong or obovate-oblong, with long sticky hairs. Flowers in axillary and terminal racemes, in close pairs. Corolla pink or deep red. Pods 3-5-jointed, apiculate, moniliform; densely transversely rugose. Seeds ellipsoid, brown.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1096

Occasional amidst grasses.

Alysicarpus vaginalis (L.) DC. Prodr. 2: 353. 1825 var. **nummularifolius** Miq. Fl. Ind. Bat. 1: 232. 1855; Baker in Hook.f. Fl. Brit. India 2: 158. 1876; Cooke, Fl. Pres. Bombay 1: 369. 1958 (Repr. ed.); Sanjappa, Legumes of India 81. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 609. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 137. 2002. *Hedysarum Vaginalis* L. Sp. Pl. 746. 1753.

Annual herbs; stems spreading or ascending. Leaves 1-foliolate. Leaflets very variable in shape and size. Flowers in close pairs in 6-12 flowered racemes. Corolla deep rose coloured, slightly exerted. Pods subterete, 3-8 jointed, glabrous, black.

Fls. & Frts.: Sept.-Dec.

Specimen examined: AMJ 1018

Occasional on hill slopes and along roadsides.

Butea Roxb. ex Willd. (nom. cons.)

Butea monosperma (Lamk.) Taub., Engl. & Prantl., Pflanzenf. 3 (3): 365. 1894; Kothari in Singh et al. Fl. Maharashtra St. Dicot.1: 610. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 137. 2002. *Erythrina monosperma* Lam. Encycl.1: 371. 1785. *Butea frondosa* Koen. ex Roxb. in Asiat. Res. 3: 469. 1792; Baker in Hook.f. Fl. Brit. India 2: 194. 1876; Cooke, Fl. Pres. Bombay 1: 395. 1958 (Repr. ed.). Palas.

An erect deciduous tree with crooked trunk, bark ash^{*}coloured, fissured. Leaves 3-foliolate; leaflets obovate, ovate-rhomboid. Flowers large in dense rigid racemes; densely brown velvety. Calyx olive green, densely velvety outside clothed with silky hairs. Corolla salmon or orange coloured, clothed outside with silky hairs. Pods stalked, one seeded, reticulately veined, silvery tomentose.

Fls. & Frts.: Mar.-June

Specimen examined: AMJ 1061

Frequent on hill slope.

Crotalaria L.

1. Plants prostrate, trailing or decumbent; racemes

1-few-flowered:

2. Pods silky hairy

C. hebecarpa

2. Pods glabrous

C. filipes

var. *filipes*

1. Plants erect or diffuse; racemes many flowered

C. Nana

Crotalaria filipes Benth. in Hook. Lond. J. Bot. 2: 475. 1843 var. **filipes**; Baker in Hook.f. Fl. Brit. India 2: 66. 1876; Cooke, Fl. Pres. Bombay 1: 312. 1958 (Repr. ed.);

Sanjappa, Legumes of India 120. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 629. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 141. 2002.

Annual herbs. Prostrate, silky pubescent. Stems slender. Leaves spathulate, ovate-oblong, or ovate-elliptic. Stipules absent. Flowers distant in leaf opposed or extra axillary, 1-3 flowered racemes. Corolla yellow, exserted. Pods stalked. Seeds 6-10, ovate, reniform.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1056

Occasional amidst grasses.

Crotalaria hebecarpa (DC.) Rudd. in Phytologia 54: 28. 1983; Sanjappa, Legumes of India 121. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 631. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 142. 2002. *Goniogyna hebecarpa* DC. Ann. Sci. Nat. Paris 4: 92. Jan. 1825. *Heylandia latebrosa* DC. Mem. Leg. 201. 1826; Baker in Hook.f. Fl. Brit. India 2: 65. 1876; Cooke, Fl. Pres. Bombay 1: 310. 1958 (Repr. ed.). Godhadi.

Annual herbs, prostrate, hairy. Leaves ovate, oblique at base. Flowers axillary, solitary, subsessile. Corolla yellow, much exserted. Pods oblong, flat, silky hairy, pale brown, 1-2-seeded. Seeds reniform.

Fls. & Frts.: July-Feb.

Specimen examined: AMJ 1097

Frequent on rocky soil.

Crotalaria nana Burm.f., Fl. Ind. 156, t. 48, f. 2. 1768; Baker in Hook.f. Fl. Brit. India 2: 71. 1876, p.p.; Cooke, Fl. Pres. Bombay 1: 315. 1958 (Repr. ed.); Sanjappa, Legumes of India 125. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 642. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 143. 2002. Khulkhula.

Annual, herbs. Stems and branches clothed with long spreading hairs. Leaves oblong-lanceolate, minutely silky-pubescent on both surfaces, base cuneate; stipules absent. Flowers small, usually in crowded capitate racemes. Corolla not exerted, with a tuft of hairs at the back below the apex. Pods globose, black when ripe, scarcely exceeding the calyx. Seeds 6-10, dark brown, reniform.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1097

Occasional in open grasslands.

Dalbergia L.f. (nom. cons.)

***Dalbergia sissoo** Roxb. ex DC. Prodr. 2: 416. 1825 and Roxb. in Fl. Ind. 223. 1832; Baker in Hook.f. Fl. Brit. India 2: 231. 1876; Cooke, Fl. Pres. Bombay 1: 421. 1958 (Repr. ed.); Sanjappa, Legumes of India 140. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 662. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 146. 2002. Shisav, Shisham.

Trees; bark greyish-brown, rough. Leaves 3-5-foliolate; leaflets ovate or suborbicular, alternate. Flowers subsessile, in axillary panicles, shorter than the leaves. Corolla creamy-white. Pods strap shaped. Seeds 1-4.

Fls. & Frts.: Sept.-Dec.

Specimen examined: AMJ 1205

Cultivated along road sides.

Desmodium Desv.

Desmodium dichotomum (Willd.) DC. Prodr. 2: 336. 1825; Sanjappa, Legumes of India 152. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 670. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 148. 2002. *Hedysarum dichotomum* Willd. Sp. Pl. 3 (2):

1180. 1802. *H. diffusum* Willd., loc. cit. *Desmodium diffusum* (Willd.) DC. Prodr. 2: 336. 1825; Baker in Hook.f. Fl. Brit. India 2: 169. 1876; Cooke, Fl. Pres. Bombay 1: 377. 1958 (Repr. ed.). Chikta.

Annual herbs. Stems angular, deeply grooved, clothed with white long, spreading soft hairs. Leaves 3-foliolate; Leaflets elliptic or obovate; stipules linear, foliaceous, amplexicaulate, auricled. Flowers in 2-3 flowered fascicles along axillary and terminal racemes. Corolla pink. Pods 3-6 jointed, clothed with hooked hairs, faintly reticulate veined.

Fls. & Frts.:Feb.-June

Specimen examined: AMJ 1098

Occasional in hedges.

Erythrina L.

1. Calyx spathaceous, not at all splitting into two lips,

splitting down back to the base; bark smooth

E. variegata

1. Calyx not spathaceous, splitting into two lips;

bark deeply cracked

E. suberosa

Erythrina suberosa Roxb.Fl. Ind. 3: 253. 1832; Baker in Hook.f. Fl. Brit. India 2: 189. 1876; Cooke, Fl. Pres. Bombay 1: 392. 1958 (Repr. ed.); Sanjappa, Legumes of India 173.1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 682. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 150. 2002 Pangara.

Small trees. Bark deeply cracked with stout prickles. Leaves 3-foliolate; leaflets rhomboid-ovate to ovate-cordate. Flowers in dense spicate racemes at the end of branches. Corolla scarlet or orange red. Pods stalked, subterete, glabrous. Seeds oblong.

Fls. & Frts.: Feb.-May

Specimen examined: AMJ 1248

Occasional along roadsides and on hill slope.

***Erythrina variegata** L. Stickm. Herb. Amb. 10. 1754 & Amoen. Acad. 4: 122. 1759; Sanjappa, Legumes of India 173. 1991; Kothari in Singh et al. Fl. Maha. St. Dicot. 1: 683. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 150. 2002. *E. indica* Lam. Encycl. 2: 391. 1876; Baker in Hook.f. Fl. Brit. India 2: 188. 1876; Cooke, Fl. Pres. Bombay 1: 390. 1958 (Repr. ed.). Pangara.

Medium sized trees. Bark smooth or prickly. Leaves 3-foliolate; leaflets broadly rhomboid, ovate. Flowers in terminal, horizontally spreading, spicate racemes appearing before leaves. Corolla bright red. Pods subcylindric, distinctly torulose. Seeds 6-8, subreniform, brown.

Fls. & Frts.: Feb.-June

Specimen examined: AMJ 1208

Cultivated.

Gliricidia H., B. & K.

***Gliricidia sepium** (Jacq.) Kunth ex Steud. Nom. Bot. (ed. 2) Walp. Repert. Syst. 1: 679. 1842; Sanjappa, Legumes of India, 182. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 770. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 151. 2002. *Robinia sepium* Jacq. Enum. Pl. Carib. 28. 1760. *Gliricidia maculata* H., B. & K. Nov. Gen. et Sp. 6: 393. 1823. Undirmari.

Deciduous trees. Bark smooth, greenish-brown, lenticellate. Leaves pinnate; leaflets 7-17, linear, pendulous, ovate-oblong or lanceolate. Flowers crowded in 5-16 cm long, erect or drooping racemes. Corolla pink or white, twice as long as the calyx. Pods stiptate, broadly linear. Seeds yellowish brown.

Fls. & Frts.:Feb.-June

Specimen examined: AMJ 1233

Cultivated on hill slopes.

Indigofera L.

1. Leaves cordate at base, mucronate; pods 2-seeded *I. cordifolia*

1. Leaves not cordate at base, acute or obtuse; pods

1-seeded *I. linifolia*

var. *campbellii*

Indigofera cordifolia Heyne ex Roth, Nov. Pl. Sp. 357. 1821; Baker in Hook.f. Fl. Brit India 2: 93. 1876; Cooke, Fl. Pres. Bombay 1: 331. 1958 (Repr. ed.); Sanjappa, Legumes of India 187. 1991 and in Hajra et al. Fasc. Fl. India 21: 45.1995; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 701. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 153. 2002. Godhadi.

Annual, erect or procumbent herbs, profusely branched. Stem long. Leaves simple, ovate-cordate, subsessile. Flowers in dense, sessile, 4-8 flowered heads. Corolla bright red, not exserted; standard spathulate. Pods densely pubescent. Seeds 2, yellow.

Fls. & Frts.: July-Nov.

Specimen examined: AMJ 1062

Occasional in grasses.

Indigofera linifolia (L.f.) Retz. var. **campbellii** Wight, Ic. t. 313. 1840; Cooke, Fl. Pres. Bombay 1: 331. 1958 (Repr. ed.); Yadav & Sardesai, Fl. Kolhapur Dist. 154. 2002 .

Annual herbs, prostrate. Leaves ovate-lanceolate, acute at both ends. Flowers in dense, axillary racemes. Corolla bright red, 2-3 times as long as calyx. Pods globose, 1-seeded.

Fls. & Frts.: July-Nov.

Specimen examined: CBS 1093

Occasional near wet places.

Pongamia Vent.

Pongamia pinnata (L.) Pierre, For. Fl. Cochinch. Sub. t. 385. 1899; Sanjappa, Legumes of India 230. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 728. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 158. 2002. *Cytisus pinnatus* L. Sp. Pl. 741. 1753. *Pongamia glabra* Vent. Jard. Malm. t. 28. 1803; Baker in Hook.f. Fl. Brit. India 2: 240. 1876; Cooke, Fl. Pres. Bombay 1: 429. 1958 (Repr. ed.). Karanj.

Trees; branches drooping. Leaves pinnate; leaflets opposite, 5-7, broadly ovate or elliptic. Flowers in axillary racemes, shorter than leaves. Corolla pinkish-white. Pods elliptic- oblong, thick, compressed, woody. Seeds reddish-brown, reniform, rugose.

Fls. & Frts.: Mar.-Aug.

Specimen examined: AMJ 1216

Occasional along streams and roadsides.

Stylosanthes Sw.

Stylosanthes fruticosa (Retz.) Alst. in Trim. Handb. Fl. Ceylon 6: 77. 1931; Sanjappa, Legumes of India 254. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 747. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 163. 2002. *Arachis fruticosa* Retz.. Obs. Bot. 5: 26. 1788. *Stylosanthes mucronata* Willd. Sp. PL. 3: 1166. 1802 nom. illeg.; Baker in Hook.f. Fl. Brit. India 2: 148. 1876; Cooke, Fl. Pres. Bombay 1: 366. 1958 (Repr. ed.).

PLATE - IV



← **Abrus precatorius**

Butea monosperma →



← **Erythrina suberosa**

**Stylosanthes
fruticosa** →



Annual herbs. Leaves 3-foliolate; leaflets lanceolate. Flowers small, sessile in the axils of leaf like stipulate bracts and forming close terminal heads. Corolla twice the length of calyx, yellow. Pods very short.

Fls. & Frts.: Sept.-Nov.

Specimen examined: AMJ 1164

Occasional along roadsides.

Tephrosia Pers. (nom. cons.)

Tephrosia purpurea (L.) Pers. Syn. Pl. 2: 329. 1807; Baker in Hook.f. Fl. Brit. India 2: 112. 1876, p.p.; Cooke, Fl. Pres. Bombay 1: 346. 1958 (Repr. ed.); Sanjappa, Legumes of India 258. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 752. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 164. 2002. *Cracca purpurea* L. Sp. Pl. 752. 1753. Sharpunkha, Unhali.

Perennial herbs or undershrubs; woody at base, branches spreading, sparsely pillose. Leaves pinnate; leaflets 9-21. Flowers 2-4 together in extra axillary racemes. Corolla pink or pink-purple twice as long as the calyx. Pods curved at tip, glabrescent, 2-5 cm long. Seeds 5-7, pale brown.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1169

Occasional on rocky soil.

Zornia Gmel.

Zornia gibbosa Span. in Lannea 15: 192. 1841; Sanjappa, Legumes of India 280. 1991; Kothari in Singh et al. Fl. Maharashtra St. Dicot. 1: 767. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 167. 2002.

Annual herbs, much branched, prostrate or ascending Leaves 2-foliate; leaflets sessile, linear-lanceolate, or ovate-lanceolate. Flowers in short, spicate racemes. Bracts foliaceous, dotted with black glands, produced below the insertion into spur, concealing the flowers. Calyx membranous; the two upper connate, ciliate at apex. Corolla yellow, twice as long as the calyx. Pods 1-6 jointed; joints compressed, spinous. Seeds reniform.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1066

Rare in marshy places.

CAESALPINIACEAE R. Br.

1. Leaves pinnately compound; calyx divided

to base or below the disc:

2. Leaves unipinnately compound:

3. Petals 5; stamens 5-10

Cassia

3. Petals 3; others two reduced to scale; stamens 3

Tamarindus

2. Leaves 2-3-innately compound:

4. Sepals valvate in bud:

5. Leaf rachis along with many pinnae

and leaflets; flowers large

Delonix

5. Leaf rachis very short with 2-6-pinnae

with many minute leaflets; flowers small

Parkinsonia

4. Sepals imbricate in bud:

6. Tall trees; never prickly; pods indehiscent

Peltophorum

6. Scandent shrubs or small trees; often

prickly; pods dehiscent

Caesalpinia

1. Leaves 1-foliolate, deeply lobed; calyx

gamosepalous beyond the disc

Bauhinia

Bauhinia L.

1. Fertile stamens 3-5

B. variegata

1. Fertile stamens 10

B. racemosa

***Bauhinia purpurea** L. Sp. Pl. 375. 1753; Baker in Hook.f. Fl. Brit. India 2: 284. 1878; Cooke, Fl. Pres. Bombay 1: 461. 1958 (Repr. ed.); Sanjappa, Legumes of India 5. 1991; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 780. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 168. 2002. Kanchan

Trees; branches stout. Leaves suborbicular, glabrous above, thinly puberulous beneath. Flowers fragrant, in terminal and axillary few colored racemes. Corolla purple, rose or white. Fertile stamens 3-4; filaments as long as petals. Pods linear, flat, pointed at both ends, glabrous. Seeds 10-10, brown, polished.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1265

Cultivated along road sides.

Bauhinia racemosa Lam. Encycl. 1: 390. 1785; Baker in Hook.f. Fl. Brit. India 2: 276. 1878; Cooke, Fl. Pres. Bombay 1: 459. 1958 (Repr. ed.); Moorthy in Singh et al. Fl. Maharashtra 1: 780. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 168. 2002. Apta.

Small trees; branches many, drooping. Leaves orbicular or suborbicular. Flowers in elongate racemes. Calyx lobes pubescent; tube very short. Corolla lobes narrowly oblanceolate, white or pale yellow. Stamens 10, all fertile. Ovary pubescent, stigma sessile. Pods stalked. Seeds 12-20, compressed, rounded at apex, black.

Fls. & Frts.: Mar.-Aug.

Specimen examined: AMJ 1217

Occasional on hill slopes.

Caesalpinia L.

Caesalpinia pulcherrima (L.) Sw., Obs. 166. 1791; Baker in Hook.f. Fl. Brit. India 2: 255. 1878; Cooke, Fl. Pres. Bombay 1: 440. 1958 (Repr. ed.); Sanjappa, Legumes of India 13. 1991; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 796. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 170. 2002. *Poinciana pulcherima* L., Sp. Pl. 380. 1750. Shankasur.

Shrubs glabrous, erect; branches often unarmed or with few weak prickles. Leaves bipinnate, pinnae 6-8 pairs; leaflets 8-12 pairs, oblong or obovate-oblong. Flowers in terminal racemes. Corolla yellow or red, orbicular, clawed; limb with fringed margin. Stamens 10, long exserted. Pods linear, flat. Seeds 8-10, smooth.

Fls. & Frts.: Through out the year.

Specimen examined: AMJ 1165

Cultivated and also occurring along roadsides.

Cassia L.

1. Trees:

2. Pods cylindric

C. fistula

2. Pods flat

C. siamea

1. Herbs or shrubs:

3. Stamens 5; staminodes absent

C. pumila

3. Stamens 10; staminodes present:

4. Fertile stamens 10, staminodes

absent; leaflets 40-60 pairs

C. mimosoides

4. Fertile stamens 7, staminodes 3; leaflets 3-12 pairs:

5. Herbs; leaflets 3 pairs:

6. Pods moniliform, 12 – 20 cm long, slightly

curved

C. tora

6. Pods moniliform, up to 6 cm long, straight

and erect

C. uniflora

5. Shrubs; leaflets 3 to 12 pairs

C. auriculata

Cassia auriculata L. Sp. Pl. 379. 1753; Baker in Hook.f. Fl. Brit. India 2: 263. 1878; Cooke, Fl. Pres. Bombay 1: 448. 1958 (Repr. ed.); Sanjappa, Legumes of India 14. 1991; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 785. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 171. 2002. Tarwad.

Shrubs, 1.1-2.5 m tall; branches pubescent. Leaflets elliptic-oblong; stipules auricled. Flowers in terminal and axillary racemes. Pods flat, thin papery, oblong, obtuse, mucronate, pale brown, deeply depressed between the seeds, pubescent. Seeds 10-20, ovate-oblong, purplish- brown, compressed.

Fis & Frts :Jan.-July

Specimens examined: AMJ 1252

Occasional along roadsides

Cassia fistula L. Sp. Pl. 377. 1753; Baker in Hook.f. Fl. Brit. India 2: 261. 1878; Cooke, Fl. Pres. Bombay 1: 444. 1958 (Repr. ed.); Moorthy in Singh et al. Fl. Maharashtra 1: 786. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 171. 2002. Bahava.

Trees; branches slender and spreading. Leaflets 4-8 pairs, ovate, coriaceous. Flowers in lax drooping racemes. Calyx pubescent, segments oblong, obtuse. Corolla

bright yellow; subequal. Stamens 10, all perfect. Pods cylindric, straight or slightly curved, black. Seeds many, dark brown, polished.

Fls.: Mar.-Aug. & *Frts.*: ripe in next year.

Specimen examined: AMJ 1247

Occasional on hill slopes.

Cassia mimosoides Lam. Encycl. 1: 648. 1785; Baker in Hook.f. Fl. Brit. India 2: 264. 1878; Cooke, Fl. Pres. Bombay 1: 454. 1958 (Repr. ed.); Sanjappa, Legumes of India 20. 1991; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 800. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 172. 2002.

Perennial herbs; branches hairy. Leaves pinnate; rachis slender; leaflets crowded and overlapping, 40-60 pairs, sessile, linear-oblong, glabrous. Flowers axillary, solitary or 2-3 together. Corolla yellow. Stamens 10, all perfect, alternately long and short. Pods linear, flat, straight. Seeds 15-25, compressed, brown, polished.

Fls. & Frts.: Oct.-Dec.

Specimen examined: CBS 1028

Occasional on hill slopes.

Cassia pumila Lam. Encycl. 1: 651. 1785; Baker in Hook.f. Fl. Brit. India 2: 266. 1878; Cooke, Fl. Pres. Bombay 1: 452. 1958 (Repr. ed.); Sanjappa, Legumes of India 19. 1991; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 789. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 172. 2002.

Annual herbs. Leaves pinnate; rachis hairy; petioles with a gland below the leaflets; leaflets subsessile, 10-20 pairs, linear-oblong. Flowers 1-3, supra axillary. Calyx divided to the base; pubescent on the back. Corolla yellow, obovate. Stamens 5,

subequal. Pods linear, oblong, slightly curved, flat, appressed hairy. Seeds 6-12, dark brown and shining.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1157

Occasional on hill slopes.

***Cassia siamea** Lam. *Encycl.* 1: 648. 1785; Baker in Hook.f. *Fl. Brit. India* 2: 264. 1878; Cooke, *Fl. Pres. Bombay* 1: 454. 1958 (Repr. ed.); Sanjappa, *Legumes of India* 20. 1991; Moorthy in Singh et al. *Fl. Maharashtra St. Dicot.* 1: 800. 2000; Yadav & Sardesai, *Fl. Kolhapur Dist.* 174. 2002. Kashid.

Trees, bark grey. Leaves abruptly pinnate; leaflets 6-14 pairs, ovate-elliptic, coriaceous. Flowers yellow in axillary and terminal racemes. Pods brown, beaked, compressed, broadly oblong. Seeds 20-30.

Fls. & Frts.: May-Mar.

Specimen examined: AMJ 1175

Planted along road sides.

Cassia tora L. *Sp. Pl.* 376. 1753; Baker in Hook.f. *Fl. Brit. India* 2: 263. 1878, p.p; Cooke, *Fl. Pres. Bombay* 1: 447. 1958 (Repr. ed.); Moorthy in Singh et al. *Fl. Maharashtra* 1: 791. 2000; Yadav & Sardesai, *Fl. Kolhapur Dist.* 174. 2002. Takla.

Annual herbs, foetid. Leaflets obovate-oblong, 3 pairs. Flowers in subsessile pairs, in the axils of leaves, crowded upwards. Calyx lobes glabrous, ovate, acute, spreading. Corolla lobes -5, yellow, subequal. Stamens 10, upper 3 reduced, 7 perfect. Pods subterete, often spreading. Seeds obliquely truncate at both ends, smooth.

Fls. & Frts.: Aug. -Dec.

Specimen examined: AMJ 1090

Occasional near marshy places.

Cassia uniflora Mill., Gard. Diet. ed. 8. no. 5. 1768 *non* Spreng; Sanjappa, Legumes of India 24. 1991; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 792. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 174. 2002. *C. sericea* Sw. Prodr. 66. 1788 & Fl. Ind. Occ. 2 (1): 724. 1798.

Annual herbs. Young parts pubescent. Leaflets opposite, obovate-oblong, base cuneate, apex rounded, apiculate. Flowers in subsessile pairs, in the axils of leaves, crowded upwards. Corolla yellow, subequal. Pods subcompressed. Seeds subquadrangular, rhomboidal, smooth, dull brown.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1084

Occasional along road sides.

Delonix Raf.

***Delonix regia** (Hook.) Raf. Fl. Tell. 2: 92. 1836; Sanjappa, Legumes of India 27. 1991; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 803. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 175. 2002. *Poinciana regia* Bojer ex Hook.f. in Curtis, Bot. Mag. 56: 5. t. 2884. 1829; Hook.f. Fl. Brit. India 2: 260. 1878; Cooke, Fl. Pres. Bombay 1: 442. 1958 (Repr. ed.). Gul Mohor.

Trees, bark grey. Leaves bipinnate, leaflets narrowly oblong, 6-35 pairs. Flowers in axillary racemes. Corolla red, the upper with white blotches, clawed with crisped orbicular limbs. Stamens 10, filaments long, red in the upper half. Pods linear-oblong, flattened, woody, dark brown. Seeds 10-50, dark brown.

Fls. & Frts.: Feb.-Nov.

Specimen examined: AMJ 1228

Planted along roadsides.

Parkinsonia L.

Parkinsonia aculeata L. Sp. Pl. 375. 1753; Baker in Hook.f. Fl. Brit. India 2: 260. 1878; Cooke, Fl. Pres. Bombay 1: 442. 1958 (Repr. ed.); Sanjappa, Legumes of India 33. 1991; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 804. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 175. 2002.

Large shrubs, armed. Leaves bipinnate, leaflets numerous, minute, oblanceolate, pinnae 1-3 pairs. Flowers in lax axillary racemes shorter than leaves. Corolla yellow. Stamens 10, filaments flattened, densely villous at base. Pods moniliform, narrowed at both ends. Seeds 1-6, oblong.

Fls. & Frts.: Nov.-June

Specimen examined: AMJ 1204

Rare along roadsides.

Peltophorum (Vogel) Walp.

* **Peltophorum pterocarpum** (DC.) Baker ex Heyne, Nutt. Pl. Ned. Ind. 2: 755. 1927; Sanjappa, Legumes of India 33. 1991; L. Sp. PL. 379. 1753; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 804. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 176. 2002. *Inga pterocarpa* DC. Prodr. 2: 441. 1825. *Peltophorum ferrugineum* Benth. Fl. Austr. 2: 279. 1864; Baker in Hook.f. Fl. Brit. India 2: 257. 1878.

Trees; young branches brown, tomentose. Leaflets 10-20 pairs, shining green and glabrous above, paler and brown pubescent beneath. Flowers in rather dense, terminal panicles shorter than the leaves. Corolla bright yellow, clawed with crispy margined limb. Stamens 10, filaments with the dense tuft of hairs at the base. Pods flat, red-brown, narrowly winged on both surfaces. Seeds 3-6, compressed, ellipsoid, brown.

Fls. & Frts.: Sept.-Mar.

Specimen examined: AMJ 1178

Planted as avenue tree along road sides.

Tamarindus L.

Tamarindus indica L. Sp. Pl. 34. 1753; Baker in Hook.f. Fl. Brit. India 2: 273. 1878; Cooke, Fl. Pres. Bombay 1: 457. 1958 (Repr. ed.); Sanjappa, Legumes of India 36. 1991; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 1: 794. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 176. 2002. Chinch.

Trees. Leaflets 10-20 pairs. Flowers in lax racemes. Calyx lobes glabrous, oblong, obtuse or subacute Corolla yellow, striped with red. Stamens 3, monadelphous. Pods subcompressed, brown, upto 12-seeded, obovoid-oblong.

Fls. & Frts.: July-Nov.

Specimen examined: AMJ 1227

Occasional along roadsides.

MIMOSACEAE R. Br.

1. Stamens indefinite:

2. Stamens monadelphous:

3. Pods turgid, arched, circinate or

variously twisted

Samanea

3. Pods thin, papery, slightly curved

Albizia

2. Stamens free

Acacia

1. Stamens definite, 4-10

Dichrostachys

Acacia P. Mill.

1. Flowers in globose heads

A. nilotica

1. Flowers in spikes:

2. Leaflets 30-50 pairs; calyx and corolla villous *A. catechu*

2. Leaflets 20-40 pairs; calyx and corolla glabrous *A. chundra*

Acacia catechu (L.f.) Willd. Sp. Pl. 4: 1079. 1806; Baker in Hook.f. Fl. Brit. India 2: 295. 1878; Cooke, Fl. Pres. Bombay 1: 476. 1958 (Repr. ed.); Sanjappa, Legumes of India 38. 1991; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 808. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 178. 2002. *Mimosa catechu* L.f. Suppl. Pl. 439. 1781. Khair, Kat.

Trees, 5-10 m tall. Leaves bipinnate, 24-25 cm long, pinnate 10-30 pairs, leaflets 30-50 pairs, 0.5 x 0.1 cm linear; stipular, spines hooked. Flowers pale yellow or greenish or white in spikes. Pods flat, brown, stalked, beaked, reticulately veined. Seeds 3-10.

Fls. & Frts.: June-Oct.

Specimens examined: AMJ 1227

Occasional along streams.

Acacia chundra (Roxb. ex Rottl.) Willd. Sp. Pl. 4: 1078. 1806; Sanjappa, Legumes of India 38. 1991; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 808. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 178. 2002. *Mimosa chundra* Roxb. ex Rotd, Ges. Naturf. Fr. Ber., Mag. Neue. Schr. 4: 207. 1803. *Acacia sundra* (Roxb.) DC. Prodr. 2: 458. 1825; Baker in Hook.f. Fl. Brit. India 2: 295. 1878 (*sundra*); Cooke, Fl. Pres. Bombay 1: 477. 1958 (Repr. ed.). *Acacia catechu* (Roxb. ex Rottl.) Willd. var. *sundra* (DC.) Prain in J. Asiat. Soc. Bengal 66: 508. 1898. Lal Khair.

Shrubs or small trees; bark dark coloured. Pinnae 20-30 pairs; leaflets 20-40 pairs, glabrous. Flowers pale yellow, in axillary 1-4-nate spikes. Stamens numerous,

much exerted. Ovary shortly stalked, style filiform. Pods brown, flat, brownish, beaked at apex. Seeds 3-10.

Fls & Frts : Aug.-Feb.

Specimen examined: AMJ 1175

Frequent along streams.

Acacia nilotica (L.) Willd. ex Del. ssp. **indica** (Benth.) Brenan, Kew Bull. 12: 84. 1957; Sanjappa, Legumes of India 42. 1991; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 813. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 179. 2002. *Mimosa nilotica* L. Sp. Pl. 4: 521. 1753. *Acacia arabica* (Lam.) Willd. Sp. PL. 4: 1085. 1806; Baker in Hook.f. Fl. Brit. India 2: 293. 1878; Cooke, Fl. Pres. Bombay 1: 472. 1958 (Repr. ed.). Babhul. Fig. 5.

Trees; bark deeply cracked. Pinnae 4-8 pairs; leaflets subsessile, 10-25 pairs. Flowers in globose heads in fascicles of 2-6. Corolla yellow. Pods flat, stalked constricted between the seeds. Seeds 6-10, brown.

Fls. & Frts.: June-Feb.

Specimen examined: CBS 1260

Frequent along road side.

Albizzia Duraz

***Albizzia lebbeck** (L.) Willd. Sp. Pl. 4: 1066. 1806; Baker in Hook.f. Fl. Brit. India 2 : 298. 1878; Cooke, Fl. Pres. Bombay 1: 481. 1958 (Repr. ed.); Sanjjapa, Legumes of India 56. 1991; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 816. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 180. 2002. *Mimosa lebbek* L. Sp. Pl. 576. 1753. Shirish.

Trees. Pinnae 2-4 pairs; leaflets 5-9 pairs, elliptic-oblong, cuneate at base, obtuse, glabrous above, glabrescent beneath. Flowers in globose heads, stalked, fragrant.

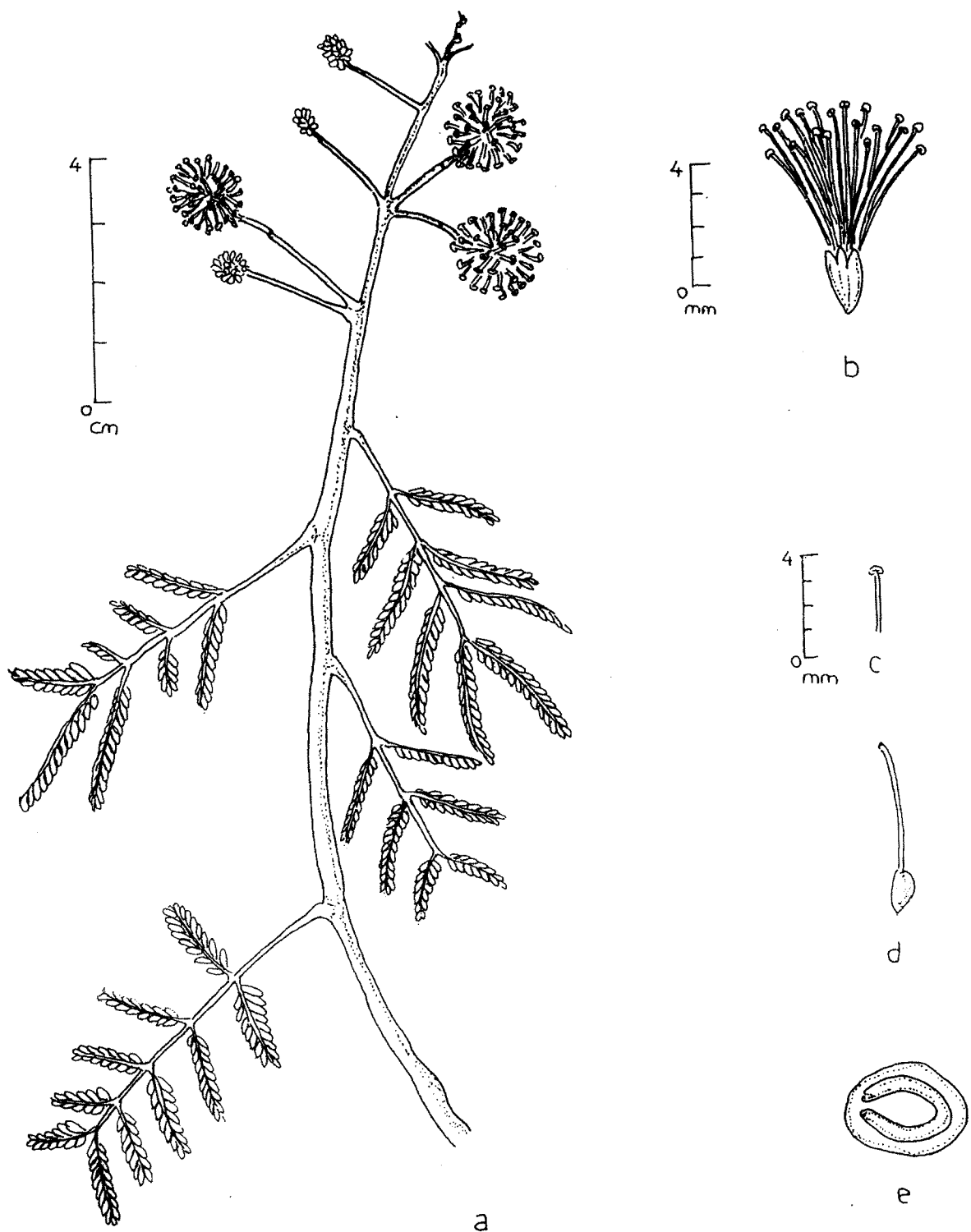


Fig. No. 5.: *Acacia nilotica* (L.) Willd.

a. Habit; b. Flower; c. Stamen; d. Pistil; e. C. S. of ovary.

Calyx pubescent. Corolla dull white. Stamens much longer than corolla; filaments connate at base. Pods oblong, flat, thin, straw coloured. Seeds 5-10, pale brown, smooth.

Fls. & Frts.: Apr.-Aug.

Specimen examined: AMJ 1026

Planted as avenue tree.

Dichrostachys (DC.) Wight & Arn. (nom. cons.)

Dichrostachys cinearea (L.) Wight & Arn. var. **indica** Brenan & Brummit in Bot. Soc. Borter 39: 111. 1935; Sanjappa, Legumes of India 65. 1991; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 819. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 181. 2002. *D. cinearea* (L.) Wight & Arn., Prodr. 271. 1834; Baker in Hook.f. Fl. Brit. India 2: 288. 1878; Cooke, Fl. Pres. Bombay 1: 468. 1958 (Repr. ed.). *Mimosa cinearea* L. Sp. Pl. 577. 1753. Durangi, Sigam Kati.

Large shrubs, armed with sharp straight thorns. Pinnae 3-12 pairs; leaflets 7-15 pairs, linear-oblong. Flowers dimorphic, in elongated spikes, the upper bisexual, the lower neuter. Bisexual flowers: Calyx 4-5 toothed. Corolla yellow, twice as long as the calyx. Stamens 8-10. Ovary many ovuled. Neuter flowers: Calyx and Corolla pale pink, longer than those of bisexual flowers. Staminodes 10 with long pink filaments. Pods curled or twisted, pubescent. Seeds 2-10, brown, smooth.

Fls. & Frts.: Apr.-Aug.

Specimen examined: AMJ 1023

Frequent along road sides and hill slopes.

Samanea Merr.

***Samanea saman** (Jacq.) Merr. in J. Wash. Acad. Sci. 6: 46. 1916; Sanjappa, Legumes of India 72. 1991; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 1: 828. 2000.

Mimosa saman Jacq. Fragm. 15, t. 9. 1809; Yadav & Sardesai, Fl. Kolhapur Dist. 183. 2002. *Pithecelobium saman* (Jacq.) Benth. in Hook. London J. Bot. 8: 216. 1844; Cooke, Fl. Pres. Bombay 1: 485. 1958 (Repr. ed.). Parjanya Vriksha.

Trees; branches spreading. Leaves bipinnate, rachis velvety pubescent; pinnae 4-6 pairs; leaflets 2-8 pairs, sessile. Flowers in long peduncled globose heads. Calyx tubular, hairy outside; teeth short, triangular-acute. Corolla pale-pink, lobes oblong. Stamens long exerted, filaments purple. Pods oblong, black, pendent. Seeds 6-10, embedded in brownish black sweet pulp.

Fls. & Frts.: Mar.-July

Specimen examined: AMJ 1235

Planted along road side.

CRASSULACEAE DC.

Kalanchoe Adans.

Kalanchoe pinnata (Lam.) Pers., Syn. Pl. 446. 1805; Godbole & Das Das in Singh *et al.* Fl. Maharashtra St. Dicot. 1: 842. 2000; Yadav & Sardesai, Fl. Kolhapur Dist. 186. 2002. *Cotyledon pinnata* Lam. Encycl. 2: 141. 1786. *Bryophyllum calycinum* Salisb., arad. London t. 3. 1805; Cl. in Hook.f. Fl. Brit. India 2: 413. 1878; Cooke, Fl. Pres. Bombay 1: 494. 1958 (Repr. ed.). Panphuti.

Erect herb, succulent, glabrous, stem obtusely 4-angled. Leaves variable, the lower usually simple, the upper often 3-7-foliolate. Flowers pendent from terminal corymbose cymes. Calyx striated, red and green at the base, pale green above. Corolla reddish, swollen at base, constricted in middle, twice as long as calyx lobes, triangular. Fruits enclosed in the persistent papery calyx and corolla. Seeds small, smooth.

Fls. & Frts.: Jan.-Apr.

PLATE - V



← Cassia auriculata

Cassia siamea →



← Acacia catechu

Dichrostachys
cinearea →



Specimen examined: AMJ 1127

Planted in garden.

COMBRETACEAE R. Br.

1. Corolla absent:

2. Flowers in spikes or racemes *Terminalia*

2. Flowers in globose heads *Anogeissus*

1. Corolla present:

3. Flowers cream-coloured in axillary panicle
spikes; pendulous; calyx tube straight constricted
above the ovary *Combretum*

3. Flowers white changing to red in terminal
corymbose cymes, pendulous; calyx tube
produced to a great length beyond ovary *Quisqualis*

***Anogeissus* (DC.) Guill. & Perr.**

Anogeissus latifolia (Roxb. ex DC.) Wall. ex Guill. & Perr. Fl. Seneg. Tent. 1: 280. 1832; Cl. in Hook.f. Fl. Brit. India 2: 450. 1878; Cooke, Fl. Pres. Bombay 1: 512. 1958. (Repr.); Diwakar in Singh et al. Fl. Maharashtra St. Dicot. 2: 1. 2001. *Conocarpus latifolia* Roxb. ex DC. Prodr.3: 17. 1828; Yadav & Sardesai, Fl. Kolhapur Dist. 189. 2002. Dhavada.

Trees. Leaves subopposite or alternate, elliptic-oblong. Flowers sessile in dense globose heads. Calyx tube short. Corolla absent. Stamens 10, biseriate, exerted. Style thickened at base, villosus. Fruits small, compressed, winged with a long beak, crowded in a globular head. Seed ovoid, solitary.

Fls. & Frts.: Sept.-Mar.

Specimen examined: AMJ 1257

Common on hill slopes.

Combretum Loefl. (nom.cons.)

Combretum latifolium Bl., Bijdr. 641. 1825; Diwakar in Singh et al. Fl. Maharashtra St. Dicot. 2: 3. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 190. 2002. *C. extensum* Roxb. ex Don, Trans. Linn. Soc. London 15: 414, 422. 1827; Cl. in Hook.f. Fl. Brit. India 2: 458. 1878; Cooke, Fl. Pres. Bombay 1: 515. 1958 (Repr.).

Scandent shrubs. Leaves opposite, ovate-elliptic. Flowers sessile usually in solitary dense spikes. Corolla yellowish white. Disk hairy. Ovary 4-gonous. Fruits indehiscent, suborbicular, yellowish, wing horizontally striate.

Fls. & Frts.: Jan.-May

Specimen examined: AMJ 1179

Occasional along streams.

Quisqualis L.

***Quisqualis indica** L. Sp. Pl. ed. 2, 1: 556. 1762; Cl. in Hook.f. Fl. Brit. India 2: 459. 1878; Cooke, Fl. Pres. Bombay 1: 517. 1958 (Repr.); Diwakar in Singh et al. Fl. Maharashtra St. Dicot. 2: 6. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 190. 2002. Madhumalati.

Large, straggling shrubs. Leaves opposite, elliptic-oblong. Flowers in terminal, corymbose spikes. Calyx tube green, pubescent outside. Corolla white, turning pink to deep red.

Fls.: Throughout the year.

Specimen examined: AMJ 1181

Planted in garden.

Terminalia L.

Terminalia elliptica Willd. Sp. Pl. 4: 969. 1806; Diwakar in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 5. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 191. 2002. *T. crenulata* Roth, Nov. Sp. Pl. 380. 1821. *Pentaptera crenulata* Roxb. Fl. Ind. 2: 438. 1832. *Terminalia tomentosa* Wight & Arn. var. *Crenulata* Cl. in Hook.f. Fl. Brit. India 2: 447. 1878. *T. tomentosa* Wight & Arn., Prodr. 314. 1834 non Mart; Cooke, Fl. Pres. Bombay 1: 510. 1958 (Repr. ed.). Ain.

Trees; bark black, rough, deeply cracked. Leaves elliptic or ovate-oblong, soft tomentose when young. Flowers in axillary spikes and terminal panicles. Calyx glabrous or pubescent. Disc brown hairy. Drupes with 5 broad glabrous, brown wings.

Fls. & Frts.: Mar. -Oct.

Specimen examined: AMJ 1229

Occasional on hill slopes.

MYRTACEAE Juss

1. Fruits capsule, loculicidally dehiscent at apex; leaves alternate *Eucalyptus*

1. Fruits a berry or drupe; leaves opposite *Syzygium*

Eucalyptus L' Herit.

***Eucalyptus globulus** Labill., Rel. Voy. Rech. Prouse 1: 153, t. 13. 1799; Kulkarni in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 18. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 192. 2002. Nilgiri.

Tree. Leaves lanceolate, Flowers axillary, solitary, large 1-3 together on a short peduncle. Calyx tube hard, bluish white. Lid of calyx and corolla conical. Fruits globular to conical, 4 ribbed.

Fls. & Frts.: Feb.-May

Specimen examined: AMJ 1215

Occasional along road sides.

Syzygium Gaertn.

Syzygium cumini (L.) Skeels, U.S. Dept. of Agric. Bur. Pl. Ind. Bull. 248: 25. 1912; Kulkarni in Singh et al. Fl. Maharashtra St. Dicot. 2: 10. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 193. 2002 *Myrtus cumini* L. Sp. PL. 471. 1753. *Eugenia jambolana* Lam. Encycl. 3: 198. 1789; Duthie in Hook.f. Fl. Brit. India 2: 499. 1879; Cooke, Fl. Pres. Bombay 1: 523. 1958 (Repr. ed.). Jambhul.

Trees, bark thick, rough. Leaves elliptic-oblong or ovate with acute apex. Flowers white, fragrant laxly paniced cymes. Corolla calyptrate. Fruits dark violet, oblong or ovoid, fleshy.

Fls. & Frts.: Mar.-July

Specimen examined: AMJ 1182

Occasional along streams.

LYTHRACEAE J. St. Hil.

1. Herbs; calyx membranous

Ammannia

1. Shrubs or Trees

Woodfordia

Ammannia L.

1. Stems and branches acutely angled; leaves narrowed
at base

A. baccifera

ssp. *baccifera*

1. Stems and branches more or less terete; leaves at least
lower, cordate and semi-amplexicaule at base

A. baccifera

ssp. *aegyptiaca*

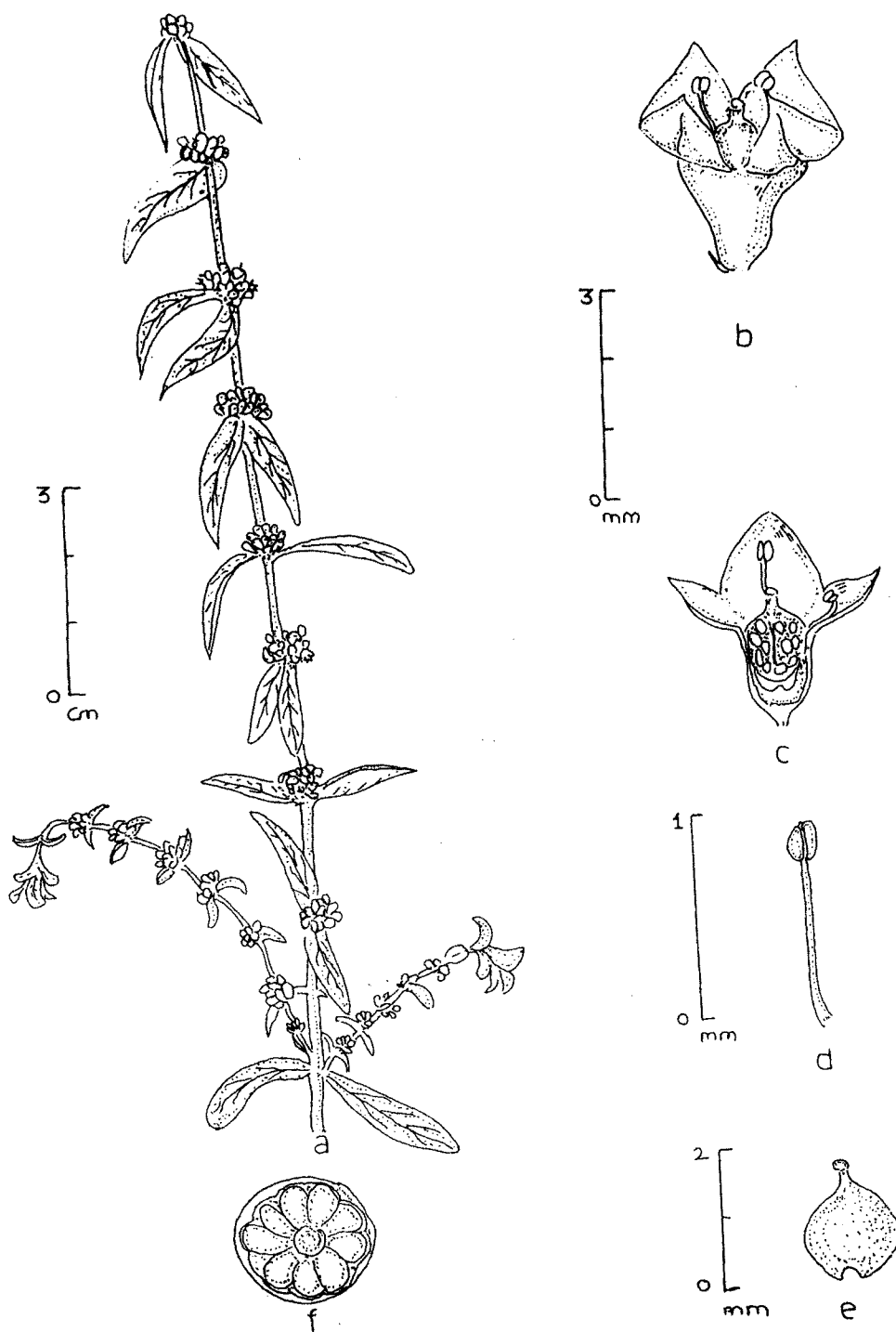


Fig. No. 6.: *Ammannia baccifera* L. subsp. *baccifera*;

a. Habit; b. Flower; c. V. S. of Flower; d. Stamen; e. Pistil; f. C. S. of ovary.

Ammannia baccifera L. Sp. Pl. 120. 1753 subsp. **baccifera**; Cl. in Hook.f. Fl. Brit. India 2: 569. 1879; Cooke, Fl. Pres. Bombay 1: 541. 1958 (Repr. ed.); Diwakar in Singh et al. Fl. Maharashtra St. Dicot. 2: 30. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 197. 2002. Dadmari. Fig. 6.

Annual herbs. Stems and branches acutely angled. Leaves sessile, linear-oblong or oblong-lanceolate, base attenuate- cuneate. Flowers numerous, densely clustered in axils. Calyx red, hemispheric. Capsules depressed globose, red, irregularly dehiscent. Seeds semi-obovoid, yellowish brown.

Fls. & Frts.: Aug.-Apr.

Specimen examined: CBS 1049

Occasional in Marshy places.

Ammannia baccifera L. subsp. **aegyptiaca** (Willd.) Koehne. in Engl. Pfreich. 17: 53. 1903; Diwakar in Singh et al. Fl. Maharashtra St. Dicot. 2: 30. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 197. 2002. *A. aegyptiaca* Willd. Enum. Pl. Hort. Berol 1: 6, t. 6.1803. *A. salirifolia* Hiern in Oliv. Fl. Trop. Africa 2: 278. 1871, non Monti 1767; Cl. in Hook.f. Fl. Brit. India 2: 569. 1879; Cooke, Fl. Pres. Bombay 1: 541. 1958 (Repr. ed.).

Annual herbs. Stems and branches more or less terete. Leaves sessile, linear-oblong or oblong-lanceolate, cordate at base. Flowers numerous, densely clustered in axils. Calyx red, hemispheric. Capsules globose red.

Fls. & Frts.: Aug.-Apr.

Specimen examined: CBS 1054

Occasional in Marshy places.

Woodfordia Salisb.

Woodfordia fruticosa (L.), Kurz in J. Asiat. Soc. Beng. 40: 56. 1871; Diwakar in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 39. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 202. 2002. *Lythrum fruticosum* L. Sp. Pl. ed. 2: 641. 1762. *Woodfordia floribunda* Salisb., Parad. Lond. t. 42. 1806; Cl. in Hook.f. Fl. Brit. India 2: 572. 1879; Cooke, Fl. Pres. Bombay 1: 543. 1958 (Repr. ed.). Dhaiti, Dhayati.

Shrubs. Leaves opposite, bifarious, ovate- lanceolate. Flowers in 2-15 flowered cymes in axils of leaves. Calyx bright red. Corolla red, slightly longer than calyx teeths, sometimes absent. Stamens 12. Capsules ellipsoid. Seeds numerous, brown, smooth.

Fls. & Frts.: Jan.-May.

Specimen examined: AMJ 1087

Frequent on slopes along road sides.

CUCURBITACEAE Juss.

Coccinia Wight & Arn.

Coccinia grandis (L.) Voigt, Hort. Suburb. Calc. 59. 1845; Madhusudan Rao in Singh *et al.* Fl. Maharashtra St Dicot. 2: 53. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 206. 2002. *Bryonia grandis* L. Mant. Pl. 1: 126. 1767. *Coccinia indica* Wight & Arn., Prodr. 1: 347. 1834; Cooke, Fl. Pres. Bombay 1: 572. 1958 (Repr. ed.). *Cephalandra indica* (Wight & Arn.) Naud. Ann. Sci. Nat. Bot. Ser. 5, 5: 16. 1859; Cl. in Hook.f. Fl. Brit. India 2: 621. 1879. Tondali. Fig. 7.

Climbers, with stem angular and slender tendrils. Leaves broadly ovate, minutely denticulate along margins, rarely dissected. Flowers white axillary, solitary. Corolla white. Fruits ellipsoid, rounded at both ends. Seeds compressed oblong, yellowish, smooth.

Fls. & Frts.: Mar.-Dec.

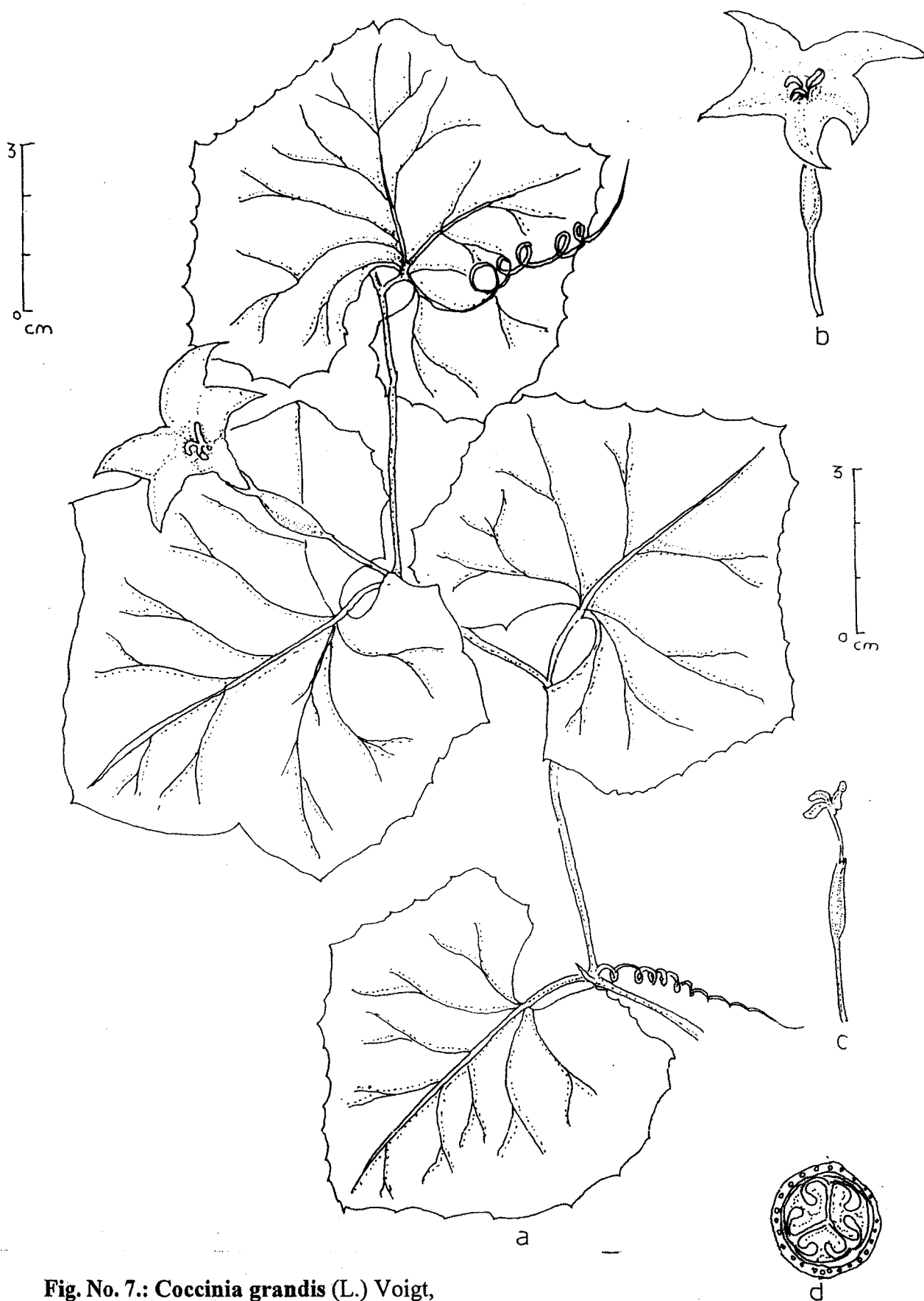


Fig. No. 7.: *Coccinia grandis* (L.) Voigt,

a. Habit; b. Pistillate flower; c. Pistil; e. C. S. of ovary.

Specimen examined: AMJ 1088

Occasional on bushes.

CACTACEAE Juss.

Opuntia P. Miller

Opuntia elatior Mill. Gard. Dict. ed. 8, 4. 1768; Singh *et al.* Fl. Maharashtra St. Dicot. 2: 83. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 214. 2002. *O. dillenii* Grah. Cat. 546. 1839 non How 1812; Cl. in Hook.f. Fl. Brit. India 2: 657. 1879; Cooke, Fl. Pres. Bombay 1: 587. 1958 (Repr. ed.). Nivdung.

Bushy shrubs; stem terete; branches flat, spinous, areoles, densely glochidiate, spines often 3-6 from areole. Flowers erecto-patent, solitary, along margins of joint. Calyx and corolla yellow. Petals longer than sepals, pink. Stamens included.

Fls. & Frts.: Aug.-Jan.

Specimen examined: AMJ 1237

Rare on rocky soil.

MOLLUGINACEAE Hutch.

Mollugo L.

Mollugo pentaphylla L. Sp. Pl. 89. 1753 var. **pentaphylla**; Cooke, Fl. Pres. Bombay 1: 594. 1958 (Repr. ed.); Yadav and Sardesai, Fl. Kolhapur Dist. 217. 2002. *M. stricta* sensu Hook.f. Fl. Brit. India 2: 663. 1879 non L., 1762; Kamble & Lakshmi. in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 94. 2001.

Annual erect or diffuse, herbs; stems numerous; branches dichotomous. Leaves in whorls of 4-9; obovate-obtuse or oblanceolate. Flowers in terminal cymes pseudoracemes. Stamens 3. Stigmas 3. Capsules subglobose. Seeds numerous, reniform, compressed, black.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1076

Occasional near moist places.

APIACEAE Lindl.

Pimpinella L.

Pimpinella wallichiana (Miq. ex Hohen.) Gandhi in Sald. & Nicols. in Fl. Hassan Dt. 417. 1976; Pradhan in Singh et al. Fl. Maharashtra State 2: 102. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 220. 2002. *Heliscidium wallichianum* Miq. ex Hohen., Bot. Zeit. 7: 775. 1849. *Pimpinella monoica* Dalz. in Hook. J. Bot. & Kew Gard. Misc. 3: 212. 1851; Cl. in Hook.f. Fl. Brit. India 2: 687. 1879; Cooke, Fl. Pres. Bombay 1: 602. 1958 (Repr. ed).

Perennial herbs. Lower leaves pinnately 3-foliolate, upper leaves often dissected into numerous setaceous linear segments. Flowers in compound umbels. Primary umbels with 6-12 rays Partial umbels 8-20-flowered. Corolla white, suborbicular, rounded at apex. Fruits ovoid, crowned by conspicuous disk, mericarps rounded on back.

Fls. & Frts.: Oct.-Jan.

Specimen examined: AMJ 1160

Occasional on hill slopes.

RUBIACEAE Juss.

1. Plants armed

Canthium

1. Plants unarmed:

2. Number of ovule in a locule one:

3. Corolla lobes twisted

Ixora

3. Corolla lobes valvate:

4. Shrubs or Trees	<i>Morinda</i>
4. Weak herbs	<i>Spermacoce</i>
2. Number of ovule in a locule two or many	<i>Hedyotis</i>

Canthium Lamk.

Canthium coromandelicum (N. Burm.) Alst. in Trimen, Handb. Fl. Ceyl. 6: 152. 1931. (Repr.); Mudaliar & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 120. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 223. 2002. *Gmelina coromandelica* N. Burm. Fl. India 132. 1768. *Canthium parviflorum* Lam. Encycl. 1: 602. 1785; Hook.f. Fl. Brit. India 3: 136. 1880. *Plectronia parviflora* (Lam.) Bedd. For. Man. 132. 1872; Cooke, Fl. Pres. Bombay 2: 35. 1958 (Repr. ed.). Kara, Kirbit, Kirni.

Shrubs; branches with sharp, straight thorns. Leaves ovate to orbicular. Flowers 4-merous, small, in many flowered peduncled cymes. Calyx minute. Corolla white turning pale yellow; tube inflated. Style glabrous. Stigma globose. Drupes globose, yellow when ripe.

Fls. & Frts.: Apr.-Aug.

Specimen examined: CBS 1144

Common on hill slopes.

Hedyotis L.

Hedyotis corymbosa (L.) Lam. Encycl. 1: 272. 1792; Mudaliar & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 130. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 227. 2002. *Oldenlandia corymbosa* L. Sp. Pl. 119. 1753; Hook.f. Fl. Brit. India 3: 64. 1880; Cooke, Fl. Pres. Bombay 2: 15. 1958 (Repr. ed).

Annual herbs; stem quadrangular, thinly hairy, rooting at lower nodes. Leaves sessile, linear-lanceolate, acute; stipules membranous, truncate.. Flowers on filiform

pedicels, usually 2-3 on the top of a very slender axillary solitary peduncles. Corolla white. Capsules globose or pyriform. Seeds pale brown, angular

Fls. & Frts.: Aug.-Nov.

Specimen examined: AMJ 1147

Frequent in moist places..

***Ixora* L.**

Ixora pavetta Andr. Bot. Rep. t. 78. 1799; Mudaliyar & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 141. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 230. 2002. *I. arborea* Roxb. ex J. E. Sm. in Ress, Cyclop. 19: 5. 1811. *I. parviflora* Vahl Symb. Bot. 3: 11. t. 52: 1794; Hook.f. Fl. Brit. India 3: 142. 1880; Cooke, Fl. Pres. Bombay, 2: 39. 1958. (Repr. ed.). Lokhandi, Raikuda.

Evergreen trees; branchlets angular, glabrous somewhat compressed. Leaves opposite, elliptic or oblong. Flowers fragrant, small, in subglobose clusters, in sessile cymes. Corolla tube long; lobes 4. Drupes red at maturity.

Fls. & Frts.: Jan.-July

Specimen examined: AMJ 1148

Occasional on hill slopes.

***Morinda* L.**

Morinda citrifolia L. Sp. Pl. 76.1753; Hook.f. Fl. Brit. India 3:155.1880: Cooke, Fl. Pres. Bombay 2:42.1958. (Repr.); Mudaliar & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 146. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 230. 2002. Bartondi.

Trees; bark greyish, brown. Leaves opposite decussate, usually one of the pair suppressed, broadly elliptic or oblong-lanceolate. Flowers in dense, globose, axillary,

peduncled clusters. Calyx tube hemispheric. Corolla white. Fruits irregularly globose.

Pyrenes, yellowish, compressed, winged .

Fls & Frts.: Apr.-Sept.

Specimen examined: AMJ 1170

Frequent along roadsides.

Spermacoce L.

Spermacoce ocymoides Burm.f., Fl. Ind. 34. t. 13. f. 1. 1768; Hook.f. Fl. Brit. India 3: 200. 1881; Mudaliar & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 165. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 234. 2002.

Procumbent herbs; stem acutely 4-gonous or often narrowly winged. Leaves elliptic to lanceolate, acute. Flowers small in dense, axillary & terminal capitate cymes. Calyx hairy. Corolla white, lobes as long as the tube. Capsules compressed with persistent calyx teeth. Seeds oblong, dark brown.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1150

Occasional in wet places.

ASTERACEAE Dumort. (nom. alt.)

[COMPOSITAE Juss. (nom. cons.)]

1. Heads one to few flowered:

2. Heads axillary

Caesulia

2. Heads terminal

Lagascea

1. Heads few to many flowered:

3. Leaves all opposite:

4. Heads sessile or subsessile:

- 5. Achenes not radiating *Synedrella*
- 5. Achenes radiating *Acanthospermum*
- 4. Heads on long peduncles:
 - 6. Heads homogamous:
 - 7. Achenes 3-angled *Eupatorium*
 - 7. Achenes 5-angled *Ageratum*
 - 6. Heads heterogamous:
 - 8. Heads purple or white:
 - 9. Heads solitary, achenes triquetrous; pappus absent:
 - 10. Involucral bracts leafy, ovate, acute *Eclipta*
 - 10. Involucral bracts herbaceous, linear *Blainvillea*
 - 9. Heads fascicled; achenes angular; pappus present *Galinsoga*
 - 8. Heads yellow:
 - 11. Achenes glabrous *Bidens*
 - 11. Achenes villous *Tridax*
- 3. Leaves alternate:
 - 12. Heads homogamous:
 - 13. Leaves pinnatisect or pinnatifid *Emilia*
 - 13. Leaves entire or serrate *Vernonia*
 - 12. Heads heterogamous:
 - 14. Heads spiny *Tricholepis*
 - 14. Heads not spiny:

15. Leaves pinnatisect, pinnatifid or lyrate:

16. Heads pink or white *Erigeron*

16. Heads neither pink nor white:

17. Pappus absent *Parthenium*

17. Pappus present *Glossocardia*

15. Leaves entire or serrate:

16. Anthers cells tailed:

17. Involucral bracts scarious or
hyaline *Pulicaria*

17. Involucral bracts herbaceous *Blumea*

19. Anthers cell not tailed:

20. Involucral bracts many seriate *Pentanema*

20. Involucral bracts 1-2-seriate *Senecio*

Acanthospermum Schrank.

Acanthospermum hispidum DC. Prodr. 5: 522. 1836; Chowdhery in Hajara et al. in Fl. India 12: 361. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 179. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 238. 2002.

Annual herbs. Leaves opposite, elliptic, ovate-spathulate or oblanceolate. Heads axillary, solitary. Involucral bracts 5. Ray florets with yellow, ligulae corolla. Central florets with tubular corollas. Achenes are compressed with two long, hooked spines at the tip & small spines below.

Fls. & Frts.: Aug.-Feb.

Specimen examined: AMJ 1149

Frequent along roadsides.

Ageratum L.

Ageratum conyzoides L. Sp. Pl. 839. 1753; Hook.f. Fl. Brit. India 3: 243. 1881; Cooke, Fl. Pres. Bombay 2: 70. 1958 (Repr. ed.); Shirodkar & Lakshmi. in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 181. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 239. 2002. Sahdevi, Osadi.

Annual herbs. Leaves opposite or alternate, ovate. Heads in dense terminal corymbs. Involucral bracts linear. Pappus of 5 scales. Corolla tubular, pale blue, pink or white. Achenes linear, 4-gonous, slightly curved.

Fls. & Frts.: Aug. -Apr.

Specimen examined: AMJ 1120

Frequent along roadsides.

Bidens L.

Bidens biternata (Lour.) Merr. & Scherif. in Bot. Gaz. 88: 293. 1929; Chowdhery in Hajara *et al.* Fl. India 12: 367. 1997; Shirodkar & Lakshmi. in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 184. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 240. 2002. *Coreopsis biternata* Lour. Fl. Cochinch. 508. 1790. *Bidens pilosa* auct. non L. 1753; Hook.f. Fl. Brit. India 3: 309. 1881, p.p.; Cooke, Fl. Pres. Bombay. 2: 101. 1958. (Repr.).

Annual herbs, erect, stem quadrangular, ribbed, hairy. Leaves pinnately 3-7-lobed, leaflets ovate, acute. Head solitary on long peduncles. Ray florets with ligulate corolla, ligules white or yellow. Pappus of 2-4 rigid, restrely barbellate awns. Achenes linear black.

Fls. & Frts.: Aug.-Oct.

Specimen examined: AMJ 1202

Occasional along roadsides.

Blainvillea Cass.

Blainvillea acmella (L.) Philip. in Blumea 6: 350: f. 1, 1950; Chowdhery in Hajara et al. Fl. India 12: 377. 1995; Shirodker & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 184. 2001. *Verbesina acmella* L. Sp. Pl. 901. 1753. *Eclipta latifolia* L.f. Suppl. 378. 1781. *Blainvillea latifolia* (L.f.) DC. ex Wight, Conbrs. Nat. Dicot. Sci. Nat. 29: 494. 1823. *B. rhomboidea* Bot. India 71. 1834; Hook.f. Fl. Brit. India 3: 305. 1881; Cooke, Fl. Pres. Bombay 2: 97. 1958 (Repr. ed.); Yadav and Sardesai, Fl. Kolhapur Dist. 240. 2002.

Annual herbs; stem hispidly hairy terete or subterete. Leaves opposite or the upper alternate, ovate-lanceolate, 3-nerved. Heads in erect, terminal cymes. Ray florets inconspicuous; ligules white. Central florets tubular; corolla white, 5-fid. Pappus of few unequal; acute scales. Achenes of the ray florets cuneiform, triquetrous and slightly curved.

Fls. & Frts.: Aug.-Oct.

Specimen examined: AMJ 1161

Common in grasses.

Blumea DC

Blumea virens DC. in Wight, Contrib. 14. 1834; Hook.f. Fl. Brit. India 3: 264. 1881; Cooke, Fl. Pres. Bombay 2: 77. 1958 (Repr. ed.). S. Kumar in Hajara et al. Fl. India 13: 143. 1995; Shirodker & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 196. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 242. 2002.

Erect herbs. Leaves elliptic-oblong or oblanceolate. Heads in open terminal, paniculate cymes. Involucral bracts 3-4 seriate, linear. Marginal florets with filiform, 3-

fid, pale yellow corolla. Central florets with tubular, 5-fid, bright yellow corolla.

Achenes oblong, ribbed, hairy.

Fls. & Frts.: Nov.-Feb.

Specimen examined: AMJ 1139

Frequent in shady places.

Caesulia Roxb.

Caesulia axillaris Roxb. Pl. Corom. 1: 64. t. 93. 1798; Hook.f. Fl. Brit. India 3: 291. 1881; Cooke, Fl. Pres. Bombay 2: 92. 1958 (Repr. ed.); Pant. in Hajara et al. Fl. India 13: 2. 1995; Cooke, Aquat. & Wetl. Pl. India 67. 1996; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 197. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 242. 2002. Maka.

Erect, sub-succulent herbs. Leaves sessile, lanceolate, serrulate. Heads compound axillary, sessile. Pappus absent. Corolla tubular, purple, 5-lobed. Anthers dark purple or black with long tails. Achenes obovoid, flat, broadly winged due to persistent involucre bracts.

Fls. & Frts.: Aug.-Feb.

Specimen examined: CBS 1025

Occasional in drying ditches.

Eclipta L. (nom. cons.)

Eclipta prostrata (L.) L. Mant 2: 286. 1771; Hajara in Hajara et al. Fl. India 12: 381. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 207. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 246. 2002. *Verbesina prostrata* L. Sp. Pl. 902.1753. *Eclipta alba* (L.) Hassk. Fl. Jav. Rar. 528. 1848; Hook.f. Fl. Brit. India 3:

304. 1881. *Eclipta erecta* L. Mant. 2: 286. 1771; Cooke, Fl. Pres. Bombay 2: 95.1958. (Repr.). Maka.

Annual herbs, erect or prostrate. Leaves sessile, ovate-oblong or oblong, pinnatifid. Heads solitary or 2-7 together, axillary and terminal. Involucral bracts, 2-seriate. Marginal florets with white, 2-dentate, ligulate corolla. Central florets with tubular 4-5-fid, white corolla. Achenes oblong-obovate, tubercled all over trigonous, brown to black.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1128

Ocassional on wet places.

Emilia Cass.

Emilia sonchifolia (L.) DC. in Wight, Contrib. 24. 1834; Hook.f. Fl. Brit. India 3: 336. 1881; Cooke, Fl. Pres. Bombay 2: 107. 1958. (Repr.); Mathur in Hajara et al. Fl. India 13: 214. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 209. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 246. 2002. *Cacalia sonchifolia* L. Sp. Pl. 836. 1753. Sadmandi.

Erect herbs. Leaves alternate, mostly near the base of stem, very variable. Heads few in lax corymbs. Florets all bisexual. Corolla pink or purple. Achenes obscurely 5-gonous, brown.

Fls. & Frts.: Aug.-Dec.

Specimen examined: CBS 1118

Ocassional near waste places.

Erigeron L.

Erigeron sublyratus DC. in Wight, Contrib. Bot. Ind. 9: 1834; Hajara et al. Fl. India 12: 125. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 211. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 247. 2002. *E. asteroides* Roxb. Fl. Ind. Ed. 2. 3: 432. 1832 non Ander. ex Bessaer nec Link., 1822; Hook.f. Fl. Brit. India 3: 254. 1881; Cooke, Fl. Pres. Bombay 2: 73. 1958. (Repr.).

Annual herbs. Radical leaves alternate; sessile, obovate, spatulate. Heads solitary or 1-4 on axillary peduncles. Marginal florets female, bluish-purple, followed by several rows of female florets with white corolla. Central florets with tubular, 5-fid, yellow corolla. Achenes brownish yellow, glabrous. Pappus 1-2-seriate of unequal, pinkish-white bristles.

Fls. & Frts.: June-Dec.

Specimen examined: AMJ 1114

Rare in shady places.

Eupatorium L.

Eupatorium odoratum L. Syst. Nat. ed. 10 (2): 1205. 1759; Hook.f. Fl. Brit. India 3: 244. 1881; Uniyal in Hajara et al. Fl. India 12: 354. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 258. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 247. 2002.

Viscid shrubs. Leaves opposite, 3-nerved from the base, lanceolate, hairy on both surfaces. Heads in corymbose panicles, homogamous bracts scarious, unequal. All florets bisexual with tubular, 5-fid, bluish purple corolla. Achenes truncate. Pappus uniseriate.

Fls. & Frts.: Dec.-Mar.

Specimen examined: AMJ 1214

Ocassional on borders.

Galinsoga Ruiz & Pav.

Galinsoga quadriradiata Ruiz & Pavon, Syst. Veg. 1: 198. 1798; Chowdhery in Hajara et al. Fl. India 12: 388. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 212. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 248. 2002.

Annual herbs. Leaves ovate-lanceolate. Heads axillary and terminal; peduncles glandular hairy. Involucral bracts in 2 series, 6-8, ovate, glandular hairy. Achenes black, awn tipped.

Fls. & Frts.: Dec.-Mar.

Specimen examined: CBS 1104

Frequent in shady places.

Glossocardia Cass.

Glossocardia bosvallea (L.f.) DC. in Wight, Contrib. Bot. India 19: 1834; Chowdhery in Hajara et al. Fl. India 12: 391. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 213. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 249. 2002. *Verbascena bosvallea* L.f. Suppl. Pl. 379. 1781. *Glossocardia linearifolia* Cass. Dict. Sci. Nat. 19: 62. 1821; Hook. Fl. Brit. India 3: 308. 1881; Cooke, Fl. Pres. Bombay. 2: 100. 1958. (Repr.). Khadak Shepu.

Annual herbs, prostrate or erect, diffusely branched. Leaves pinnatisect. Heads radiate, solitary, axillary. Involucral bracts in 2-4 series. Ray florets with 2-3-lobed corolla. Achenes long, flat, brown black.

Fls. & Frts.: July-Dec.

Specimen examined: CBS 1101

Frequent on rocky soils.

Lagascea Cav. (nom.cons.)

Lagascea mollis Cav., Anales. Sci. Nat. 6: 332. t. 44. 1803; Hook.f. Fl. Brit. Ind. 3: 302. 1881; Cooke, Fl. Pres. Bombay 2: 93. 1958. (Repr.); Chowdhery in Hajara et al. Fl. India 12: 397. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 222. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 251. 2002.

Annual herbs. Leaves elliptic or ovate-lanceolate, upper surface coarsely hairy, lower surface densely silky. Heads subtended by an involucre of leafy bracts, containing many simple heads. Each head consists of an involucre and a single floret. Florets with tubular, white corolla. Pappus of a short fimbriate cup. Achenes cuneate, enclosed within involucre.

Fls. & Frts.: Throughout year.

Specimens examined: AMJ 1060

Occasional in shady places.

Parthenium L.

Parthenium hysterophorus L. Sp. Pl. 988. 1753; S. Kumar in Hajara et al. Fl. India 12: 403. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 227. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 252. 2002. Congress Grass, Gajargavat.

Annual herbs, erect, stem hairy, angular, branched. Leaves usually alternate, lanceolate to pinnatifid. Heads peduncled in terminal, lax, cymes. Involucral bracts often 10, 2-seriate. Central florets male, with tubular white corolla. Achenes compressed, black, triquetrous, puberulous along sides.

Fls. & Frts.: Sept.-Feb.

Specimen examined: AMJ 1249

Occasional along road sides.

PLATE - VI



← **Anogeissus latifolia**

Woodfordia fruticosa →



← **Morinda pubescens**

Pulicaria wightiana →



Pentanema Cass.

Pentanema indicum (L.) Ling in Acta. Phyt. Sin. 10: 179. 1965; S. Kumar in Hajara et al. Fl. India 13: 28. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 229. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 252. 2002. *Inula indica* L. Sp. Pl. ed. 2. 1236. 1763. *Vicoa auriculata* Cass. in Ann. Sci Nat. Bot. Ser. 1,17: 418. 1829; Hook.f. Fl. Brit. India 3: 297. 1881; Cooke, Fl. Pres. Bombay 2: 88.1958. (Repr.).

Perennial herbs, erect; branches numerous, ascending. Leaves sessile, linear-lanceolate, appressed hairy. Heads numerous on long slender peduncles. Ray florets 12-24, much longer than the involucre; ligules yellow. Pappus of ray florets absent and of disc florets scanty. Achenes brown, terete, sparsely hairy.

Fls. & Frts.: Aug.-Mar.

Specimen examined: AMJ 1105

Frequent on rocky soil in grasses.

Pulicaria Gaertn.

Pulicaria wightiana (DC.) Cl. Compd. India 128.1876; Hook.f. Fl. Brit. India 3: 298. 1881; Cooke, Fl. Pres. Bombay 2: 90. 1958 (Repr. ed.); S. Kumar in Hajara et al. Fl. India 13: 40. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot 2: 236. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 253. 2002. *Poloa wightiana* DC. in Guil. Arch. Bot. (Paris) 2: 515. 1833.

Annual, much branched herbs. Leaves sessile, oblong, pubescent on both surfaces. Heads solitary, terminal on branches; peduncles slightly thickened below the heads. Involucral bracts 3-4-seriate. Marginal florets 1-2-Seriate with yellow corolla. Achenes ribbed, linear-oblong, sparsely hairy; brown.

Fls. & Frts. Sept.- Feb.

Specimen examined: AMJ 1109

Common on rocky soil.

Senecio L.

Senecio bombayensis Balakr. in J. Bombay Nat. Hist. Soc. 57 (1): 61. 1976; Mathur in Hajara et al. Fl. India 13: 244. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 237. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 254. 2002. *Senecio grahmii* Hook.f. Fl. Brit. India 3: 347. 1881 non Benth. 1857; Cooke, Fl. Pres. Bombay 2: 110. 1958 (Repr. ed.).

Annual herbs. Leaves alternate, rhomboid-ovate, irregularly toothed, white tomentose below. Heads yellow; florets of ray ligulate, usually sterile. Pappus of ray florets absent of disk florets slightly longer than achenes, dilated & paleaceous at the base, dirty-white or yellowish. Achenes ribbed.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1042

Occasional on hill slopes.

Synedrella Gaertn (nom.cos.)

Synedrella vialis (Less.) A. Gray in Proc. Amer. Acad. 17: 217. 1882; Ahuja & Pataskar in Ind. For. 95, 267. 1969; Chowdhery in Hajara et al. Fl. India 12: 415. 1995; St. Dicot. 2: 245. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 257. 2002. *Calypocarpus vialis* Less. Syn. 221. 1832.

Annual herbs, rooting at nodes. Leaves simple, opposite, ovate to lanceolate. Heads axillary, solitary sessile, sometimes 2, one of them pedunculate. Involucral

bracts 4. Achenes dorsally compressed, narrowly winged, crowned with 2 spines. Disk florets bisexual, tubular. Achenes dorsally compressed crowned with 2 spines.

Fls. & Frts.: Throughout year

Specimen examined: AMJ 1108

Occasional in moist places.

Tricholepis DC.

Tricholepis glaberrima DC. Prodr. 6: 754. 1837; Hook.f. Fl. Brit. India 3: 381. 1881; Cooke, Fl. Pres. Bombay 2: 114. 1958. (Repr.); Hajara in Hajara et al. Fl. India 12: 222. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 246. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 258. 2002.

Annual herbs. Leaves elliptic to lanceolate, crowded at the base of stem. Heads solitary at the end of leafy branches on short peduncles. Involucral bracts many seriate, imbricate. All florets with purple pink or bluish corolla. Achenes oblong, brown. Pappus hairy, yellowish brown, shorter than achenes.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1146

Occasional on rocky soil.

Tridax L.

Tridax procumbens L. Sp. Pl. 900. 1753; Hook.f. Fl. Brit. India 3: 311. 1881; Cooke, Fl. Pres. Bombay. 2: 102. 1958. (Repr.); Chowdhery in Hajara et al. Fl. India 12: 418. 1995; Shirodkar & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 247. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 258. 2002. Dagadi Pala.

Annual procumbent herbs. Leaves in distant pairs, elliptic-ovate to lanceolate. Heads radiate, solitary on straight, erect peduncles, hirsute with long spreading hairs.

Marginal florets 4-8, white or yellow. Central florets many, with yellow corolla. Achenes blackish, ribbed, truncate at apex.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1213

Common on rocky soil.

Vernonia Schr. (nom.cons.)

Vernonia cinerea (L.) Less, in *Linnaea* 4: 291. 1829; Hook.f. *Fl. Brit. India* 3: 233.. 1881; Cooke, *Fl. Pres. Bombay* 2: 65. 1958 (Repr. ed.); Uniyal in Hajara et al. *Fl. India* 13: 367. 1995; Shirodkar & Lakshmi. in Singh et al. *Fl. Maharashtra St. Dicot.* 2: 248. 2001; Yadav & Sardesai, *Fl. Kolhapur Dist.* 259. 2002. *Conyza cinerea* L. *Sp. Pl.* 862. 1753. Sahadevi.

Annual herbs. Leaves petioled, broadly elliptic or lanceolate, pubescent on both surfaces, obtuse or acute at apex. Heads in terminal cymes. All florets with pink-purple tubular 5-lobed corolla. Pappus bristles in 2 series, the outer ones shorter than inner one. Achenes terete.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1145

Occasional in shady places.

PLUMBAGINACEAE Juss.

Plumbago L.

Plumbago zeylanica L. *Sp. Pl.* 151. 1753; Cl. in Hook. f. *Fl. Brit. India* 3: 480.1882; Cooke, *Fl. Pres. Bombay* 2: 136. 1958 (Repr. ed.); Londhe in Singh et al. *Fl. Maharashtra St. Dicot.* 2: 282. 2001; Yadav and Sardesai, *Fl. Kolhapur Dist.* 262. 2002. Pandhara Chitrak. Fig. 8.

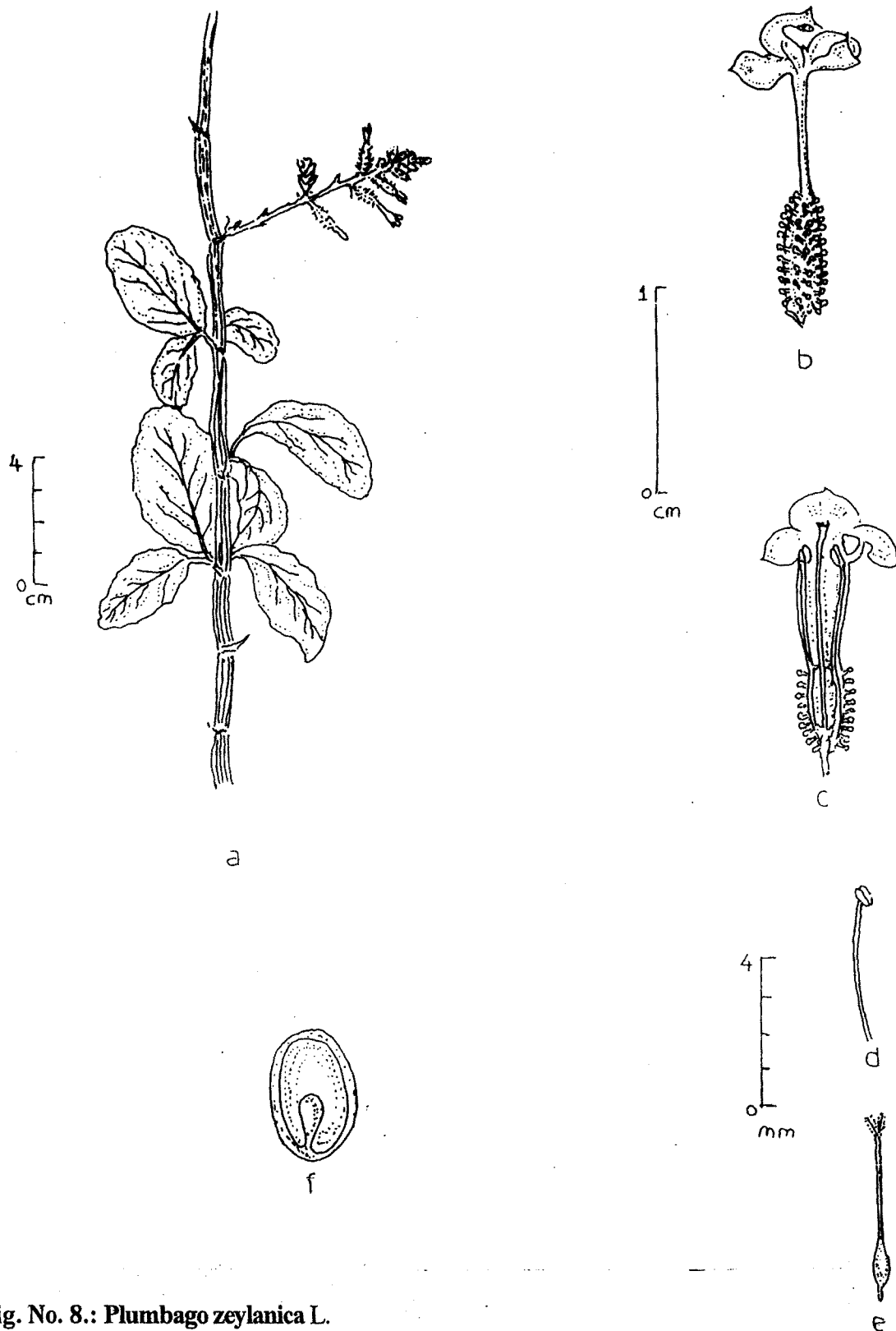


Fig. No. 8.: *Plumbago zeylanica* L.

a. Habit; b. Flower; c. V. S. of Flower; d. Stamen; e. Pistil; f. L. S. of ovary.

Perennial undershrubs, erect or scandent. Leaves elliptic-ovate; petiole auricled at base. Flowers many in terminal spikes. Corolla white. Stamens 5. Ovary attenuated at the apex. Capsules oblong, enclosed in stalked glandular persistent calyx. Seeds black, flattened.

Fls. & Frts.: Aug.-Nov.

Specimen examined: AMJ 1078

Occasional along road sides.

EBENACEAE Gurke.

Diospyros L.

Diospyros montana Roxb. Pl. Corom. 1: 37. t. 48 1798; Cl. in Hook.f. Fl. Brit. India 3: 555. 1882; Cooke, Fl. Pres. Bombay 2: 165. 1958 (Repr. ed.); Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 2: 301. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 262. 2002. Tembhurni, Tamrang.

Trees. Leaves elliptic to elliptic-lanceolate. Male flowers in short few flowered panicles. Corolla white, urceolate; stamens 16 in 2 rows of 8, in opposite pairs, united at base. Female flowers axillary, solitary. Fruits globose.

Fls. & Frts.: Jan-June

Specimen examined: CBS 1225

Frequent on hill slopes.

OLEACEAE Hoffm. ex Link.

- | | |
|---|-------------------|
| 1. Erect shrub or small trees; fruits dry | <i>Nyctanthes</i> |
| 1. Shrubs often scandent; fruits fleshy | <i>Jasminum</i> |

Jasminum L.

Jasminum malabaricum Wight, Ic. t. 1250. 1848; Cl. in Hook.f. Fl. Brit. India 3: 594. 1882; Cooke, Fl. Pres. Bombay 2: 172. 1958 (Repr. ed.); Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 2: 309. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 269. 2002. Ranjai, Kusar.

A large climbing shrub. Leaves opposite, membranous, elliptic. Flowers in lax trichotomously compound terminal cymes. Corolla white, glabrous, lobes 6-10, very acute. Fruits elliptic, black.

Fls. & Frts.: Mar.-July

Specimen examined: AMJ 1106

Frequent on bushes.

Nyctanthes L.

***Nyctanthes arbor-tristis** L. Sp. Pl. 6: 1753; Cl. in Hook.f. Fl. Brit. India 3: 603. 1882; Cooke, Fl. Pres. Bombay 2: 176. 1958 (Repr. ed.); Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 2: 311. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 270. 2002. Parijatak.

A small tree. Young branches quadrangular, hairy. Leaves opposite, entire or coarsely dentate, ovate. Flowers in axillary and terminal paniculate cymes. Corolla white with orange red tube, lobes white. Anthers 2, subsessile. Fruits obcordate or orbicular, compressed, 2-locular, glabrous.

Fls. & Frts.: June -Jan.

Specimen examined: AMJ 1269

Planted for beautiful flowers near temples.

APOCYNACEAE Juss.

1. Plants unarmed; fruits follicle, drupe or capsule:

- | | |
|---|-----------------|
| 2. Leaves alternate | <i>Plumeria</i> |
| 2. Leaves opposite or whorled | <i>Nerium</i> |
| 1. Plants armed with sharp spines; fruit a fleshy berry | <i>Carissa</i> |

Carissa L.

Carrisa carandus L. Mant. Pl. 1: 52. 1767; Cl. in Hook.f. Fl. Brit. India 3: 630. 1882, p. p. Hainesin Ind. For. 45: 384. f. 1: 1919; Cooke, Fl. Pres. Bombay 2: 186. 1958 (Repr. ed.); Yadav & Sardesai, Fl. Kolhapur Dist. 274. 2002. Karvand.

Shrubs; with armed with spines. Leaves broadly elliptic-oblong or oblong. Flowers in terminal corymbose cymes. Corolla tube swollen near top. Stamens included within corolla tube. Fruits ellipsoid, purplish black.

Fls. & Frts.: Jan.-June

Specimen examined: AMJ 1107

Common throughout the sanctuary.

Nerium L.

Nerium indicum Mill. Card. Diet. ed. 8. n. 2. 1768. Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 2: 332. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 276. 2002. *N. odorum* Soland in Ait. Hort. Kew 1: 297. 1789; Cl. in Hook.f. Fl. Brit. India 3: 655. 1882; Cooke, Fl. Pres. Bombay 2: 206. 1958 (Repr. ed.). Kaner.

Shrubs up to 4 m tall. branches whorled. Leaves whorled, with tapering ends. elliptic-lanceolate, whorled. Flowers in terminal polychasial cymes. Corolla white pink or deep red. Anther cells long, spurred with twisted hairs. Follicles 10-15 cm long, lanceolate. Seeds villous with long terminal coma.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1279

Cultivated and also naturalized along streams.

Plumeria L.

***Plumeria alba** L. Sp. Pl. 210. 1753; Cooke, Fl. Pres. Bombay 2: 206. 1958. (Repr.); Pradhan in Singh et al. Fl. Maharashtra St. Dicot. 2: 332. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 277. 2002. Pandhara Chapha.

Small trees with milky latex. Leaves alternate, oblanceolate; glabrous above, pubescent beneath. Flowers cream coloured, fragrant in terminal peduncled corymbs. Calyx with suborbicular sepals, Corolla lobes, oblanceolate up to 8 cm long. Stamens inserted near the base of corolla tube; anthers free.

Fls. & Frts.: May-Sept.

Specimen examined: AMJ 1258

Planted for its flowers.

ASCLEPIADACEAE R. Br.

1. Plants erect:

2. Succulent herbs with angular stem; leaves

reduced to scales

Caralluma

2. Non succulent herbs; stem not as above; leaves

well developed:

3. Rootstock tuberous; plants with watery sap;

anthers not appendaged

Ceropegia (p.p)

3. Rootstock fibrous; plants with milky sap; anthers

appendaged:

4. Stem and leaves glabrous; leaves lanceolate

with acute base

Asclepias

4. Stem and leaves beneath with whitish

tomentum; leaves broad with cordate base

Calotropis

1. Plants climbing, scandent or trailing:

5. Climbing or prostrate leafy shrubs:

6. Plants tuberous; corolla tubular; lobes connate

at apex

Ceropegia (p.p)

6. Plants not tuberous; corolla other than tubular;

lobes free at apex:

7. Corona distinctly lobed, not truncate:

8. Corona staminal

Wattakaka

8. Corona corolline

Gymnema

7. Corona a fleshy ring with truncate margins,

not lobed

Holostemma

5. Trailing or scandent leafless shrubs

Sarcostemma

***Asclepias* L.**

***Asclepias curassavica* L.** Sp. Pl. 215. 1753; Hook.f. Fl. Brit. India 4: 18. 1883; Cooke, Fl. Pres. Bombay 2: 245. 1958 (Repr. ed.); Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 336. 2001; Yadav and Sardesai, Fl. Kolhapur Dist. 280. 2002. Haladi-Kunku. Fig. 9.

Erect under shrubs, stem branched from base; branches purplish red. Leaves petiolate, linear-lanceolate to lanceolate, apex acute. Flowers in extra-axillary umbellate cymes. Corolla rotate, reflexed. Corona saffron yellow, staminal. Follicles 10 cm long, in pairs, lanceolate, beaked. Seeds broadly ovate, coma silky white.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1137

Occasional in marshy places.

Calotropis R. Br.

1. Leaves abruptly acuminate; sepals glabrous; corona

longer than staminal column

C. gigantea

1. Leaves acute; sepals cottony pubescent; corona

shorter than or equaling staminal column

C. procera

Calotropis gigantea (L.) R. Br. in Ait. Hort. Kew. (ed. 2) 2: 78. 1811; Hook.f. Fl. Brit. India 4: 17. 1883; Cooke, Fl. Pres. Bombay 2: 214. 1958 (Repr); Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 341. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 282. 2002. *Asclepias gigantia* L. Sp. Pl. 214. 1753. Rui.

A tall shrub. Leaves opposite-decussate, broadly obovate or elliptic-oblong. Flowers in lateral subcorymbose cymes. Corolla lobes ovate. Pollinia ovoid. Corona of 5 fleshy laterally compressed lobes with a recurved spur at base and 2 rounded auricles just below the rounded apex. Follicles boat shaped with hooked tips, coma silky white.

Fls. & Frts.: Oct.-June

Specimen examined: AMJ 1140

Occasional along road sides.

Calotropis procera (Ait.) R. Br. in Hort. Kew. (ed.2) 2: 78. 1811; Hook.f. Fl. Brit. India. 4: 18. 1883; Cooke, Fl. Pres. Bombay 2: 215. 1958 (Repr. ed.); Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 342. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 282. 2002. *Asclepias procera* Ait. Hort. Kew ed. 1, 1: 305. 1789. Rui.

Erect shrubs; young parts clothed with cottony pubescence. Leaves opposite, sessile or shortly petioled, broadly ovate, obovate or ovate-oblong, cottony pubescent on

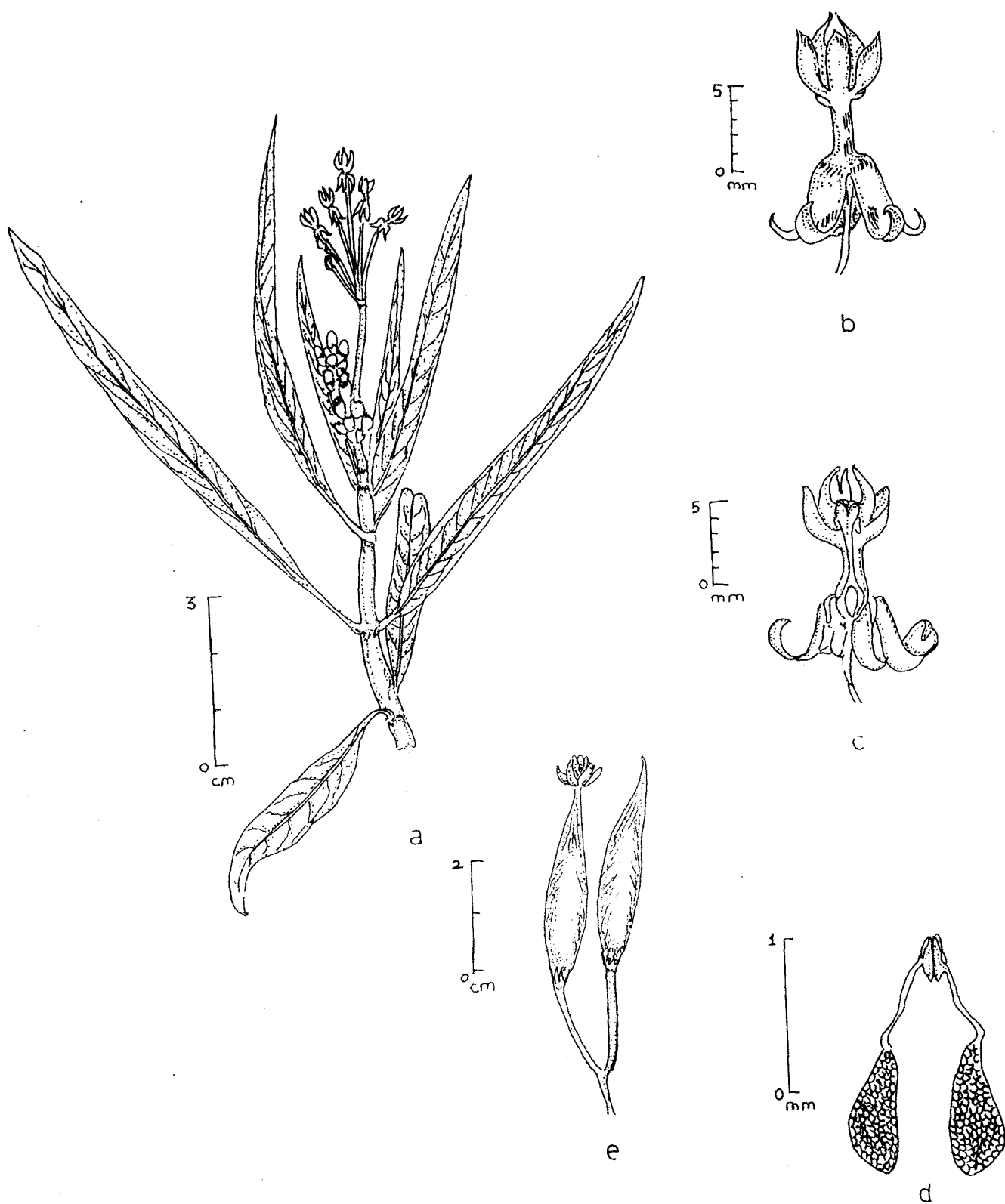


Fig. No. 9.: *Asclepias curassavica* L.

a. Habit: b. Flower: c. V. S. of Flower: d. Pollinia: e. Fruit.

both surfaces. Flowers in lateral umbellate cymes. Corolla lobes truncate with a recurved spur at base and without auricles at apex. Follicles boat shaped, recurved, cottony pubescent. Seeds ovoid, compressed, brown, coma silky white.

Fls. & Frts.: Sept.-June

Specimen examined: AMJ 1152

Occasional along road sides.

Caralluma R. Br.

Caralluma adscendens var. *fimbriata* (Wall.) Grav. & Mayur in Bull. Madras Govt. Mus. n. s. Nat. Hist. Soc. 4: 12. 1931; Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 344. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 282. 2000. *Caralluma fimbriata* Wall. Pl. Asiat. Rar. 1: 7. t. 8. 1830; Hook.f. Fl. Brit. India 4: 77. 1883; Cooke, Fl. Pres. Bombay 2: 244. 1958 (Repr. ed.). Makad shing, Shingoli

Dwarf, succulent, perennial, herbs. Leaves reduced, minute, axillary, opposite, sessile, deltoid-ovate. Flowers solitary. Corolla rotate; lobes valvate, conspicuously purple, ciliate along margins. Follicles paired. Seeds oblong, coma silky, white at upper nodes.

Fls. & Frts.: June-Dec.

Specimen examined: CBS 1212

Frequent on rocky hill slopes.

Ceropegia L.

Ceropegia hirsuta Wight & Arn. in Wight, Contrib. 30. 1834; Hook.f. Fl. Brit. India 4: 71. 1883; Cooke, Fl. Pres. Bombay 2: 242. 1958 (Repr. ed.); Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 350. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 282. 2000.

Tuberous twining herbs. Leaves opposite, ovate to lanceolate, variable. Cymes few to many-flowered. Corolla depressedly inflated at the base, funnel shaped above; lobes hairy inside and on the margins. Outer corona saucer shaped, entire or broadly shallow linear, erect. Pollinia oblong. Follicles linear, beaked. Seeds oblong, brown, comose.

Fls. & Frts.: July-Sept.

Specimen examined: AMJ 1167

Rare on hill slopes.

Gymnema R. Br.

Gymnema sylvestre (Retz.) R. Br. & S. Syst. Veg. 6: 57. 1819; Hook.f. Fl. Brit. India 4: 29. 1883; Cooke, Fl. Pres. Bombay 2: 224. 1958 (Repr. ed.); Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 362. 2001. *Periploca sylvestris* Retz. Obs. Bot. 2: 15. 1781; Yadav & Sardesai, Fl. Kolhapur Dist. 286. 2002. Bedkicha pala, Gudmari.

Twining shrubs. Leaves ovate or elliptic- oblong. Flowers minute, in lateral, subsessile cymes. Corolla campanulate, greenish-yellow; pubescent within lobes, deltoid, shorter than the tube, obtuse. Corona of 5-fleshy processes, alternating with the corolla lobes, inserted on the throat of the appearing at ridges. Seeds brown, with broad, thin margins; coma long, silky.

Fls. & Frts.: Apr-Oct.

Specimen examined: AMJ 1167

Frequent on hill slopes.

Holostemma R. Br.

Holostemma annulare (Roxb.) K. Schum. in Engl. & Prantl. Pflanzenf. 4 (2): 250. 1895 (*annularis*); Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 367. 2001.

Asclepias annularia Roxb. Fl. Ind. 2: 37. 1832. (*annularia*). *Holostemma ada-kodien* Sch. In L. Syst. Veg. 6: 95. 1820 nom. illeg. *H. rheedei* Wall. Pl. As. Rar. 2: 51. 1831; Hook.f. Fl. Brit. India 4: 21. 1883. *H. rheedianum* Spreng, Syst. 1: 851. 1825; Cooke, Fl. Pres. Bombay 2: 220. 1958. (Repr.); Yadav & Sardesai, Fl. Kolhapur Dist. 287. 2002. Shidodi.

Twining shrubs. Leaves broadly ovate, lanceolate, membranous, glandular in the axils. Flowers in lateral short, fasciculate cymes. Corolla rotate, pinkish white outside, deep red within. Corona staminal, ring like. Pollinia linear, falcate. Follicles tapering to a blunt point. Seeds compressed, glabrous.

Fls. & Frts.: July-Oct.

Specimen examined: CBS 1112

Rare on bushes.

Sarcostemma R. Br.

Sarcostemma viminalis (L.) R. Br. in Mem. Wern. Soc. 1: 51. 1809, printed in 1811 and Prodr. Fl. Nov. Holl. 464. 1810 var. ***viminalis***; Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 376. 2001. *Euphorbia viminalis* L. Sp. Pl. 452. 1753. *Sarcostemma brevistigma* Wight & Arm. in Wight, Contrib. 59. 1834; Hook.f. Fl. Brit. India 4: 26. 1883; Cooke, Fl. Pres. Bombay 2: 222. 1958 (Repr. ed.); Yadav & Sardesai, Fl. Kolhapur Dist. 289. 2002. Somvel, Ransher.

Shrubs. Leaves scale like or absent. Flowers in terminal, sessile umbels. Corolla rotate, white, with revolute margins. Corona double, staminal; outer cupular, crenately 10-lobed, inner one of 5 erect, fleshy lobes. Pollinia clavate, pendulous. Follicles solitarily, lanceolate, tapering at both ends.

Fls. & Frts.: Feb.-May

Specimen examined: CBS 1234

Frequent in hilly areas.

Wattakaka Hassk.

Wattakaka volubilis (L.f.) Stapf in Curtis. Bot. Mag. Sub. t.8976.1923; Jagtap & Das Das in Singh et al . Fl. Maharashtra St. Dicot. 2: 381. 2001; Yadav & Sardesai, Fl. of Kolhapur Dist. 290. 2002. *Asclepias volubilis* L.f. Suppl. 170. 1781. *Dregea volubilis* (L.f.) Benth ex. Hook.f. Fl. Brit. India 4 : 46: 1883. *Marsdenia volubilis* (L.f.) Cook , Fl. Pres. Bombay 2: 230. 1958. (Repr.). Hirandodi.

Twining shrubs. Leaves broadly ovate, cordate. Flowers in dense lateral umbellate cymes. Corolla green. Follicles 7-10 cm long , slightly tapering to blunt point.

Fls. & Frts.: May-Sept.

Specimen examined: AMJ 1202

Occasional on bushes.

PERIPLOCACEAE Schlecht

1. Cymes pedunculate, axillary and terminal; corolla tubular, campanulate or infundibuliform; imbricate:
2. Cymes terminal; corolla more than 4 cm long, funnel shaped; scales acuminate or 2-fid

Cryptostegia

2. Cymes axillary; corolla up to 2.5 cm long, short; scales linear or club shaped

Cryptolepis

1. Cymes sessile, axillary; corolla rotate, valvate

Hemidesmus

PLATE - VII



← Plumbago zeylanica

Calotropis procera →



← Ceropegia hirsuta

Cryptostegia
grandiflora →



Cryptolepis R. Br.

Cryptolepis buchananii R. Br. ex R. & S. Syst. Veg. 4: 409. 1819; Hook.f. Fl. Brit. India 4: 5. 1883; Cooke, Fl. Pres. Bombay 2: 210. 1958 (Repr. ed.); Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 384. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 290. 2002. Kavali.

Twining shrubs. Leaves elliptic-oblong, apex acute. Flowers in short axillary paniculate cymes. Filaments distinct; anthers with a connective produced into a fleshy apicules, more or less connivent into a cone and united with style. Follicles paired, lanceolate, rigid. Seeds black, many, ovate.

Fls. & Frts.: May-Feb.

Specimen examined: AMJ 1027

Occasional on bushes.

Cryptostegia R. Br.

Cryptostegia grandiflora R. Br. in Bot. Reg. 5: t, 435. 1819; Hook.f. Fl. Brit. India 4: 6. 1883; Cooke, Fl. Pres. Bombay 2: 245. 1958 (Repr. ed.); Jagtap & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 386. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 291. 2002.

Scandent or straggling shrubs. Leaves ovate to elliptic-oblong. Flowers 6-12 in terminal, trichotomous cymes. Corolla purple outside, white within. Follicles 3 winged, 12-15 cm long. Seeds many, ovate, winged.

Fls. & Frts.: Mar.-Dec.

Specimen examined: AMJ 1123

Occasional on bushes.

Hemidesmus R. Br.

Hemidesmus indicus (L.) Sch. in Roem. & Sch. Syst. Veg. 6: 126. 1819 var. **indicus**; Hook.f. Fl. Brit. India 4: 5. 1883; Cooke, Fl. Pres. Bombay 2: 210. 1958 (Repr. ed.); Jagtap & Das Das in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 386. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 291, Pl.-28. 2002. *Periploca indica* L. Sp. Pl. 211. 1753. Anantmul, Upalsari.

A perennial twinner. Leaves lanceolate or linear-lanceolate. Flowers in dense axillary cymes. Corolla green outside, purple inside. Staminal corona greenish outside, purple within. Filaments distinct, anthers cohering at apex. Seeds black, coma silvery white.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1116

Occasional amidst bushes.

GENTI ANACEAE Juss.

1. Ovary 1-celled; stigma not capitate:

2. Corolla irregular:

3. Flowers stalked, pink or white, stigma

distinctly 2-lobed; capsules cylindric

Canscora

3. Flowers sessile, pale yellow; stigma

obscurely lobed; capsules globose

Hoppea

2. Corolla regular

Centaurium

1. Ovary 2-celle; stigma capitate

Exacum

Canscora Lam.

Canscora diffusa (Vahl) R. Br. ex R. & S. Syst. Veg. 3: 301. 1820 var. **diffusa** ; Cl. in Hook.f. Fl. Brit. India 4: 103. 1883; Cooke, Fl. Pres. Bombay 2: 257. 1958 (Repr. ed.);

Jadhav in Singh et al. Fl. Maharashtra St. Dicot. 2: 400. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 294. 2002. *Gentiana diffusa* Vahl, Symb. Bot. 3: 47. 1794.

Annual herbs. Leaves sessile, broadly ovate, acute at apex, rounded at base, lower petiolate, elliptic. Flowers in dichotomous paniculate cymes. Corolla pale or deep pink, tube as long as the calyx. Stamens 4, one perfect and longer than others. Capsules membranous, narrowly oblong.

Fls. & Frts.: Aug.-Apr.

Specimen examined: AMJ 1115

Common in moist and wet places.

Centaurium Hill.

Centaurium meyeri (Bunge) Druce in Rep. Bot. Exch. Brit. Isles. 4: 613. 1917; Jadhav in Singh et al. Fl. Maharashtra St. Dicot. 2: 405. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 294. 2002. *Erythraea meyeri* Brunge in Ledeb. Fl. Altai 1: 220. 1829; Cl. in Hook.f. Fl. Brit. India 4: 102. 1883. *E. roxburghii* D. Don, Lond. & Edinb. Phil. Mag. & J. Sci. 8: 77. 1836; Cl. op. cit; Cooke, Fl. Pres. Bombay 2: 255. 1958. (Repr.).

Annual herbs, erect. Radical leaves obvoate, obtuse at apex; cauline linear-oblong. Flowers in dichotomous cymes. Corolla pink or rarely white. Stamens 5, anthers twisted at apex. Capsules narrowly oblong, enclosed in persistent calyx. Seeds numerous, light brown.

Fls. & Frts.: Nov.-Mar.

Specimen examined: CBS 1002

Common in wet places.

Exacum L.

Exacum pedunculatum L. Sp. PL. 112. 1753; Cl. in Hook.f. Fl. Brit. India 4: 97. 1883; Cooke, Fl. Pres. Bombay 2: 253. 1958. (Repr.); Jadhav in Singh et al. Fl. Maharashtra St. Dicot. 2: 407. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 296. 2002. Fig. 10.

Annual herbs, stems quadrangular. Leaves elliptic-oblong, subsessile 3 or 5-nerved. Flowers in terminal branched cymes. Calyx 4-lobed. Corolla blue. Stamens on corolla throat, anthers cordate at base. Capsules globose, smooth, shining.

Fls. & Frts.: Sept.-Mar.

Specimen examined: AMJ 1015

Common amidst grasses and moist places.

Hoppea Willd.

Hoppea dichotoma Heyne ex Willd. in Gen. Naturnf. Fr. Neue Schr. 3: 435. 1801; Cl. in Hook.f. Fl. Brit. India 4: 100. 1883; Cooke, Fl. Pres. Bombay 2: 256. 1958 (Repr. ed.); Jadhav in Singh et al. Fl. Maharashtra St. Dicot. 2: 409. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 297. 2002.

Annual herbs; stem acutely 4-angled. Leaves ovate or obovate, acute. Flowers in lax, terminal, dichotomous cymes. Calyx campanulate. Corolla pale yellow, tubular. Stamens 4, one perfect remaining sterile. Seeds numerous, minute, dark brown.

Fls. & Frts.: Oct.-Mar.

Specimen examined: AMJ 1011

Common in wet places.

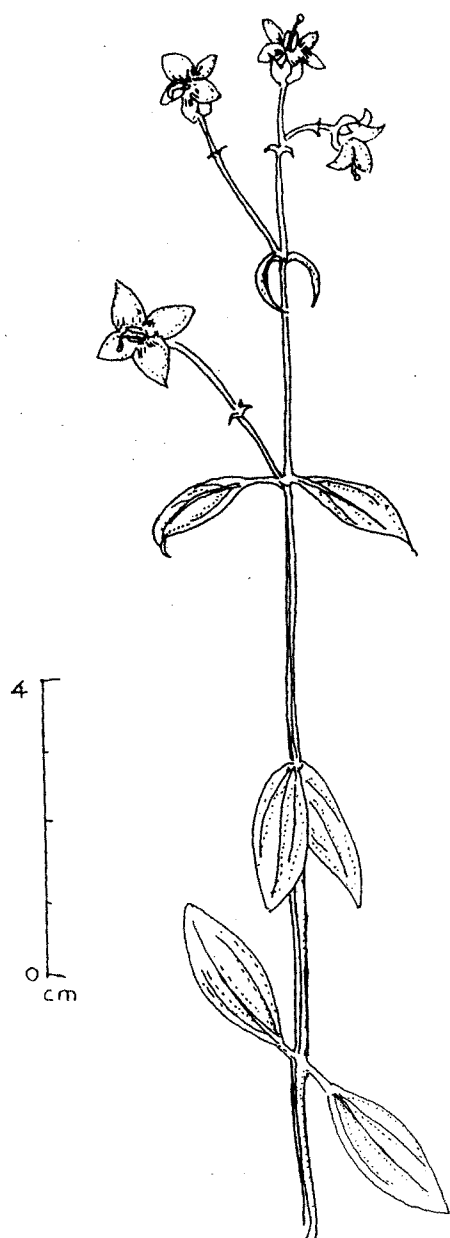
BORAGINACEAE Juss.

1. Herbs or undershrubs

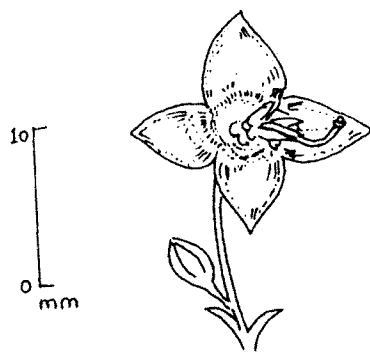
Trichodesma

1. Shrubs or trees

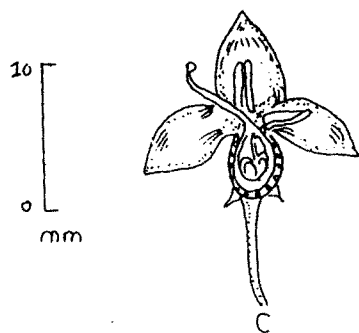
Cordia



a



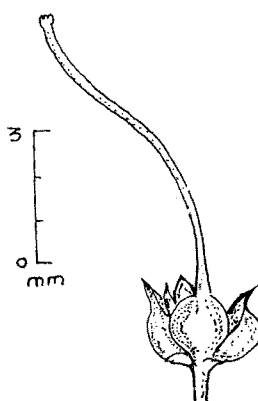
b



c



d



e



f

Fig. No. 10.: *Exacum pedunculatum* L.

a. Habit b. Flower c. Flower d. Pistil e. Pistil f. Fruit

Cordia L.

Cordia dichotoma Forst.f. Prodr. 18. 1786; Kulkarni in Singh et al. Fl. Maharashtra St. Dicot. 2: 417. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 299. 2002. *C. obliqua* Willd. Phytogr. 4. t. 4. 1774; Cl. in Hook.f. Fl. Brit. India 4: 137. 1883 excl. var. *myxa* auct. plur. non L. 1753; Cl. in Hook.f. op. cit. 136; Cooke, Fl. Pres. Bombay 2: 265. 1958 (Repr. ed.). Bhokar.

Trees. Leaves broadly ovate, elliptic-oblong or suborbicular, glabrous. Flowers in axillary and terminal cymes. Corolla creamy yellow. Drupes ovoid or rounded, glabrous, yellow with pinkish tinge.

Fls. & Frts.: Mar.-July

Specimen examined: CBS 1259

Occasional on hill slopes.

Trichodesma R. Br. (norn. cons.)

Trichodesma indicum (L.) Lehm. Pl. Fam. Asperifol. 193. 1818; Cl. in Hook.f. Fl. Brit. India 4: 153. 1883; Cooke, Fl. Pres. Bombay 2: 281. 1958 (Repr. ed.); Kulkarni in Singh et al. Fl. Maharashtra St. Dicot. 2: 435. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 303. 2002. *Borago indica* L. Sp. PL. 137. 1753. *Trichodesma amplexicaule* Roth, Nov. Sp. PL. 104. 1821; Cl. in Hook.f. op.cit. *T. indicum* var. *amplexicaule* T. Cooke, Fl. Pres. Bombay 2: 282. 1958 (Repr. ed.).

Annual herbs. Leaves ovate-oblong or ovate-lanceolate, hairy on both sides, apex acute or obtuse. Flowers axillary, supra-axillary and in few flowered terminal cymes. Corolla lobes as long as the tube. Staminal cone exserted; anther connectives spirally contorted. Fruits pyramidal of 4 nutlets.

Fls. & Frts.: Aug.-Feb.

Specimen examined: AMJ 1113

Common along stream and banks of fields.

CONVOLVULACEAE Juss

- | | |
|------------------------------------|--------------------|
| 1. Pollen echinulate | <i>Argyreia</i> |
| 1. Pollen smooth walled: | |
| 2. Prostrate herbs; style branched | <i>Evolvulus</i> |
| 2. Twinning herbs or shrubs | <i>Convolvulus</i> |

Argyreia Lour.

Argyreia cuneata (Willd.) Ker.-Gawl. in Bot. Reg. 8, t. 661. 1822; Cl. in Hook.f. Fl. Brit. India 4: 191. 1883; Cooke, Fl. Pres. Bombay 2: 327. 1958 (Repr. ed.); Venkanna & Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 441. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 299. 2002. *Convolvulus cuneata* Willd. Sp. Pl. 1: 873. 1798.

Shrubs usually erect but with a tendency to climb when near support; stems softly silky pubescent. Flowers few-flowered (usually 3-flowered) cymes. Corolla bright-purple. Fruits ellipsoid, pointed, shining, yellow-brown.

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1124

Rare on hill slopes.

Convolvulus L.

Convolvulus arvensis L. Sp. Pl. 153. 1753; Cl. in Hook.f. Fl. Brit. India 4: 219. 1883; Cooke, Fl. Pres. Bombay 2: 303. 1958 (Repr. ed.); Venkanna & Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 449. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 306. 2002. Chandvel.

PLATE - VIII



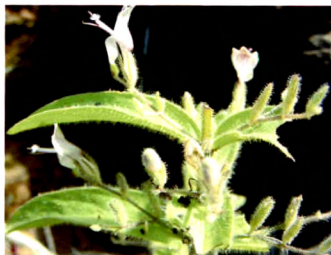
← Exacum
pedunculatum

Dolichandrone falcata →



← Sesamum laciniatum

Andrographis
paniculata →



Herbaceous twiners or trailing or rarely climbing herbs. Leaves variable in breadth, base auriculate. Flowers axillary, solitary or paired. Corolla pinkish-white, broadly funnel shaped. Stamens unequal. Capsules globose, glabrous. Seeds 4, reddish-brown, subtrigonous.

Fls. & Frts.: July-Mar.

Specimen examined: AMJ 1033

Ocassional on bushes.

Evolvulus L.

Evolvulus alsinoides (L.) L. Sp. Pl. ed. 2: 392. 1762; Cl. in Hook.f. Fl. Brit. India 4: 220. 1883; Cooke, Fl. Pres. Bombay 2: 297. 1958 (Repr. ed.); Venkanna & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 453. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 306. 2002. *Convolvulus alsinoides* L. Sp. Pl. 157. 1753. Vishnukranta.

Annual herbs, prostrate, much branched, pubescent. Leaves sessile, elliptic-oblong, densely pilose, base acute, apex obtusely apiculate. Flowers axillary, solitary, calyx densely silky, lanceolate, acute. Corolla light blue, rotate. Capsules globose, 4-valved. Seeds ellipsoid, black.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1117

Common on rocky soil.

SOLANACEAE Juss.

Physalis L.

Physalis minima L. Sp. Pl. 183. 1753; Cl. in Hook.f. Fl. Brit. India 4: 238. 1883; Cooke, Fl. Pres. Bombay 2: 340. 1958 (Repr. ed.); Madhusudan Rao in Singh et al. Fl.

Mahaashtra St. Dicot. 2: 499. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 318. 2002.
Popati.

Erect herb; stems angular, glabrous. Leaves broadly ovate or elliptic, glabrous.
Flowers solitary, axillary, terminal. Corolla pale yellow; with 5, faint brown spots inside;
lobes ovate, acute. Anthers bluish green, blue or violet. Berries ovoid-globose, orange
yellow. Seeds many, compressed granulate.

Fls. & Frts.: Oct.-Mar.

Specimen examined: AMJ 1032

Common in wet places.

SCROPHULARIACEAE Juss.

- | | |
|---|-------------------|
| 1. Corolla saccate or spurred | <i>Kickaxia</i> |
| 1. Corolla neither saccate nor spurred: | |
| 2. Leaves dimorphic | <i>Limnophila</i> |
| 2. Leaves monomorphic: | |
| 3. Leaves pinnatisect; calyx campanulate, 5-toothed | <i>Sophubia</i> |
| 3. Leaves entire; calyx tubular: | |
| 4. Corolla white, yellow or rosy-pink;
corolla tube straight, lobes subequal | <i>Striga</i> |
| 4. Corolla pink; corolla tube straight,
lobes subequal | <i>Buchnera</i> |

Buchnera L.

Buchnera hispida Buch.-Ham. ex D. Don., Prodr. Fl. Nepal 91. 1825; Hook.f. Fl. Brit.
India 4: 298. 1884; Cooke, Fl. Pres. Bombay 2: 373. 1958 (Repr. ed.); Godbole & Prasad

in Singh et al. Fl. Maharashtra St. Dicot. 2: 526. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 324. 2002.

Erect herbs. Leaves obovate-cuneate or oblanceolate, sessile or subsessile. Flowers numerous arranged in terminal spikes. Corolla light purple; slender; tube 6-8 mm, long hairy inside; lobes obovate, obtuse. Stamens 4. Capsules oblong, shorter than calyx. Seeds numerous, ovoid, reticulate.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1125

Occasional in grasslands.

Kickxia Dumort.

Kickxia incana (Wall.) Pennell. Scroph. West. Himal. 59. 1943; Godbole & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 530. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 325. 2002. *Linaria incana* Wall. Pl. As. Rar. 2: 43. 1831. Hook.f. Fl. Brit. India 4: 252. 1883. *L. cabulica* Benth. in DC. Prodr. 10: 270. 1846; Hook.f. op. cit. 251; Cooke, Fl. Pres. Bombay 2: 354. 1958 (Repr. ed.).

Herbs. Leaves variable in shape. Flowers solitary, axillary. Corolla personate, spurred; lower lip 3-lobed; upper lip shorter than lower. Seeds angular, brown, black.

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1041

Occasional on rocky hill slopes.

Limnophila R.Br. (nom. cons.)

Limnophila heterophylla (Roxb.) Benth. Scroph. Ind. 25. 1835; Hook.f. Fl. Brit. India 4: 270. 1884; Godbole & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 532. 2001;

Yadav & Sardesai, Fl. Kolhapur Dist. 326. 2002. *Columnea heterophylla* Roxb. Fl. Ind. (Carey & Wall, ed.) 3: 97. 1832.

Annual herbs, 15-10 cm long; upper leaves lanceolate, sessile, 3-nerved, lower leaves pinnatifid, segments narrow, linear. Flowers bluish-white, axillary, solitary, sessile or subsessile. Corolla 2-lipped. Stamens 4. Ovary 2-celled. Capsules subglobose. Seeds small, angular.

Fls & Frts.: Aug.-Dec.

Specimen examined: CBS 1221

Occasional in ditches.

Sopubia Buch. Ham. ex D. Don

Sopubia delphinifolia (L.) G. Don *var. delphinifolia*, Gen. Syst. 4: 560. 1837; Hook.f. Fl. Brit. India 4: 302. 1884; Cooke, Fl. Pres. Bombay 2: 378. 1958 (Repr. ed.); Godbole & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 547. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 333. 2002. *Gerardia delphinifolia* L. in Juslenius Cent. Pl. 2: 21. 1756.

Annual herbs, simple erect, branched. Leaves opposite, pinnatisect, often tinged with dark purple, segment filiform. Flowers axillary, solitary or in few flowered terminal racemes. Corolla pinkish-purple, lobes broad, spreading. Capsules oblong. Seeds numerous, cuneate-oblong, dark brown.

Fis. & Frts.: July-Jan.

Specimen examined: AMJ 1046

Common in wet and marshy place.

Striga Lour.

1. Flowers white

S. angustifolia

1. Flowers yellow

S. asiatica

Striga angustifolia (D. Don.) Sald. Bull. Bot. Surv. India 5 (1): 70. 1963; Godbole & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 549. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 334. 2002. *Buchnera angustifolia* D. Don., Prodr. Fl. Nepal 91. 1825. *Striga euphrasoides* Benth. in Hook. Comp. Bot. Mag. 1: 364. 1836; Hook.f. Fl. Brit. India 4: 299. 1884. Cooke, Fl. Pres. Bombay 2: 376. 1958 (Repr. ed.).

Erect, scabrid, herbs. Leaves linear, lower opposite, upper alternate, sessile, scabrous. Flowers sessile or subsessile, in lax, spicate racemes. Stamens 4, included; anther 1-celled. Capsules ellipsoid or ovoid, black. Seeds minute, black, truncate at both ends, smooth.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1053

Occasional in grasslands and parasitic on roots of grasses.

Striga asiatica (L.) O. Ktze. Rev. Gen. Pl. 1: 466. 1861; Godbole & Prasad in Singh et al. Fl. Maharashtra St. Dicot. 2: 550. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 334. 2002. *Buchnera asiatica* L. Sp. Pl. 630. 1753. *Striga lutea* Lour. Fl., Cochinch. 22. 1790; Hook.f. Fl. Brit. India 4: 299. 1884; Cooke, Fl. Pres. Bombay 2: 375. 1958 (Repr. ed.).

Annual herbs. Leaves lower opposite, upper alternate, sessile, linear, acute. Flowers axillary, solitary or in lax terminal spikes. Corolla yellow; limb 2-lipped; lobes orbicular-ovate. Stamens 4; anthers stipitate. Capsules ellipsoid, glabrous. Seeds truncate at one end.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1071

Frequent in grasslands.

BIGNONIACEAE Juss.

1. Leavers pinnate:

2. Leaves unipinnate:

3. Calyx spatheous, cleft to base on one

side in flower

Dolichandrone

3. Calyx tubular or campanulate; not as above

Tecoma

2. Leaves 2-4 pinnate

Jacaranda

1. Leaves digitate

Tabebuia

Dolichandrone (Fenzl.) B. Seem.

Dolichandrone falcata (Wall. ex DC.) Seem. in J. Bot. 8. 381. 1870; Cl. in Hook.f. Fl. Brit. India 4: 380. 1884; Cooke, Fl. Pres. Bombay 2: 404. 1958 (Repr. ed.); Prasanna in Singh et al. Fl. Maharashtra St. Dicot. 2; 574. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 343. 2002. *Spathodea falcata* Wall. ex DC. Prodr. 9: 206. 1845. Med-Shingi.

Trees. Leaves opposite, simply pinnate, rachis pubescent; leaflets usually 5-9, opposite with an odd one, orbicular to obovate. Flowers in terminal, few flowered racemes. Corolla white with crisped, undulate margins. Stamens 4, included. Disk annular. Capsules flat, falcately curved, seeds winged at two ends, rectangular brown.

Fls. & Frts.: Mar.-June

Specimen examined: AMJ 1246

Frequent on hills slopes.

Jacaranda Juss.

* **Jacaranda acutifolia** Hurnb. & Bonpl. Pl. Acquin. 1: 59. t. 17. 1806; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 581. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 345. 2002.

Trees. Leaves opposite, 2-pinnate, pinnae 14-24 pairs with terminal pinnae longer and acuminate; leaflets elliptic-oblong. Flowers in loose, terminal, panicles. Corolla dark blue or pink. Capsules suborbicular, hard, dark brown or black. Seeds, winged.

Fls. & Frts.: Mar.-Oct.

Specimen examined: AMJ 1280

Planted as avenue tree.

Tabebuia Gornes ex. DC.

***Tabebuia argentea** (Bur. & Schum.) Britt. in Sc. Surv. Porto Rico & Virgin Isl. 6: 197. 1925; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 584. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 347. 2002. *Tecoma argentea* Bur. & Schum. in Mart. Fl. Bras. 8(2): 332. 1845.

Trees. Leaves opposite, digitate; leaflets elliptic-oblong. Flowers in terminal, capitate racemes. Calyx cupular. Corolla bright yellow, tubular-funnel shaped; limb irregularly spreading, lobes obtuse.

Fls.: Mar.-Apr.

Specimen examined: AMJ 1254

Planted as avenue tree.

Tecoma Juss.

Tecoma stans (L.) H. B. & K. Nov. Gen. Sp. 3: 144. 1819; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 585. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 347. 2002. *Bignonia stans* L. Sp. Pl. ed. 2: 871. 1763. *Stenolobium stans* Seem in Ann. Mac. Nat. Hist. 10: 30. 1862; Cooke, Fl. Pres. Bombay 2: 410. 1958 (Repr. ed.). Fig. 11.

Shrubs or small trees. Leaves opposite, 1-pinnate; leaflets ovate-lanceolate. Flowers often drooping, in large, terminal, few-flowered, corymbose racemes often

shorter than the leaves. Corolla yellow, campanulate, limb 2-lipped. Capsules linear, brown, acute. Seeds thin, winged.

Fls. & Frts.: Sept.-Feb.

Specimen examined: CBS 1129

Frequent on hill slopes.

PEDALIACEAE R. Br.

Sesamum L.

Sesamum laciniatum Klein ex Willd. Sp. Pl. 3: 359. 1800; Cl. in Hook.f. Fl. Brit. India 4: 387. 1884; Cooke, Fl. Pres. Bombay 2: 413. 1958 (Repr. ed.); Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 587. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 348. 2002.

Annual herbs. Leaves lower opposite, upper alternate, variously lobed or laciniate, narrowly as broad as long, orbicular, white tomentose beneath. Flowers axillary, solitary. Corolla purple with yellow. Capsules scabrous, pilose. Seeds obovoid, oblong, foveolate.

Fls. & Frts.: June-Oct.

Specimen examined: AMJ 1063

Occasional on rocky soil.

A C A N T H A C E A E Juss.

1. Stamens 4, all with perfect anthers

Lepidagathis

1. Stamens 2, staminodes absent or present:

2. Anther cells parallel

Androgrphis

2. Anther cells superposed:

3. Placentas separating elastically from the

valves from base upwards

Rungia

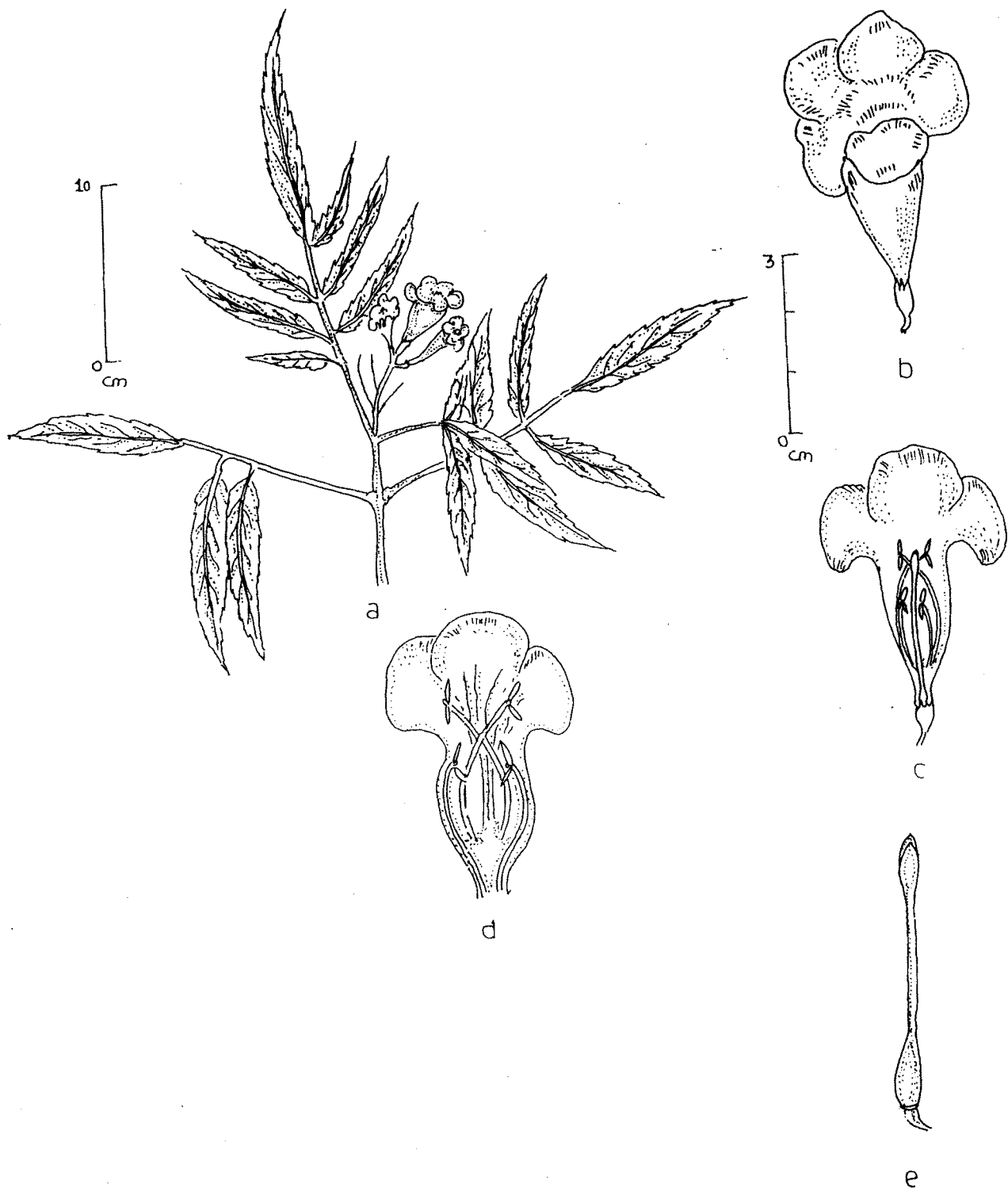


Fig. No. 11.: *Tecoma stans* (L.) H. B. & K.

a. Habit; b. Flower; c. & d. V. S. of Flower; e. Pistil.

3. Placentas not separating elastically from

the valves

Rostellularia

Andrographis Wall. ex Nees.

Andrographis paniculata (Burm.f.) Wall. ex Nees in wall. Pl. Asiat. Rar. 3: 116. 1832; Cl. in Hook.f. Fl. Brit. India 4: 501. 1884; Cooke, Fl. Pres. Bombay 2: 451. 1958 (Repr. ed.); Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 593. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 352. 2002. *Justicia paniculate* Burm.f. Fl. Ind. 9. 1768.

Annual herbs; branches quadrangular, glabrous. Leaves linear-lanceolate, glabrous above, paler beneath. Flowers solitary in lax, terminal and axillary racemes or panicles. Corolla white with rose or pink 8-10 mm long throat, pubescent outside; limb 2-lipped; lobes linear-oblong. Filaments hairy in the upper part; anthers bearded at base. Capsules acute at both ends, glabrous. Seeds many, rugose or pitted, pale brown.

Fls. & Frts.: Aug.-Feb..

Specimen examined: AMJ 1044

Rare, plants used in ayurvedic medicines.

Lepidagathis Willd.

Lepidagathis cristata Willd. Sp. Pl. 2: 400. 1800, Hook.f. Fl. Brit. India 4: 516. 1885; Cooke, Fl. Pres. Bombay 2: 470. 1958. (Repr.); Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 645. 2001; Yadav & Sardesai, Fl. Kolhapur Dist 361. 2002.

Perennial shrubs. Leaves opposite sessile, spinous-serrulate, pubescent. Flowers in globose clusters at the base of stems, spinous pointed, hairy. Corolla pale pink with brown dots. Seeds densely clothed with long hygroscopic mucilaginous hairs.

Fls. & Frts.: Sept-Jan.

Specimen examined: AMJ 1091

Occasional on rocky soils in grasslands.

Rostellularia

1. Sepals neither scarious nor aristate

R. japonica

1. Sepals scarious, the midrib produced into a long
arista

R. crinita

Rostellularia crinita Nees. in Wall. Pl. As. Rar. 3: 101. 1832 & in DC. Prodr. 11: 373. 1847; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 664. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 365. 2002. *Justicia micrantha* Wall. ex Cl. in Hook.f. Fl. Brit. India 4: 536. 1885, *non* Pohl ex Nees; Cooke, Fl. Pres. Bombay 2: 489. 1958 (Repr. ed.). *J. neesii* Raman in Sald. & Nicols., Fl. Hassan Dt. 551. 1976.

Erect herbs. Leaves orbicular or ovate-elliptic, more or less rounded at both ends, entire. Flowers in axillary and terminal short, dense spikes. Corolla pink, 2-lipped; lobes subequal, rounded. Capsules elliptic, mucronate, minutely puberulous. Seeds orbicular, finely rugose.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1074

Occasional on hill slopes.

Rostellularia japonica (Thunb.) Ellins. in Bull. Bot. Surv. India 22: 196. (1980) 1982; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 665. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 365. 2002. *Justicia japonica* Thunb. Fl. Jap. 20. 1784. *Justicia simplex* D. Don., Prodr. Fl. Nepal 118. 1825; Hook.f. Fl. Brit. India 4: 539. 1885; Cooke, Fl. Pres. Bombay 2: 490. 1958 (Repr. ed.).

Annual herbs; branches quadrangular. Leaves ovate to elliptic. Flowers in dense axillary and terminal, cylindric spikes. Corolla pink, pubescent outside; limb 2-lipped;

lobes short rounded. Capsules oblong, pointed and pubescent at apex, with a solid stalk.

Seeds orbicular, concentrically rugose.

Fls. & Frts.: Aug.-Oct.

Specimen examined: AMJ 1067

Occasional on hill slopes.

Rungia Nees

1. Erect herbs, densely hairy; capsules ovoid, obtuse *R. elegans*

1. Decumbent herbs, rooting at lower node, nearly
glabrous; capsules ovoid, acute *R. repens*

Rungia elegans Dalz. in Dalz. & Gibs. Bombay Fl. 196. 1861; Cl. in Hook.f. Fl. Brit. India 4: 549. 1885; Cooke, Fl. Pres. Bombay 2: 480. 1958 (Repr. ed.); Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 671. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 366. 2002.

Annual herbs. Leaves elliptic lanceolate, apex acute, base rounded. Flowers in sessile, terminal spikes. Corolla blue, pubescent outside, 2-lipped. Stamens 2; anthers 2-celled, with a white basal appendage. Seeds 4, sub-orbicular, rugose with concentric furrows, brown.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1037

Frequent in shady places.

Rungia repens (L.) Nees in Wall. Pl. Asiat. Rar. 3. 110. 832; Cl. in Hook.f. Fl. Brit. India 4: 549. 1885; Cooke, Fl. Pres. Bombay 2: 480. 1958 (Repr. ed.); Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 672. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 366. 2002.

Annual herbs, decumbent; stems rooting at lower nodes. Leaves 2.5-5.0 x 1-1.2 cm, oblong- lanceolate, base usually tapering. Flowers in sessile, terminal spikes. Corolla blue, pubescent outside, 2-lipped. Stamens 2; anthers 2-celled, cells superposed, the lower cell often with a white basal appendage. Seeds 4, sub-orbicular, rugose with concentric furrows, pale brown.

Fls. & Frts.: Sept-Jan.

Specimen examined: CBS 1040

Common on bunds of fields.

VERBENACEAE J. St. Hil.

1. Inflorescence centripetal:

2. Flowers sessile in spikes:

3. Spikes capitate, cylindric; calyx small;

stamens 4; fruit indehiscent:

4. Shrubs; calyx truncate or obscurely lobed;

fruit a juicy berry

Lantana

4. Prostrate herbs; calyx 2-4-lobed; fruits

drupaceous, hard

Phyla

3. Spikes long, slender; calyx long, tubular;

stamens 2; fruits indehiscent

Stachytarpheta

2. Flowers pedicellate

Duranta

1. Inflorescence centrifugal:

5. Leaves simple:

6. Flower regular; stamens isomerous

Tectona

6. Flower irregular; stamens fewer:

7. Fruit with one 4-celled pyrene	<i>Gmelina</i>
7. Fruit with four 1-seeded pyrenes	<i>Clerodendrum</i>
5. Leaves digitate	<i>Vitex</i>

Clerodendrum L.

Clerodendrum serratum (L.) Moon. Cat. Pl. Ceylon 46: 382. 1824; Cl. in Hook.f. Fl. Brit. India 4: 592. 1885; Cooke, Fl. Pres. Bombay 2: 512. 1958 (Repr. ed.); Prasanna in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 691. 2001; Yadav & Sardesai, Fl. Kolhapur Dist 371. 2002. *Volkameria serrata* L. Mant. 90. 1767. Bharangi.

A shrub. Stems bluntly quadrangular. Leaves oblong, acute, sharply serrate, glabrous. Flowers in lax panicles, with bractiform leaves at the base of cymes. Calyx cup like, truncate or minutely 5-toothed pubescent. Corolla bluish purple or white; longest lobe dark bluish. Stamens definite, long exserted. Fruits drupaceous.

Fls. & Frts.: Sept. -Nov.

Specimen examined: AMJ 1155

Occasional on hill slopes.

Duranta L.

***Duranta erecta** L. Sp. Pl. 637. 1753; Prasanna in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 704. 2001. *D. repens* auct. non L. 1753. *D. plumieri* Jacq. Select. Strip. Arn. 186. 1763; Cl. in Hook.f. Fl. Brit. India 4: 560. 1885; Cooke, Fl. Pres. Bombay 2: 518. 1958 (Repr. ed.); Yadav & Sardesai, Fl. Kolhapur Dist. 372. 2002.

Erect shrubs with long, thorny branches. Leaves ovate to elliptic-oblong. Flowers in erect or drooping, in terminal panicles. Corolla bluish or white, tubular, pubescent within, often with yellowish throat; lobes broad, obtuse. Fruits drupaceous, often falling off together with orange calyx and top of the pedicels.

Fls. & Frts.: Almost through out year.

Specimen examined: CBS 1131

Planted as hedge plant.

Gmelina L.

Gmelina arborea Roxb. Pl. Corom. 3: 42. t. 246. 1815; Cl. in Hook.f. Fl. Brit. India 4: 581. 1985; Cooke, Fl. Pres. Bombay 2: 504. 1958 (Repr. ed.); Prasanna in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 692. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 372. 2002. Shivan.

A moderate tree. Leaves broadly ovate or elliptic rhomboid. Flowers in dichotomously branched, velvety tomentose panicles of 3-flowered cymes. Corolla orange-yellow or yellowish, densely hairy. Fruits drupaceous, obovoid-oblong, orange-yellow or blackish.

Fls. & Frts.: Mar. -May

Specimen examined: AMJ 1256

Occasional along road side.

Lantana L.

Lantana camara L. var. **aculeata** (L.) Moldenke in Torr. 34: 9. 1934 & in Ann. Missouri. Bot. Card. 60: 58. 1973; Prasanna in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 693. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 374. 2002. *L. aculeata* L. Sp. PL 627. 1753. *Lantana camara* auct. non L. 1753; Cl in Hook.f. Fl. Brit. India 4: 562. 1885; Cooke, Fl. Pres. Bombay 2: 498. 1958 (Repr. ed.). Ghaneri.

Shrubs much branched. Leaves ovate-elliptic, apex acute, base rounded, margins crenate- serrate. Inflorescence of terminal and axillary spikes. Corolla yellow, turning

PLATE - IX



← *Lepidagathis cristata*

Lavandula bipinnata
var. *bipinnata* →



← *Clerodendrum*
serratum

Boerhavia erecta →



orange-red; tubes 2-3 times longer than the lobes. Fruits drupaceous, globose, bluish-black, coloured, when ripe.

Fls. & Frts.: Throughout the year.

Specimen examined: AMJ 1133

Frequent along roadsides and on hill slopes.

Phyla Lour.

Phyla nodiflora (L.) Greene in Pittonia 4: 46. 1899; Prasanna in Singh et al. Fl. Maharashtra St. Dicot. 2: 693. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 374. 2002. *Verbena nodiflora* L. Sp. Pl. 20. 1753. *Lippia nodiflora* (L.) A. Rich. in Michx. Fl. Bor. Amen. 2: 15. 1803; Cl. in Hook.f. Fl. Brit. India 4: 563. 1885; Cooke, Fl. Pres. Bombay 2: 499. 1958 (Repr. ed.).

Annual herbs. Leaves elliptic-obovate, upper half serrate, appressed hairy, base alternate, opposite, subsessile. Flowers minute, sessile, in densely packed, subglobose to oblong head. Corolla white or pink, the middle lobe longest. Drupes ellipsoid.

Fls. & Frts.: Sept.-Apr.

Specimen examined: AMJ 1142

Occasional in marshy places.

Stachytarpheta Vahl.

Stachytarpheta jamaicensis (L.) Vahl, Enum. Pl. 1: 206. 1804; Prassanna in Singh et al. Fl. Maharashtra St. Dicot. 2: 696. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 375. 2002. *Verbena indica* L. Syst. Nat. ed. 10: 851. 1759. *Stachytarpheta indica* auct. non (L.) Vahl, Enum. 1: 206. 1804; Cl. in Hook.f. Fl. Brit. India 4: 564. 1885; Cooke, Fl. Pres. Bombay 2: 501. 1958 (Repr. ed.). Jangali Aghada.

Erect, dichotomously branched, herbs. Leaves elliptic or ovate-oblong. Flowers sessile in slender, glabrous spikes. Corolla tubular, deep blue, glabrous; slightly curved, pubescent within, 5-lobed. Fruits drupaceous, oblong, often ribbed, splitting into 2 pyrenes.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1043

Occasional on hill slopes.

Tectona L.f. (nom. cons.)

***Tectona grandis** L.f. Suppl. 151. 1781; Cl. in Hook.f. Fl. Brit. India 4: 570. 1885; Cooke, Fl. Pres. Bombay 2: 503. 1958 (Repr. ed.); Prasanna in Singh et al. Fl. Maharashtra St. Dicot. 2: 696. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 375. 2002. Sagwan.

Tall trees. Leaves elliptic or obovate, apex acute, base cuneate, upper surface glabrous and rough, lower surface stellate grey. Flowers in large, terminal branched, panicles. Corolla white, 5-6-lobed. Stamens 5-6, exserted. Fruits subglobose, shallowly 4-lobed. Seeds 2-4, brown.

Fls. & Frts.: June –Dec.

Specimen examined: AMJ 1289

Planted and also on hill slopes.

Vitex L.

Vitex negundo L. Sp. Pl. 638. 1753 var. **negundo**; Cl. in Hook.f. Fl. Brit. India 4: 583. 1885; Cooke, Fl. Pres. Bombay 2: 508. 1958 (Repr. ed.); Prasanna in Singh et al. Fl. Maharashtra St. Dicot. 2: 699. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 376. 2002. *Vitex bicolor* Willd. Enum. Hort. Berol. 660. 1810. Nirgudi.

Shrubs. Leaves 3-5-foliolate, ovate-lanceolate, base acute, margins entire sinuate with few scattered teeth in middle above. Flowers in a large terminal often compound pyramidal panicles. Corolla bluish purple, tomentose outside. Drupes black when ripe, enclosed by campanulate calyx.

Fls. & Frts.: Throughout the year.

Specimen examined: AMJ 1154

Occasional on borders.

LAMIACEAE Lindl. (nom. alt.)

[LABIATAE (nom. cons.)]

1. Calyx tubular with 5-15 equal or subequal teeth:

2. Leaves neither pinnatisect nor pinnatipartite;

flowers in terminal axillary whorls of racemes
or racemes of whorls; calyx 5-10-nerved:

3. Upper lip of corolla not wooly; calyx 5-toothed;

stamens exserted

Hyptis

3. Upper lip of corolla wooly; calyx more than

6-toothed; stamens included

Leucas

2. Leaves pinnatisect or pinnatipartite; flowers

in elongated spikes; calyx 13-15 nerved

Lavandula

1. Calyx 2-lipped with upper broad, ovate, elliptic

or suborbicular and lower lip 4-toothed:

4. Flowers in clusters or racemes of whorls;

upper lip of calyx not deflexed, not covering

the mouth of tube; lower lip toothed; bracts

persistent:

5. Bracts not spinous pointed; calyx 10-15

toothed:

Ocimum

5. Bracts spinous pointed; calyx 5-10 toothed

Leonotis

4. Flowers in thick cylindrical spikes; upper lip of

calyx deflexed in fruit and concealing the

mouth of tube; lower lip truncate; bracts caducous

Anisochilus

Anisochilus (L.) Wall.

Anisochilus carnosus (L.) Wall. Pl. Asiat. Rar. 2: 18. 1831; Cl. in Hook.f. Fl. Brit. India 4: 627. 1885; Cooke, Fl. Pres. Bombay 2: 532. 1958 (Repr. ed.); Kulkarni & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 713. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 377. 2002. *Lavendula carnosus* L. Amoen. Acad. 10: 56, t. 3. 1790.

Erect herbs. Leaves ovate, truncate or subcordate at base. Flowers in simple to paniculate, cylindrical spikes. Corolla tubular, 2-lipped, purplish, pubescent outside. Nutlets suborbicular, subcompressed, shining smooth.

Fls. & Frts.: Sept.-Dec.

Specimen examined: AMJ 1033

Frequent on rocky side.

Hyptis Jacq. (nom. cons.)

Hyptis suaveolens (L.) Poit. Ann. Mus. Nat. Hist. Paris. 7: 472. t. 29. f. 2. 1806; Hook.f. Fl. Brit. India 4: 630. 1885; Cooke, Fl. Pres. Bombay 2: 560. 1958 (Repr. ed.); Kulkarni & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 718. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 378. 2002. *Balata suaveolens* L. Syst. Nat. (ed.10.) 1100. 1759.

Annual erect aromatic herbs or shrubs. Leaves ovate, rounded or sub-cordate at base, crenate-dentate, pubescent on both the surfaces. Flowers in pedunculate cymes. Corolla tubular, bluish; upper lip shortly 2-lobed; lower one 3-lobed. Nutlets 2, quadrate, compressed, with a median rib, rugulose, brown.

Fls. & Frts.: Oct.-Mar.

Specimen examined: AMJ 1034

Frequent in shady places.

Lavandula L.

Lavandula bipinnata (Roth) O. Ktze. Rev. Gen. Pl. 521. 1891 var. **bipinnata**; Kulkarni & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 722. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 379. 2002 *Biseropogon bipinnata* Roth, Nov. Pl. Sp. 255. 1821. *Lavandula burmanni* Benth. Lab. Gen. & Sp. 151. 1833; Hook.f. Fl. Brit. India 4: 631. 1885; Cooke, Fl. Pres. Bombay 2: 534. 1958 (Repr. ed.).

Annual erect herbs. Leaves sessile, pinnatifid. Flowers in simple or branched spikes; floral bracts with strongly nerved base and capillary setaceous awns at apex, longer than calyx. Corolla tubular, blue or white 2-lipped. Stamens 4; filaments bearded. Nutlets ellipsoid, smooth, black.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1188

Occasional on rocky soil and along road sides.

Leonotis (Pers.) R. Br.

Leonotis nepetiifolia (L.) R. Br., Prodr. 504. 1810; Hook.f. Fl. Brit. India 4: 691. 1885; Cooke, Fl. Pres. Bombay. 2: 555. 1958 (Repr. ed.); Kulkarni & Das Das in Singh et. al.

Fl. Maharashtra St. Dicot. 2: 723. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 379. 2002. *Phlomis nepetiifolia* L. Sp. Pl. 586. 1753. Dipmal.

Erect, woody herbs or under shrubs, stem obtusely 4-angled. Leaves broadly ovate, membranous, pubescent on both sides, apex acute, base cuneate, margins coarsely serrate. Inflorescence globose, many flowered, in head like whorls. Corolla tubular, orange-red, densely covered with orange-red hairs, annulate with 3-transverse rings of white hairs. Nutlets ovoid, pitted at apex.

Fls. & Frts.: Sept.-Feb.

Specimen examined: AMJ 1050

Occasional along road sides.

Leucas R. Br.

Leucas aspera (Willd.) Link., Enum. Hort. Berol. 2: 113. 1822; Hook.f. Fl. Brit. India 4: 690. 1885; Cooke, Fl. Pres. Bombay 2: 548. 1958 (Repr. ed.); Kulkarni & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 726. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 380. 2002. *Phlomis aspera* Willd. Enum. Hort. Berol. Pl. 2: 621. 1809.

Annual erect herbs. Leaves linear-oblong, lanceolate, subsessile, membranous, pubescent on both sides; apex obtuse, base narrowed, margins crenate. Flowers in terminal and axillary dense whorls, with 1-2 bractiform leaves. Corolla white, the upper lip densely woolly. Nutlets ovoid smooth, brownish.

Fls. & Frts.: Sept.-Mar.

Specimen examined: AMJ 1121

Common in grasslands and on rocky soil.

Ocimum L.

Ocimum americanum L., Cent. Pl. 1: 15, t. 1755; Kulkarni & Das Das in Singh et al. Fl. Maharashtra St. Dicot. 2: 741. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 382. 2002. *O. canum* Sims. in Bot. Mag. 51. t. 2452. 1824; Hook.f. Fl. Brit. India 4: 607. 1885; Cooke, Fl. Pres. Bombay 2: 521. 1958 (Repr. ed.). RanTulasi.

Annual erect herbs. Stems sub quadrangular. Leaves ovate-oblong, glabrous above, sparsely pilose along nerves and gland dotted beneath margins, serrulate. Flowers in 5-6-flowered whorls, arranged in thyrsus. Corolla tubular, white. Stamens 4, much exserted, the two upper with a tooth at base. Nutlets ellipsoid, black.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1004

Occasional on rocky soil.

NYCTAGINACEAE Juss.

1. Involucral bracts absent; flowers small; fruits small,

clavate

Boerhavia

1. Involucral bracts present; flowers large; fruits large,

globose

Bougainvillea

Boerhavia L.

1. Prostrate herbs; flowers sessile in umbels; fruits 5-ribbed

and glandular on ribs

B. repens

var. *diffusa*

1. Erect or suberect herbs; flowers pedicellate in lax panicles; fruits

5-angular and eglandular

B. erecta

Boerhavia erecta L. Sp. Pl. 3. 1753; Moorthy in Singh et al. Fl. Maharashtra St. Dicot 2: 772. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 387. 2002. *B. punarnava* Saha et Murthy J. Sci. Ind. Rec. 21 c: 249.1962.

Annual herbs. Leaves simple, opposite pairs unequal, linear-lanceolate to ovate, margins wavy, undersurface whitish. Flowers 2-3 together in lax panicles; perianth white or pale pink. Stamens 2-3, slightly exserted. Fruits obconical, 5-angled, truncate at apex, glabrous.

Fls. & Frts.: Sept.-Dec.

Specimen examined: AMJ 1055

Occasional on rocky soil.

Boerhavia repens L. var. **diffusa** (L.) Hook.f. Fl. Brit. India 4: 709. 1885; Moorthy in Singh et al. Fl. Maharashtra St. Dicot. 2: 773. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 387. 2002. *B. diffusa* L. Sp. Pl. 3: 1753; Cooke, Fl. Pres. Bombay 2: 563. 1958. (Repr.). Punarnava. Fig. 12.

Annual herbs, diffuse, divaricately branched. Leaves broadly ovate, base rounded, margins wavy. Flowers 4-10 together, in small umbels arranged in slender long stalked corymbose, axillary and terminal panicles. Perianth glandular-viscid, limb funnel shaped, dark pink. Fruits 5-ribbed, very glandular.

Fls. & Frts.: Nov.–Feb.

Specimen examined: CBS 1039

Occasional in shady places.

Bougainvillea Comm. ex Juss. (nom. cons.)

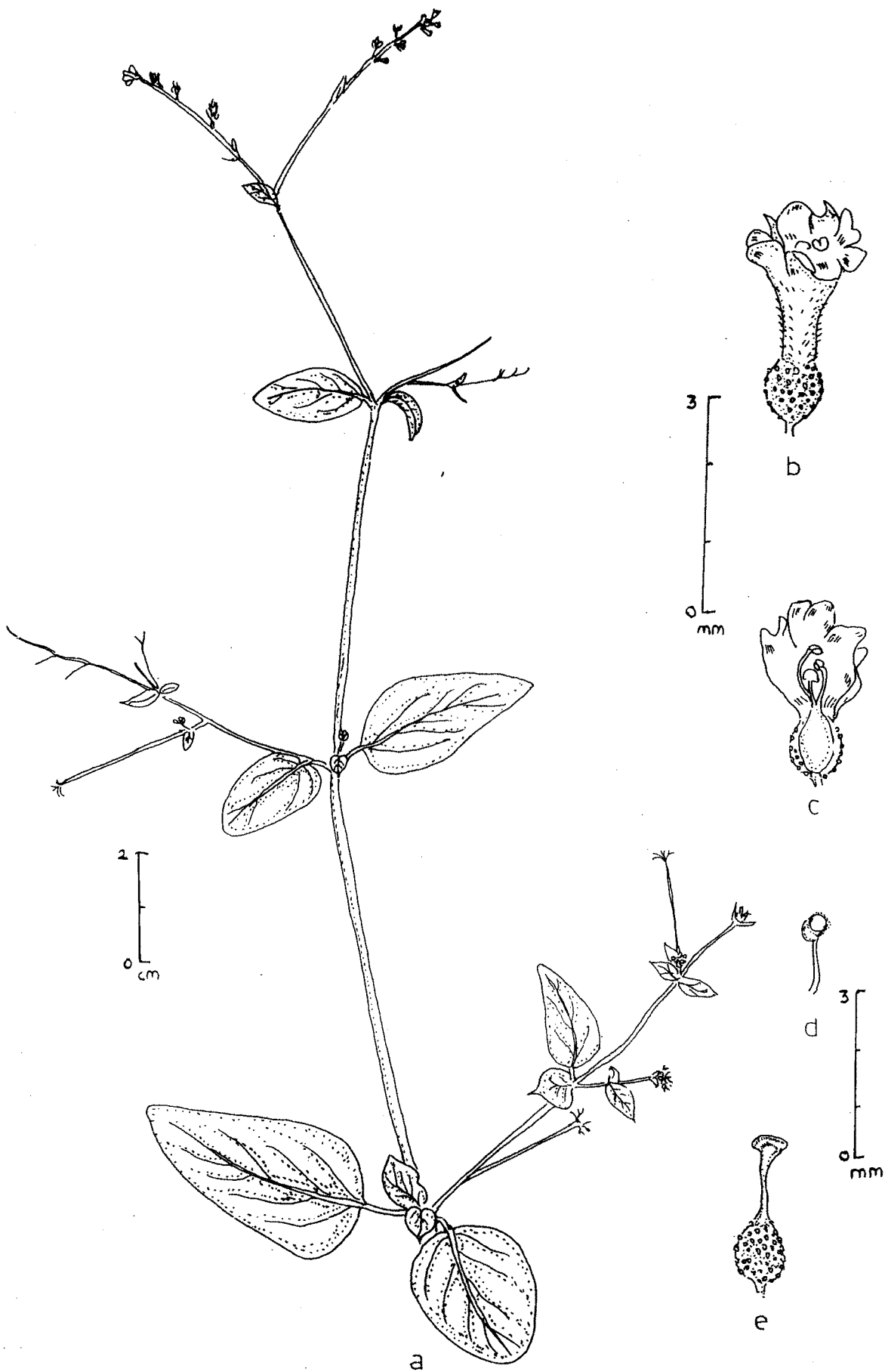


Fig. No. 12.: *Boerhavia repens* L. var. *diffusa* (L.)

***Bougainvillea spectabilis** Willd. Sp. Pl. 2: 348.1799; Cooke, Fl. Pres. Bombay 2:567. 1958 (Repr. ed.); Moorthy in Singh et al. Fl. Maharashtra St. Dicot 2: 776. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 387. 2002. Bogan Vel.

Large, thorny, straggling shrubs. Flowers in triads, 1-7, united into leafy terminal panicles, variously brightly coloured and conspicuously veined. Perianth tubular, pale yellow or white within, purplish black and pubescent outside. Stamens usually 8, included

Fls. & Frts.: Feb.-June

Specimen examined: AMJ 1267

Planted.

A MARANTHACEAE Juss.

1. Leaves opposite:

2. Anthers 2-celled:

3. Spikes elongated and rather lax

Achyranthus

3. Spikes cylindric or condensed globose

Gomphrena

2. Anthers 1-celled

Alternanthera

1. Leaves alternate:

4. Utricle 1-seeded; perianth parts not scarious:

5. Fertile flowers subtended by sterile

modified flowers

Digera

5. Fertile flowers not as above; flowers

unisexual

Amaranthus

4. Utricle more than 1-seeded; perianth parts

scarious

Celosia

Achyranthes L.

Achyranthes aspera L. Sp. Pl 204. 1753. var. **aspera**; Hook.f. Fl. Brit. India 4: 730. 1885; Cooke, Fl. Pres. Bombay 2: 580. 1958 (Repr. ed.); Lakshmi. & Godbole in Singh et al. Fl. Maharashtra St. Dicot. 2: 778. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 390. 2002. Aghada.

Annual, erect woody herbs. Leaves elliptic-oblong, ovate, apex acuminate. Flowers in terminal spikes; bracteoles with a spine as long as the blade, hard in fruit, falling off with fruiting perianth. Stamens 5. Utricle truncate at apex, enclosed in hardened perianth. Seeds subcylindric, brown.

Fls. & Frts.: Oct-Mar.

Specimen examined: AMJ 1122

Frequent in shady places.

Alternanthera Forssk.

1. Perianth segments 3-nerved; stamen 5

A. pungens

1. Perianth segments 1-nerved; stamens 3

A. sessilis

Alternanthera pungens Kunth in H. B. K. Nov. Gen. Sp. 2: 206. 1817; Lakshmi. & Godbole in Singh et al. Fl. Maharashtra St. Dicot. 2: 782. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 392. 2002. Reshim kata.

Prostrate herbs. Leaves opposite in unequal pairs, broadly obovate to elliptic-obovate or orbicular. Flowers in short, axillary, pungent spikes, often 1-3 spikes together. Tepals very unequal, hairy on the back. Stamens 5; filaments connate at base. Fruits compressed, truncate at apex, narrowly winged.

Fls. & Frts.: Oct.-Apr.

Specimen examined: AMJ 1170

Common in marshy places.

Alternanthera sessilis (L.) R. Br. ex DC. Cat. Hort. Monsp. 4: 77. 1813; Hook.f. Fl. Brit. India 4: 731. 1885; Lakshmi. & Godbole in Singh et al. Fl. Maharashtra St. Dicot. 2: 783. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 393. 2002. *Gomphrena sessilis* L. Sp. Pl. 225. 1753. *A. triandra* Lam., Encycl. 1: 95. 1783; Cooke, Fl. Pres. Bombay 2: 584. 1958 (Repr. ed.).

Annual prostrate herbs, rooting at nodes. Leaves linear. Flowers sessile, in dense, 1-4 axillary spikes. Tepals white or pinkish, 1-nerved or obscurely 3-nerved at base. Stamens 3; staminodes 2; pseudo-staminodes minute or very obscure. Utricles with thickened margin. seeds orbicular.

Fls. & Frts.: June-April.

Specimen examined: CBS 1005

Common in marshes and along streams.

Amaranthus L.

Amaranthus viridis L. Sp. Pl. ed. 2: 1405. 1763 quoad. Descr. & Herb. L. excl. ref. Bauhin & Tourn; Hook.f. Fl. Brit. India 4: 720. 1885; Cooke, Fl. Pres. Bombay 2: 575. 1958 (Repr. ed.); Lakshmi. & Godbole in Singh et al. Fl. Maharashtra St. Dicot. 2: 788. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 395. 2002.

Annual herbs. Leaves ovate, apex obtuse, usually notched, base cuneate. Flowers in axillary clusters and terminal spikes or panicles. Tepals shortly mucronate with green midrib and white scarious margins. Stamens as long as tepals. Fruits ovoid, shortly beaked, bursting irregularly. Seeds compressed, smooth, black shining.

Fls. & Frts.: Aug.-Dec.

Specimen examined: CBS 1069

Occasional on waste lands.

Celosia L.

Celosia argentea L. Sp. Pl. 205. 1753 var. **argentea**; Hook.f. Fl. Brit. India 4: 714. 1885; Cooke, Fl. Pres. Bombay 2: 570. 1958 (Repr. ed.); Lakshmi. & Godbole in Singh et al. Fl. Maharashtra St. Dicot. 2: 789. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 395. 2002. Kurdu.

Annual herbs, erect or procumbent stem strongly ribbed. Leaves broadly ovate; lanceolate-elliptic or linear. Flowers in solitary or paired, terminal, cylindric spikes. Perianth of 5 distinct tepals. Stamens 5; filaments united at base. Style purple. Seeds 2-9, biconvex, shining black.

Fls. & Frts.: Sept.-Mar.

Specimen examined: AMJ 1057

Common in rocky soils.

Digera Forssk.

Digera muricata (L.) Mart. Beitr. Amar. 77, no. 2. 1825; Lakshmi. & Godbole in Singh et al. Fl. Maharashtra St. Dicot. 2: 790. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 396. 2002. *Achyranthes muricata* L. Sp. Pl. (ed. 2) 295. 1762. *Digera arvensis* Forssk. Fl. Aeg.-Arab. 65. 1775; Hook.f. Fl. Brit. India 4: 717. 1885; Cooke, Fl. Pres. Bombay 2: 572. 1958 (Repr. ed.).

Annual herbs. Leaves ovate or elliptic. Flowers in subaxillary, extra-axillary or axillary, lax spikes. Sterile flowers in upper part of spike. Tepals unequal. Stamens 5, distinct. Fruits compressed, globose. Seeds compressed yellowish brown.

Fls. & Frts.: June-Feb.

Specimen examined: CBS 1021

PLATE - X



← Celosia argentea
var. argentea

Gloriosa superba →



← Cynotis fasciculata

Pennisetum
pedicellatum →



Frequent in rocky places.

Gomphrena L.

***Gomphrena globosa** L. Sp. Pl. 224. 1753; Hook.f. Fl. Brit. India 4: 732. 1885; Cooke, Fl. Pres. Bombay 2: 584. 1958 (Repr. ed.); Lakshmi. & Godbole in Singh et al. Fl. Maharashtra St. Dicot. 2: 790. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 396. 2002.

Annual herbs. Leaves ovate, the 2 uppermost leaves sessile or nearly so. Flowers in sessile or subsessile, solitary or clustered terminal, globose heads. Bracteoles deep purple. Perianth shorter than the bracteoles, yellowish-green, white-woolly outside. Fruits ovoid. Seed reniform, turgid.

Fls. & Frts.: Aug.-Mar.

Specimen examined: AMJ 1010

Grown in garden.

SANTALACEAE R. Br.

Santalum L.

Santalum album L. Sp. Pl. 349. 1753; Hook.f. Fl. Brit. India 5: 231. 1886; Cooke, Fl. Pres. Bombay 3:49. 1958 (Repr. ed.); Godbole & Lakshmi. in Singh et al. Fl. Maharashtra St. Dicot. 2: 850. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 418. 2002. Chandan.

Evergreen trees. Leaves elliptic, lanceolate. Flowers inodorous, in terminal and axillary paniculate cymes. Stamens 4. Drupe, globose, purplish black. Seeds subglobose, hard, ribbed.

Fls. & Frts.: Feb.-Nov.

Specimen examined: AMJ 1255

Occasional on slopes.

EUPHORBIACEAE Juss.

1. Ovule one in each cell of ovary:

2. Inflorescence a cyathium *Euphorbia*

2. Inflorescence not cyathium *Jatropha*

1. Ovule 2-many in each cell of ovary:

3. Male flowers petaliferous *Bridelia*

3. Male flowers apetaliferous:

4. Styles free:

5. Disc present; filaments free or connate:

6. Herbs or shrubs *Phyllanthus*

6. Trees *Emblica*

Bridelia Willd.

Bridelia retusa (L.) Spreng. Syst. Veg. 3: 48. 1826; Hook.f. Fl. Brit. India 5: 268. 1887; Cooke, Fl. Pres. Bombay 3: 68. 1958 (Repr), p.p.; Londhe in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 865. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 425. 2002. *Clutia retusa* L. Sp. Pl. 1042: 1753.

Trees. Leaves coriaceous. Flowers sessile or shortly pedicellate. Petals greenish-white, those of the female flowers often pectinate. Drupes fleshy seated on enlarged calyx, purplish black.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1231

Occasional on hill slopes.

Emblica Gaertn.

****Emblica officinalis*** Gaertn. Fruct. 2: 122. 1791; Londhe in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 873. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 429. 2002. *Phyllanthus emblica* L. Sp. Pl. 982. 1753; Hook.f. Fl. Brit. India 5: 289. 1887; Cooke, Fl. Pres. Bombay 3: 81. 1958 (Repr). Awala.

Trees. Bark peeling off in flakes. Leaves distichous. Flowers in axillary fascicles. Male flowers numerous. Perianth segments 6, distinct. Female flowers few, subsessile. Fruits fleshy globose. Seeds 6, trigonous.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1232

Planted along road sides.

***Euphorbia* L.**

1. Cyathia in terminal cymes, subtended by a

leaflike, green coloured bracts

E. geniculata

1. Cyathia in terminal and / or axillary, solitary cymes:

2. Glands of involucre with a conspicuous petaloid

limb

E. parviflora

2. Glands of involucre without a conspicuous petaloid limb:

3. Prostrate herbs

E. heyneana

3. Erect herbs

E. hirta

Euphorbia geniculata Orteg. Nov. Pl. Hort. Matr. Dec. 18. 1797; Hook f. Fl. Brit. India 5: 239. 1887; Cooke, Fl. Pres. Bombay 3: 66. 1958 (Repr. ed.); Londhe in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 880. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 431. 2002. Dudhani.

Annual herbs, erect. Leaves broadly elliptic or obvoate, upper surface glabrous, lower hairy. Cyathia many, in dense terminal clustered cymes subtended by a whorl of leaf like bracts. Fruits ovoid-globose, 3-lobed. Seeds grey. ovoid.

Fls. & Frts.: Sept.-Mar.

Specimen examined: AMJ 1064

Frequent in shady places.

Euphorbia heyneana Spreng Syst. Veg. 3: 791. 1826; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 880. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 431. 2002. *E. microphylla* Heyne ex Roth Nov. Pl. Sp. 229. 1321, non Lam. 1788; Hook.f. Fl. Brit. India 5: 252. 1887; Cooke, Fl. Pres. Bombay 3: 65. 1958 (Repr. ed.).

Annual prostrate herbs. Leaves opposite Cyathia subsolitary, axillary; glands shortly stipitate with small petaloid appendages. Fruits trigonous, globose, glabrous, keeled. Seeds obtusely quadrangular, smooth.

Fls. & Frts.: Throughout year.

Specimen examined: CBS 1006

Common on rocky soils.

Euphorbia hirta L. Sp. Pl. 454. 1753; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 881. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 431. 2002. *E. pilulifera* auct. non L. 1753; Hook.f. Fl. Brit. India 5: 250. 1887; Cooke, FL Pres. Bombay 3: 64. 1958 (Repr. ed.).

Perennial herbs. Leaves elliptic or ovate-oblong. Cyathia many, crowded in small axillary, subsessile cymes. Fruits globose, hispid. Seeds reddish-brown.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1009

Euphorbia parviflora L. Syst. ed. 10. 2: 1047. 1759; Londhe in Singh et al. Fl. Maharashtra St. Dicot. 2: 883. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 433. 2002.

E. hypercifolia L. Sp. Pl. 454. 1753, p.p. tantum; Hook.f. Fl. Brit. India 5: 249. 1887, p.p.

E. hypercifolia var. *parviflora* Prain, Beng. Pl. 2: 924. 1903; Cooke, Fl. Pres. Bombay 3: 63. 1958 (Repr. ed.).

Freuently through out the area.

J. gossypifolia

Shrubs with watery juice. Leaves alternate, entire or more often 3-5-lobed. Flowers in terminal, dichotomous cymes. Tepals erect or with recurved apex, with long white hairs inside. Stamens 8-10. Stigmas sagittate, 2-lobed. Seeds ellipsoid, carunculate.

Fls. & Frts.: Oct.-June

Specimen examined: AMJ 1024

Planted as a hedge plant.

***Jatropha gossypifolia** L. Sp. Pl. 1006. 1753; Hook.f. Fl. Brit. India 5: 383. 1887; Cooke, Fl. Pres. Bombay 3: 94. 1958 (Repr. ed.); Londhe in Singh *et al.* Fl. Maharashtra St. Dicot 2: 892. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 436. 2002.

Shrubs yellow juice. Leaves alternate, cordate at base, 3-5-fid beyond the middle, green or more often dark purplish-red, ciliate with stalked glands. Flowers in terminal, corymbose panicles. Calyx green with purple tinge, gland-ciliate. Petals obovate, dark red with paler base, glabrous. Seeds oblong, carunculate.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1244

Occasional on borders.

Phyllanthus L.

Phyllanthus reticulatus Poir. in Lam. Encycl. 5: 298. 1804; Hook.f. Fl. Brit. India 5: 288. 1887; Cooke, Fl. Pres. Bombay 3: 81. 1958 (Repr. ed.); Londhe in Singh *et al.* Fl. Maharashtra St. Dicot. 2: 900. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 439. 2002. Datwan, Kanguni.

Shrubs. Flowers axillary, the males in fascicles of 2-6, the females solitary. Perianth segments 5 to 6, obtuse, alternating with disk glands. Stamens 5, the inner 3 with their filaments connate into a column, the outer 2 free, shorter. Ovary 5-10 locular; styles 3. Fruits fleshy, depressed globose, dark purple or black. Seeds 8-10, 3-gonous.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1068

Occasional on rocky soil.

MORACEAE Link.

Ficus L.

1. Leaves caudate-acuminate *F. religiosa*

1. Leaves not caudate-acuminate:

2. Receptacle on short, leafless, warted branches *F. racemosa*

2. Receptacles not as above :

3. Aerial roots well developed; leaves

finely velvety beneath *F. benghalensis*

Ficus benghalensis L. Sp. Pl. 1059. 1753; Hook.f. Fl. Brit. India 5: 499. 1888; Cooke, Fl. Pres. Bombay 3: 145. 1958 (Repr. ed.); Lakshmi. & Venkanna in Singh et al. Fl. Maharashtra St. Dicot. 2: 934. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 449. 2002. Wad.

Trees, with numerous aerial roots from spreading branches. Leaves ovate, coriaceous. Receptacles globose, sessile in axillary pairs, bright red. Male flowers near the mouth of the receptacles, Tepals 4. Gall flowers similar to males but with short style. Female flowers with 4-tepals and ovary with elongate style. Achenes ovoid-brown.

Fls. & Frts.: Apr.-June

Specimen examined: AMJ 1223

Planted along roadsides.

Ficus racemosa L. Sp. Pl. 1060. 1753; Lakshmi. & Venkanna in Singh et al. Fl. Maharashtra St. Dicot. 2: 939. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 450. 2002. *F. glomerata* Roxb. Pl. Corom. 2: 13, t. 1. 23. 1798; Hook. f. Fl. Brit. India 5: 535. 1888; Cooke, Fl. Pres. Bombay 3: 154. 1958. (Repr.) Umbar.

Trees without aerial roots. Leaves alternate coriaceous. Receptacles shortly pedunculate on short leafless branches, orange-red pubescent. Male flowers forming a ring near the mouth of receptacle.

Fls. & Frts.: Feb. -June.

Specimen examined: AMJ 1268

Occasional along streams.

Ficus religiosa L. Sp. Pl. 1059. 1753; Hook.f. Fl. Brit. India 5: 513. 1888; Cooke, Fl. Pres. Bombay 3: 149. 1958 (Repr. ed.); Lakshmi. & Venkanna in Singh et al. Fl. Maharashtra St. Dicot. 2: 940. 2001; Yadav & Sardesai, Fl. Kolhapur Dist. 450. 2002. Pimpal.

Trees. Leaves coriaceous, ovate-rounded, base truncate, apex caudate-acuminate margin often sinous. Receptacles sessile, in axillary pairs, depressed globose, smooth, dark purple. Male flowers few, sessile, near the mouth of receptacle. Achenes minute, ovoid, brown.

Fls. & Frts: Apr.-Aug.

Specimen examined: AMJ 1287

Planted along roadsides.

HYPOXIDACEAE R. Br.

Curculigo Gaertn.

Curculigo orchioides Gaertn. Fruct. 1: 63, t. 13. 1788; Hook.f. Fl. Brit. India 6: 279. 1892; Cooke, Fl. Pres. Bombay 3: 255. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 102. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 483. 2002. Kali Musali.

Perennial herbs. Leaves sessile linear-lanceolate, plicate, acuminate; sheathing base, membranous. Flowers distichously, on a short, clavate, flattened scape; the lowest flowers in the raceme hermaphrodite, upper ones staminate. Perianth bright yellow. Stamens 6, shorter than perianth segments. Capsules hypogonous with a slender beak. Seeds black.

Fls. & Frts.: June-Nov.

Specimen examined: AMJ 1001

Common on rocky hill slopes.

AGAVACEAE Endl.

Agave L.

***Agave americana** L. Sp. Pl. 323.1753 var. **americana**; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 104. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 487. 2002. Kektad.

Robust undershrubs. Leaves long linear-lanceolate to oblong-lanceolate in a rosette, marginal spines erect or recurved. Flowers numerous, yellowish-green, densely crowded on a bracteate large scape. Perianth lobes elliptic-oblong, tube funnel shaped. Fruits oblong-clavate. Seeds black, shining.

Fls. & Frts.: Jan.-May

Specimen examined: AMJ 1241

Planted on borders.

LILIACEAE Juss. *sensu lato*

1. Scandent or climbing shrubs

Gloriosa

1. Erect herbs or undershrubs:

2. Plants with corm; leaves cauline

Iphigenia

2. Plants with rhizomes or bulbs; leaves radical:

3. Leaves not as above; perianth lobe distinct

Scilla

Gloriosa L.

Gloriosa superba L. Sp. Pl. 305. 1753; Hook.f. Fl. Brit. India 6: 358. 1892; Cooke, Fl. Pres. Bombay 3: 274. 1958 (Repr. ed.). Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 137. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 499. 2002. Bachnag, Kallawi.

Perennial herbaceous climbers. Leaves ovate-lanceolate, acuminate and often coiled at apex. Flowers large, solitary or in subcorymbose cymes. Perianth green, turning yellowish-green below middle and red above at maturity. Stamens 6; filaments exerted, dark purple. Capsules fusiform, dark green. Seeds subglobose black.

Fls. & Frts.: July-Nov.

Specimen examined: AMJ 1012

Frequent in amidst bushes.

Iphigenia Kunth (nom. cons.)

1. Perianth purple; segments linear-subulate

I. indica

1. Perianth pink or white; segments elliptic-lanceolate

I. pallida

Iphigenia Kunth

Iphigenia indica (L.) A. Gray *apud* Kunth, Enum. Pl. 4: 213. 1843; Hook.f. Fl. Brit. India 6: 357. 1892; Cooke, Fl. Pres. Bombay 3: 275. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 139. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 499. 2002. *Melanthium indicum* L. Mant. 226. 1771.

Perennial, erect, herbs. Leaves alternate, sessile or subsessile, linear-lanceolate, sheathing at base. Flowers in terminal racemes. Perianth dark purple, segments distinct, filiform. Stamens 6; filaments hairy. Capsules elliptic-oblong, 3-grooved. Seeds many, subglobose, brown.

Fls. & Frts.: June-Sept.

Specimen examined: AMJ 1072

Occasional in grasslands.

Iphigenia pallida Baker in J. Linn. Soc. Bot. 17: 451. 1879; Hook.f. Fl. Brit. India 6: 357. 1892; Cooke, Fl. Pres. Bombay 3: 275. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 139. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 500. 2002.

Erect herbs. Leaves few sessile, linear, upper smaller, acute at apex. Flowers in corymbose. Perianth white or with purple tinge. Stamens 6; filaments glabrous; anthers oblong, dark purple. Capsules obovoid, green. Seeds subglobose.

Fls. & Frts.: July-Sept.

Specimen examined: AMJ 1003

Occasional in grasslands.

Scilla L.

Scilla hyacinthina (Roth) McBride in Contrib. Gray Herbs. 2, 56: 14. 1918; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 140. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 500. 2002. *Ledbouria hyacinthina* Roth, Nov. Pl. Sp. 195. 1821. *Scilla indica* (Wight) Baker in Saund. Refug. Bot. 3. App. 12. 1870 & J. Linn. Soc. Bot. 13: 250. 1872 non. Roxb. 1832; Hook.f. Fl. Brit. India 6: 348. 1892; Cooke, Fl. Pres. Bombay 3: 276. 1958 (Repr. ed.).

Herbs. Leaves linear-lanceolate. Flowers numerous, greenish-purple or pink, racemose on unbranched scape. Capsules obovoid, globose, 3-lobed. Seeds obovoid.

Fls. & Frts.: May-Sept.

Specimen examined: AMJ 1080

Occasional on rocky soil.

COMMELINACEAE R. Br.

1. Fertile stamens 6; staminodes absent

Cyanotis

1. Fertile stamens 3 or rarely two; staminodes 1-4

Commelina

Commelina L.

Commelina benghalensis L, Sp. Pl. 41. 1753; Hook. f. Fl. Brit. India 6: 370. 1892; Cooke, Fl. Pres. Bombay 3: 291. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 149. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 503. 2002.

Annual herbs. Leaves ovate-elliptic, hairy on the margins. Flowers few in axillary spathes. Corolla blue. Stamens 6; fertile stamens 3; staminodes 3. Capsules ellipsoid. Seeds 5, oblong, pitted.

Fls. & Frts.: June-Dec.

Specimen examined: AMJ 1073

Common in marshy places.

Cyanotis D. Don.

1. Roots fibrous; plants wooly herbs; leaves and bracts

white wooly; filaments bearded

C. fasciculata

var. *fasciculata*

1. Roots tuberous; plants densely villous

C. tuberosa

var. *tuberosa*

Cyanotis fasciculata (Heyne ex Roth) J. A. and J. H. Schult. in R. & S. Syst. Nat. 7: 1152. 1830 var. **fasciculata**; Hook.f. Fl. Brit. India 6: 387. 1892; Cooke, Fl. Pres. Bombay 3: 303. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 165. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 505. 2002. *Tradescantia fasciculata* Heyne ex Roth, Nov. Pl. Sp. 189. 1821.

Annual erect herbs. Leaves sessile or subsessile, linear-lanceolate thick, succulent. Flower numerous in compact cymes. Calyx elliptic-lanceolate. Corolla pink. Stamens 6; filaments twisted, bearded. Capsules elliptic-oblong, trigonous, densely pubescent at apex. Seeds oblong, faintly rugose.

Fls. & Frts.: Aug.-Nov.

Specimen examined: AMJ 1079

Common on rocky soils.

Cyanotis tuberosa (Roxb.) J. A. and J. H. Schult. in R. & S. Syst. Nat. 7: 1153. 1830 var. **tuberosa**; Hook.f. Fl. Brit. India 6: 386. 1892; Cooke, Fl. Pres. Bombay 3: 302. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 167. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 505. 2002. *Tradescantia tuberosa* Roxb. Pl. Corom. 2: t. 108. 1799 & in Fl. Ind. 2: 19. 1832.

Sperading herbs. Leaves linear-lanceolate, sessile or subsessile. Flowers many in solitary or clustered ellipsoid cymes. Corolla purplish blue; anthers yellow. Capsules elliptic, hairy near the tip, glabrous below. Seeds ellipsoid, brownish.

Fls. & Frts.: June-Nov.

Specimen examined: AMJ 1082

Common in grasslands.

ARECACEAE Sch.–Sch.(nom.alt.)

[PALMAE Juss. (nom. cons.)]

1. Plants monoecious; leaves with midrib; lowest

pinnae not as below

Cocos

1. Plants dioecious; leaflets without midrib; lowest

pinnae usually transformed into spines

Phoenix

Cocos L.

***Cocos nucifera** L. Sp. Pl. 1188. 1753; Becc. & Hook.f. in Hook.f. Fl. Brit. India 6: 482. 1892; Cooke, Fl. Pres. Bombay 3: 322. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 189. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 511. 2002. Naral.

Monoecious trees. Leaves large, forming a crown at apex. Flowers numerous, greenish-white in pyramidal, decompound spadices. Drupes large-globose, obtusely 3-gonous, greenish-brown.

Fls. & Frts.: Through out year.

Specimen examined: AMJ 1277

Planted.

Phoenix L.

Phoenix sylvestris (L.) Roxb. Fl. Ind. 3: 787. 1832; Becc. & Hook.f. in Hook.f. Fl. Brit. India 6: 425. 1892; Cooke, Fl. Pres. Bombay 3: 311. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 195. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 510. 2002. *Elate sylvestris* L. Sp. PL. 1189. 1753. Shindi.

Small trees. Leaves large, grayish-green, densely fascicled, linear-ensiform. Flowers numerous in spadix; spathes woody; spikes numerous towards apex of

peduncle in fascicles, simple. Fruits oblong-ellipsoid, orange-yellow. Seeds rounded at ends.

Fls. & Frts. : Jan.-Sept.

Specimen examined: AMJ 1222

Occasional along streams.

CYPERACEAE Juss.

1. Spikelets persistent while lower mature glumes and nuts are shed, exposing the deeply pitted rachillas, generally composed of a large number of glumes

Cyperus

1. Spikelets falling entirely from rachis at maturity, leaving the subtending bract surrounding the rachilla scars, often very numerous, sessile and crowded on short rachis, composed of a small number of glumes

Kyllinga

Cyperus L.

Cyperus rotundus L. Sp. Pl. 45. 1753; ssp. **rotundus**; Cl. in Hook.f. Fl. Brit. India 6: 614. 1893; Cooke, Fl. Pres. Bombay 3: 385. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 293. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 541. 2002. Nagarmotha.

Perennial herbs. Leaves few, narrowly linear, shorter or longer than culms. Spikelets linear, brown in compound umbels. Nuts obovoid or oblong, trigonous, black.

Fls. & Frts.: June-Nov.

Specimen examined: AMJ 1201

Frequent on moist places.

Kyllinga Rottb. (nom. cons)

Kyllinga tenuifolia Steud. Syn. Pl. Glum. 2: 69. 1855; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 330. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 546. 2002. *K. triceps* Rottb., Descr. & Ic. Nov. Pl. 14, f. 4, f. 6 (*excl. cit.* Rheede) 1773, *nom superfl.*; Cl. in Hook.f. Fl. Brit. India 6: 587. 1893; Cooke, Fl. Pres. Bombay 3: 391.1958 (Repr. ed.).

Annual erect herbs. Leaves few, linear or filiform, as long as or shorter than culms. Spikelets white or yellow in compact heads. Nuts oblong, apiculate, yellowish brown.

Fls. & Frts.: June-Dec.

Specimen examined: AMJ 1074

Frequent in wet and marshy places.

POACEAE Barnhart (nom. alt.)

[**GRAMINEAE** Juss. (nom. cons.)]

KEY TO THE SUB-FAMILIES

1. Spikelets 2-flowered, falling entire at maturity, articulated
below the glumes, with upper floret hermaphrodite and the
lower male or barren or latter often reduced to lemma **PANICOIDEAE**
1. Spikelets 1-many-flowered, breaking up at maturity above the
more or less persistent glumes or if falling entire then not
2-flowered **POOIDEAE**

KEY TO THE TRIBES OF PANICOIDEAE

1. Spikelets similar or dissimilar; often paired or in threes with
one sessile and one or two pedicelled, rarely solitary but then
the upper lemma awned; glumes as long as the spikelets

and enclosing the florets, more or less rigid;

upper lemma usually awned

ANDROPOGONEAE

2. Spikelets similar; solitary or paired; glumes usually

membranous, the lower often smaller or suppressed; lower

lemma more or less similar to upper glume in texture;

upper lemma usually awnless

PANICEAE

ANDROPOGONEAE Dumort.

1. Raceme reduced, 1-or2-noded and subtended

by a spathe :

2. Involucral spikelets absent; spikelets in triads

one sessile and two pedicelled

Apluda

2. Involucral spikelets present; spikelets not arranged

as above:

3. Involucral spikelets pedicelled; callus of hermaphrodite

spikelets short, obtuse

Iseilema

3. Involucral spikelets sessile or stalked; callus of

hermaphrodite spikelets pungent

Themeda

1. Racemes or spikes well developed, many noded or

when 1-2 noded then not subtended by spathe:

4. Spikelets unawned:

5. Sessile spikelets globose; lower glume of sessile

spikelets pitted

Mnesithea (p.p.)

5. Sessile spikelets and their glumes not as above:

6. Non rhizomatous grasses

Mnesithea (p.p.)

6. Rhizomes thick *Ophiuros*
4. Sessile or hermaphrodite spikelets awned:
7. Aromatic grasses *Cymbopogon*
7. Non-aromatic grasses:
8. Racemes solitary:
9. Lower glume of sessile spikelet pitted, pedicelled
spikelets pitted or not *Dichanthium* (p.p.)
9. Lower glume of both spikelets without pits:
10. Lowest 1-6 pairs of spikelets homogamous
and differing from above them, if heterogamous
then upper lemma reduced to a hyaline base of
awn:
11. Lowest 1-3 pairs homogamous; callus pungent;
awns hairy, 6-10 cm or more long *Heteropogon*
11. Lowest 1-3 pairs homogamous or not; callus
obtuse; awn more or less glabrous, up to
5 cm long *Dichanthium* (p.p.)
10. All spikelets heteromorphous *Sehima*
8. Racemes two or many:
12. Lower glume of sessile spikelet toothed *Lophopogon*
12. Lower glume of sessile spikelet not as
above *Dichanthium* (p.p.)
13. Upper lemma of the sessile spikelet awned from
the back just above the base; lower glume often

muriculate or spinulose rarely smooth; pedicelled

spikelets present or absent *Arthraxon*

13. Upper lemma of the sessile spikelet awned from the sinus; lower glume not as above; pedicelled spikelets usually well developed:

14. Raceme 1-noded; branches capillary,

whorled with terminal triad of spikelets *Chrysopogon*

14. Raceme 2-many noded:

15. Sessile spikelet with male and

hermaphrodite florets; lower glume often

coriaceous without a longitudinal channel

on the back *Ischaemum*

15. Sessile spikelets with bisexual florets only;

lower glume or more or less chartaceous;

longitudinally channeled

on the back *Andropogon*

PANICEAE

1. Spikelets not subtended by bristle / s:

2. Inflorescence of spiciform, subsecund racemes digitate

or subdigitate, or scattered on a central axis, rarely solitary:

3. Spikelets awned or aristae:

4. Leaves ovate-elliptic or elliptic-lanceolate; culms

creeping or ascending; lower glumes awned *Oplismenus*

4. Leaves linear; culms erect or geniculately ascending

- lower glume not owned *Echinochloa* (p.p.)
- 3. Spikelets not awned or aristae *Digitaria*
- 5. Lower glume turned away from the rachis: *Urochloa*
- 6. Spikelets paired; upper glume acuminate
or cuspidate *Echinochloa* (p.p.)
- 6. Spikelets solitary; upper glume acute *Paspalidium*
- 2. Inflorescence in panicles lax, open or contracted,
spiciform
or cylindrical:
- 7. Spikelets hispid with long purplish
to pink hairs
Rhynchelytrum
- 7. Spikelets glabrous or pubescent *Panicum*
- 1. Spikelets subtended by bristle / s:
- 8. Upper lemma smooth; bristle falling with
the spikelets *Pennisetum*
- 8. Upper lemma transversely rugose; bristles
persistent *Setaria*

POOIDEAE

- 1. Arborescent grasses

Dendrocalamus

- 1. Tall or moderate sized annuals or perennials:
- 2. Spikelets 1-flowered:
- 3. Spikelets awned:

- 4. Lemmas with 3 or rarely solitary awn *Aristida*
- 4. Lemmas with simple, solitary awn:
 - 5. Spikelets in a cluster *Melanocenchris*
 - 5. Spikelets not in a cluster:
 - 6. Lemmas awnless:
 - 7. Inflorescence a digitate, umbellate
or rarely whorled spikes *Cynodon*
 - 7. Inflorescence a solitary spike:
 - 8. Spike straight; spikelets sunken in the
cavities of the rachis *Oropetium*
 - 8. Spike often curved; spikelets not
sunken in the cavities of the rachis *Michrochloa*
 - 6. Lemmas awned *Chloris*
 - 3. Spikelets not awned *Sporobolus*
- 2. Spikelets 2-many-flowered:
 - 9. Inflorescence effuse, open or contracted panicle,
rarely spicate *Arundinella*
 - 9. Inflorescence capitate, spiciform, solitary or
digitate or subdigitate racemes or spikes:
 - 10. Inflorescence a solitary, or 2-many-digitate
or subdigitate spikes:
 - 11. Spikes solitary:
 - 12. Lemmas aristae or awned
 - 13. Lemmas lobed at apex; awned from

- | | |
|--|------------------------------|
| the sinus | <i>Tripogon</i> |
| 13. Lemmas entire, aristate; if awned then | |
| not from the sinus | <i>Dactyloctenium</i> (p.p.) |
| 12. Lemmas not aristae or awned | <i>Eragrostiella</i> |
| 11. Spikes digitate or subdigitate: | |
| 14. Axis of the spikes ending in a sharp point | <i>Dactyloctenium</i> (p.p.) |
| 14. Axis of the spikes ending in a spikelet | <i>Eleusine</i> |
| 10. Inflorescence otherwise | <i>Eragrostis</i> |

Andropogon L.

Andropogon pumilus Roxb. Fl. Ind. 1: 277. 1820; Hook.f. Fl. Brit. Ind. 7: 170. 1896; Blatt. & McC., Bombay Grass. 93. 1935; Cooke, Fl. Pres. Bombay 3: 495. 1958 (Repr. ed.) Bor, Grass. Bur. Cey. Ind. Pak. 93. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra. Monocot. 1: 390. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 558. 2002. Barki, Tambadgota.

Annual herbs. Culms terete, tufted. Leaves linear-lanceolate. Racemes paired, digitate. Sessile spikelets linear-lanceolate, awned. Pedicelled spikelet linear-lanceolate. Caryopsis narrowly ovate.

Fls. & Frts.: Aug-Dec.

Specimen examined: AMJ - 1095

Common in open grasslands.

Apluda L.

Apluda mutica L. Sp. Pl. 82. 1753; Bor, Grass. Bur. Cey. Ind. Pak. 93. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra, Monocot. 390. 1996; Yadav & Sardesai,

Fl. Kolhapur Dist. 558. 2002. *A. varia* Hack.. in DC. Monogr. Phan. 6: 196. 1889; Hook.f. Fl. Brit. Ind. 7: 150. 1896; Cooke, Fl. Pres. Bombay 3: 474. 1958 (Repr. ed.). *A. varia* Hack. var. *aristata* Hack. op.cit.; Hook.f. op.cit.; Blatt. & McC., Bombay Grass. 29. 1935. Ghagara, Tambat.

Annual herbs, up to 2 m tall. Culms terete, rooting from lower nodes. Leaves 4.5-30 x 0.5-1.5 cm, linear-lanceolate. Raceme solitary. Sessile spikelets oblong-lanceolate. Pedicelled spikelets linear-lanceolate. Caryopsis elliptic-oblong, reddish-brown.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ-1089

Common in shady places, can be identified by its boat shaped spathe.

Aristida L.

1. Lemma articulated

A. funiculata

1. Lemma inarticulated

A. adscensionis

Aristida adscensionis L. Sp. Pl. 82.1753; Hook.f. Fl. Brit. Ind. 7: 224. 1896; Blatt. & McC. Bombay Grass. 209. 1935; Cooke, Fl. Pres. Bombay 3: 529. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 407. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 392. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 560. 2002. *A. depressa* Retz. Obs. Bot. 4: 22. 1786; Bor, Grass. Bur. Cey. Ind. Pak. 409. 1960. Kusali Gavati.

Annual herbs. Culms tufted, terete, 30-120 cm tall. Leaves 6-30 x 0.1-0.2 cm, linear, finely acuminate at apex. Panicles contracted, oblong; branches subsecund, smooth; pedicels short, capillary. Spikelets 0.5 –10 cm long, linear-lanceolate, pale or purple at maturity. Caryopsis cylindric.

Fls. & Frts.: Sept.-Dec.

Specimen examined: AMJ 1192

Common on rocky soil, can be identified its contracted capillary panicles.

Aristida funiculata Trin. & Rupr. Sp. Gram. Stip. 159. 1842; Hook.f. Fl. Brit. Ind. 7: 226. 1896; Blatt. & McC. Bombay Grass. 214. 1935; Cooke, Fl. Pres. Bombay 3: 531. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 410. 1960; Lakshmi. in Sharma et al., Fl. Maharashtra St. Monocot. 392. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 560. 2002.

Annual herbs. Culms terete, tufted; nodes glabrous. Leaves flat or involute, narrowly linear; finely acuminate at apex. Panicles lax, branches short, capillary; pedicels capillary, glabrous or sparsely hairy. Spikelets purplish to yellow coloured, narrowly linear. Caryopsis cylindric, black.

Fls. & Frts.: Sept.-Nov.

Specimen examined: AMJ 1159

Common on rocky soil.

Arthraxon P.Beauv.

1. Spikelets laterally compressed; lower glume of sessile

spikelet not keeled

A. lancifolius

1. Spikelets not laterally compressed; lower glume of

sessile spikelet 2-keeled

A. lanceolatus

var. *echinatus*

Arthraxon lanceolatus (Roxb.) Hochst. var. **echinatus** (Nees) Hack. in DC. Monogr. Phan. 6: 348. 1889; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 401. 1996. *Bathratherum echinatum* Nees in Edinb. New Phil. J. 18: 181. 1835. *Arthraxon echinatus* (Nees) Hochst. in Flora 39: 188. 1856; Bor, Grass. Bur. Cey. Ind. Pak. 99. 1960; Yadav

& Sardesai, Fl. Kolhapur Dist. 561. 2002. *A. spathaceus* Hook. f. Fl. Brit. India 7: 145.

1897. Perennial herbs. Culms tufted, terete, 30-90 cm long. Leaves flat, ovate-lanceolate, 1.5-8.2 × 0.2-1.7 cm, cordate-amplexicaulate at base, glabrous; margins with tubercle-based hairs. Racemes 2-4. Spikelets 2-nate. Sessile spikelets narrowly linear-lanceolate. Pedicelled spikelets oblong-lanceolate, unawned. Lodicules 2. Stamens 3; long.

Fls. & Frts.: Sept.-Dec.

Specimen examined: CBS 1153

Frequent in open grasslands, lower glume of sessile spikelet densely spiculate.

Arthraxon lancifolius (Trin.) Hoschst. in Flora 39. 188. 1856; Blatt. & McC., Bombay Grass. 77, t. 125. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 100. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 402. 1996. *Andropogon lancifolius* Trin. in Merm. Acad. Sci. Petersb. Ser. 6. 2: 271. 1832. *Arthraxon microphyllus sensu* Hook.f. Fl. Brit. India 7: 147. 1856, p.p. *non* (Trin.) Hoschst. 1856; Cooke, Fl. Pres. Bombay 3: 488. 1958 (Repr. ed.); Yadav & Sardesai, Fl. Kolhapur Dist. 562. 2002.

Annual herbs. Culms terete, rooting at lower nodes, simple or sparingly branched. Leaves linear-lanceolate, glabrous or sparsely hairy. Racemes 2-many, digitate, silky villous. Spikelets 2-nate. Grains linear, terete.

Fls. & Frts.: Sept.-Nov.

Specimen examined: CBS-1156

Frequent in open grasslands.

Arundinella Raddi

Arundinella tuberculata Munro ex Lisboa in J. Bombay. nat. Hist. Soc. 5: 344. 1891; Hook.f. Fl. Brit. Ind. 7: 69. 1896; Blatt. & McC., Bombay Grass. 192. 1935; Cooke, Fl.

Pres. Bombay 3: 521. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 425. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 409. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 563. 2002.

Annual herbs. Culms terete, tufted; nodes bearded. Leaves linear-lanceolate, densely tubercled hairy. Panicles lax, oblong-lanceolate, 5-15 cm long; rachis angular, scaberulus; pedicels unequal, scaberulus. Spikelets ovate, acuminate. Caryopsis ellipsoid. Fls. & Frts.: Aug.-Nov.

Specimen examined: AMJ 1162

Common on rocky soil, leaves and spikelet covered by tubercle based hairs.

Chloris Sw.

1. Empty lemma always one above the fertile floret *C. virgata*

1. Empty lemmas 2 or more above the fertile floret *C. barbata*

Chloris barbata Sw. Fl. Ind. Occ. 1: 200. 1797; Hook.f. Fl. Brit. Ind. 7: 292. 1896; Blatt. & McC, Bombay Grass. 256. 1935; Cooke, Fl. Pres. Bombay 3: 557. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 465. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 425. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 567. 2002. Gondvel, Gosha.

Annual herbs, 30-45 cm long. Culms tufted, terete, nodes glabrous. Leaves 5-7 x 0.1 cm, narrowly linear, glabrous, acute. Spikes 3-12, digitate or lower 1 or 2 little below the whorl, crowded, spreading with age. Spikelets subsessile, 0.2 cm long, unilateral, 2-seriate with the lower solitary perfect and 2 imperfect or sterile florets above it. Caryopsis ovate-oblong.

Fls. & Frts.: Aug.-Jan.

Specimen examined: AMJ 1162

Occasional near moist places, can be identified by its purplish green inflorescence.

Chloris virgata Sw. Fl. Ind. Occ. 1: 203. 1797; Hook.f. Fl. Brit. Ind. 7: 291. 1896; Blatt. & McC., Bombay Grass. 255. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 468. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 427. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 567. 2002.

Annual herbs. Culms tufted, up to 1.5 m high terete or subcompressed. Leaves 4.2-30 x 0.2-0.5 cm, linear-lanceolate, keeled, glabrous or pilose towards the base. Spikes 6-12, digitate or lower 1 or 2 little below the whorl, crowded. Spikelets subsessile, 0.2 cm long. 2-seriate, imbricate, with the lower solitary perfect floret and 1 imperfect floret above it.

Fls. & Frts.: Aug.-Jan.

Specimen examined: AMJ 1193

Frequent near moist places.

Chrysopogon Trin (nom. cons.)

Chrysopogon fulvus (Spreng.) Chiov. Fl. Somala. 1: 327. 1929; Bor, Grass. Bur. Cey. Ind. Pak. 116. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 430. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 567. 2002. *Pollinia fulva* Spreng. Pugill 2: 10. 1815. *Andropogon monticola* R. & S. Syst. Veg. 2, Mant. 3: 665. 1827; Hook.f. Fl. Brit. Ind. 7: 192. 1896; Cooke, Fl. Pres. Bombay 3: 505. 1958 (Repr. ed.). *Chrysopogon montanus* Trin. ex Spreng. Neue Ent. Deck 2: 93. 1821; Blatt. & McC., Bombay Grass. 70. 1935.

Perennial herbs, 30-90 cm tall. Culms terete, tufted. Leaves 3-6 x 0.3 cm, flat, linear. Panicles pyramidal, yellowish or purplish; rachis slender, glabrous, scaberulous; branches capillary, whorled, erect or spreading with terminal triad of golden brown

spikelets. Sessile spikelets 0.6-0.7 cm long, elliptic-lanceolate, awned. Pedicelled spikelets lanceolate. Grains yellow.

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1196

Common in open grasslands, a variable species.

Cymbopogon Spreng.

Cymbopogon martinii (Roxb.) Wats. in Atkins, Gaz. N. W. Prov. Ind. 392. 1882; Blatt. & McC., Bombay Grass. 104. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 129. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 439. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 570. 2002 *Andropogon martini* Roxb. Fl. Ind. 1: 280. 1820. *Andropogon schoenanthus* L. var. *martinii* Hook.f. Fl. Brit. Ind. 7: 204. 1896. Rosha.

Perennial herbs. Culms densely tufted, terete, 40-180 cm tall, erect; nodes glabrous. Leaves 3-8 cm long, linear-lanceolate, 5-22 × 0.7-1.8 cm, cordate at base, glabrous; margins smooth, apex acuminate to caudate. Panicles narrowly oblong, 15-25 cm long, compound. Racemes binate; spatheole enclosing the spikelet.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1197

Occasional in grasslands, on hill slopes; it can be identified by a deep slid in lower half on lower glume.

Cynodon L. C. Rich. (nom. cons.)

Cynodon dactylon (L.) Pers. Syn. Pl. 1: 85. 1805; Hook.f. Fl. Brit. India 7: 288. 1896; Cooke, Fl. Pres. Bombay 3: 554. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 442. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 570. 2002. *Panicum dactylon* L. Sp. Pl. 58. 1753. Durva, Harali.

A perennial herb. Culms terete, stolon widely creeping, rooting at the nodes. Leaves linear-lanceolate, usually distichous; apex acute or pungent. Spikes 2-8, whorled, erect or spreading. Spikelets sessile, oblong, laterally compressed, 1-flowered, green or purple.

Fls. & Frts.: Throughout the year

Specimen examined: AMJ 1065

Common on moist and waste places, propagates readily by its rhizomes and stolons.

Dactyloctenium Willd.

Dactyloctenium aegyptium (L.) P. Beauv. Ess. Agrost. Expl. Pl. 15. 1812; Blatt. & McC., Bombay Grass. 262. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 489. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 445. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 571. 2002. *Cynosurus aegyptius* L. Sp. Pl. 72. 1753. *Eleusine aegyptia* (L.) Desf. Fl. Atlan. 1: 85. 1798; Hook.f. Fl. Brit. Ind. 7: 295. 1896; Cooke, Fl. Pres. Bombay 3: 560. 1958. (Repr.).

Annual herbs, erect, suberect or geniculately ascending, tufted, 15-45 cm high. Leaves 2.5-12.0 x 0.1-0.5 cm, linear-lanceolate, glabrous or hispid. Spikes 2-6, digitate, terminal; rachis stout, glabrous, mucronate at the tip. Spikelets sessile, laterally compressed, densely crowded, 3-5-flowered, spreading at right angle to the rachis. Caryopsis subglobose, red, strongly rugose.

Fls. & Frts.: Aug.-Jan.

Specimen examined: AMJ 1168

Common on rocky soil, can be identified by its peculiar digitate spikes.

Dendrocalamus Nees

Dendrocalamus strictus (Roxb.) Nees in Linnaea 9: 476. 1834; Hook.f. Fl. Brit. Ind. 7: 404. 1896; Blatt. & McC., Bombay Grass. 285. 1935; Cooke, Fl. Pres. Bombay 3: 572. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 449. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 572. 2002. *Bambosa stricta* Roxb. Pl. Corom. 1: 58. 1795. Meskathi, Velu.

Arborescent unarmed bamboos. Culms densely tufted, solid 6-15 m tall; nodes glabrous and swollen. Leaves flat, linear-lanceolate, 3-20 × 1-3 cm, glabrous, margins scabrid; apex acuminate, twisted. Panicles branched, compound. Spikelets 7-12 mm long, with 2-3 fertile florets; fertile flower intermixed with smaller barren ones. Caryopsis ovoid.

Fls & Frts.: - Dec. to March but once in about 40 years.

Specimen examined: AMJ 1218

Frequently in hilly regions and also found under cultivation.

Dichanthium Willd.

1. Joints and pedicels with a translucent groove, if not then

racemes in panicles

D. pertusum

1. Joints and pedicels without groove, racemes digitate or

subdigitate, but not in panicles:

2. Racemes solitary

D. foveolatum

2. Racemes 2-many

3. Lower glume of the sessile spikelets obovate; sheaths

compressed

D. caricosum

3. Lower glume of the sessile spikelets oblong; sheaths

terete

D. annulatum

Dichanthium annulatum (Forssk.) Stapf in Prain, Fl. Trop. Afr. 9: 178. 1917; Blatt. & McC., Bombay Grass. 94. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 133. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 452. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 572. 2002. *Andropogon annulatus* Forssk. Fl. Aeg.-Arab. 173. 1775; Hook.f. Fl. Brit. Ind. 7: 196. 1896; Cooke, Fl. Pres. Bombay 3: 507. 1958 (Repr. ed.).

Perennial herbs. Culms tufted; nodes bearded. Leaves 7-17 x 0.3-0.4 cm, linear-lanceolate, glabrous. Racemes 3-10, 2.5-6.5 cm long, subdigitate. Sessile spikelets 0.3-0.4 cm, elliptic-oblong, awned. Pedicelled spikelets oblong, unawned

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1135

Occasional on the bunds of fields and along roadsides.

Dichanthium caricosum (L.) A. Camus in Bull. Mus. Hist. Nat. Paris 27: 549. 1921; Blatt. & McC., Bombay Grass. 92. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 134. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 453. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 573. 2002. *Andropogon caricosus* L. Sp. Pl. ed. 2: 1480. 1763; Hook.f. Fl. Brit. Ind. 7: 196. 1896; Cooke, Fl. Pres. Bombay 3: 507. 1958 (Repr. ed.); *Dichanthium aristatum* (Poir.) C. E. Hubb. in Kew Bull. 654. 1940. Marvel.

Perennial herbs. Culms tufted; nodes barded. Leaves flat, linear-lanceolate, glabrous. Racemes 1-6, digitate or sub digitate. Sessile and pedicelled spikelets obovate.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1200

Frequent along road sides, on bunds and fields and in open grassland.

Dichanthium foveolatum (Del.) Roberty in Boissiera 9:170. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 455. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 573. 2002. *Andropogon foveolatus* Del. Fl. d' Egypte 16, t. 8. f. 2. 1812; Hook. f. Fl. Brit. Ind. 7:168. 1896; Cooke, Fl. Pres. Bombay 3: 496. 1958 (Repr. ed.). *Eremopogon foveolatus* (Del.) Stapf in Prain, Fl. Trop. Africa 9: 183. 1917; Blatt. & McC., Bombay Grass. 96. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 148. 1960.

Annual or perennial herbs, 60 cm tall. Culms tufted, terete. Leaves 4-18 cm long, linear-lanceolate, glabrous. Racemes solitary, terminal, slender, silky, purplish; joints densely hairy. Sessile spikelets 0.3-0.4 cm long, oblong-lanceolate, awned, pitted. Pedicelled spikelets pitted.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1206

Frequent on rocky soil, distinguished by its solitary raceme.

Dichanthium pertusum (L.) W.D. Clayton in Kew Bull. 32: 4. 1977; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 459. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 575. 2002. *Holcus pertusus* L. Mant. 2: 301. 1771. *Andropogon pertusus* (L.) Willd. Sp. Pl. 4 (2): 922. 1806; Hook.f. Fl. Brit. Ind. 7: 173. 1896; Cooke, Fl. Pres. Bombay 3: 497. 1958 (Repr. ed.). *Bothriochloa pertusa* (L.) A. Camus in Ann. Soc. Linn. Lyon, 1930, n.s. 76: 164. 1931; Bor, Grass. Bur. Cey. Ind. Pak. 109.1960.

Perennial herbs, 30-45 cm tall. Culms terete, tufted. Leaves up to 30 cm long, flat, linear, glabrous or hairy, glaucous, margin scaberulous. Panicles oblong; rachis filiform. Racemes 3-8, digitate or subdigitate; joints densely villous along the margins, translucent in the center. Sessile spikelets 0.3-0.4 cm long, elliptic-lanceolate, awned. Pedicelled spikelet elliptic-oblong, acute.

Fls. & Frts.: July-Jan.

Specimen examined: CBS 1141

Common in open grasslands, the bunds of fields.

***Digitaria* (Heist.) Hall.**

1. Hairs on the spikelets clavate tipped *D. abludens*

1. Hairs on the spikelets if any, without a globular
thickening, not clavate *D. ciliaris*

Digitaria abludens (R. & S.) Veldk. Blumea 21: 53. 1973; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 461. 1996. *Panicum abludens* R. & S. Syst. Veg. 2: 457. 1817. *Paspalum pedicellare* Trin. ex Hook.f. Fl. Brit. Ind. 7: 19. 1896. *Digitaria pedicellaris* (Trin.) Prain, Bengal Pl. 2: 1182. 1903; Blatt. & McC., Bombay Grass. 126, t. 80. 1935. *D. granularisi* (Trin. & Spreng.) Henr., Monogr., *Digitaria* 302. 1950; Bor. Grass. Bur. Cey. Ind. Pak. 301. 1960; Yadav & Sardesai, Fl. Kolhapur Dist. 575. 2002.

Annual herbs. Culms terete, tufted; nodes glabrous. Leaf sheaths compressed, 1.5-5 cm long, glabrous, 3-20 × 0.2-0.6 cm, glabrous or pilose mostly towards the rounded base, scabrid along margins, acuminate to setaceous at apex. Racemes 3-7, very slender, alternate on a long glabrous peduncle; rachis filiform, triquetrous, scabrid on angles; pedicels slender, scabrid. Spikelets in pairs or 2 or 3-nate, elliptic. Caryopsis elliptic.

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1070

Occasional in moist places and in grasslands also.

Digitaria ciliaris (Retz.) Koel. Descr. Gram. 27. 1802; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 462. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 576. 2002.

Panicum ciliare Retz. Obs. 4: 16. 1786. *Digitaria sanguinalis* Scop. var. *ciliaris* Prain, Beng. Pl. 2: 1181. 1903; Cooke, Fl. Pres. Bombay 3: 457. 1958 (Repr. ed.).

Annual herbs, up to 90 cm high, Culms terete, tufted, erect or ascending from a prostrate base, simple or branched; nodes glabrous. Leaves 4.2-18 x 0.3-0.8 cm. linear-lanceolate, margin scabrid. Racemes 2-9, subsessile, subdigitate, rachis straight, triquetrous, winged, wings scabrid. Pedicels 2-nate, one very short, other up to 2 mm long. Spikelets appressed, lanceolate. Caryopsis ellipsoid.

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1059

Common on rocky soil.

Echinochloa P. Beauv.

Echinochloa colonum (L.) Link, Hort. Berol. 2: 209. 1833; Blatt. & McC, Bombay Grass. 148. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 308. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 472. 1996. *Panicum colonum* L. Syst. Nat. ed. 10, 2: 870. 1759; Hook.f. Fl. Brit. Ind. 7: 32. 1896; Cooke, Fl. Pres. Bombay 3: 447. 1958 (Repr. ed.); Yadav & Sardesai, Fl. Kolhapur Dist. 577. 2002. Ranborat, Barud.

Annual herbs. Culms terete, decumbent or short creeping below; nodes glabrous. Leaves linear-lanceolate, margin scaberulous, 3-32 x 0.6-2 cm long, acute at apex.

Fls. & Frts.: July-Feb.

Specimen examined: AMJ 1210

Common weed in water logged areas and in harvested in rice fields.

Eleusine Gaertn.

Eleusine indica (L.) Gaertn. Fruct. 1: 8.1789; Hook.f. Fl. Brit. Ind. 7: 293. 1896; Blatt. & McC, Bombay Grass. 259. 1935; Cooke, Fl. Pres. Bombay 3: 560. 1958 (Repr. ed.);

Bor, Grass. Bur. Cey. Ind. Pak. 493. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 473. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 579. 2002. *Cynosurus indicus* L. Sp. PL. 72. 1753.

Annual herbs, erect, tufted, 20-25 cm tall. Culms densely tufted, erect. Leaves 8-12 x 0.2-0.3 cm, convolute, linear-lanceolate. Spikes 2-7, digitate or often one or two detached. Spikelets laterally compressed, densely imbricate, 3-8-flowered. Caryopsis oblong or globose.

Fls. & Frts.: July-Jan.

Specimen examined: AMJ 1171

Frequent along roadsides and near moist places, weed of cultivated fields.

Eragrostiella Bor.

Eragrostiella bifaria (Vahl) Bor in Ind. For. 66: 270. 1940 and Grass. Bur. Cey. Ind. Pak. 494. 1960; Blatt. & McC., Bombay Grass. 241. 1935; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 477. 1996. *Poa bifaria* Vahl, Symb. Bot. 2: 19. 1791. *Eragrostis bifaria* (Vahl,) Wight & Steud. Nom. Bot. ed. 1. 246: 562. 1840; Hook.f. Fl. Brit. Ind. 7: 325. 1896; Blatt. & McC, Bombay Grass. 241. 1935; Cooke, Fl. Pres. Bombay 3: 550.1958 (Repr. ed.). *Eragrostis coromandeliana* (Koen ex Rottl) Trin. in Mem, Acad. Sci. Petersb. Ser. 6, 1: 415, 1830; Hook.f. Fl. Brit. Ind. 7: 326. 1896; Yadav & Sardesai, Fl. Kolhapur Dist. 579. 2002.

Perennial herbs Culms tufted, erect, simple; nodes glabrous. Leaves convolute, linear. Spikes second, lower shorter, distichously spreading, 6-17 flowered, laterally compressed, olive green to grey. Grains ellipsoid.

Fls. & Frts.: Aug.-Nov.

Specimen examined: AMJ-1174

Common in open grasslands and on bunds of fields.

Eragrostis Wolf

1. Lowest branches of the panicle fascicled or
subwhorled

E. pilosa

2. Lowest branches of the panicle alternate:

3. Pedicels with glandular bands or dots; if
eglandular then spikelets not fascicled,
variously spreading

4. Annuals; mouth of the sheaths bearded

E. minor

4. Perennials; mouth of the sheaths glabrous

E. tenuifolia

3. Pedicels eglandular; spikelets more or less
fascicled, pointing forward

E. gangetica

Eragrostis gangetica (Roxb.) Steud. Syn. PL. Glum. 1: 266. 1854; Blatt. & McC., Bombay Grass. 236. 1935; Cooke, Fl. Pres. Bombay 3: 547. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 508. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 483. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 580. 2002. *Poa gangetica* Roxb. Fl. Ind. 1: 341. 1820. *Eragrostis stenophylla* Hochst. ex Miq. in Verh. Konink. Nederl. Inst. 3, 4: 39. 1851; Stapf in Hook.f. Fl. Brit. Ind. 318. 1896.

Annual herbs. Culms densely tufted, 30-40 cm tall, erect, branched; nodes glabrous. Leaves up to 20 cm long, linear-lanceolate. Panicles 5-15 cm long, ovate-oblong, contracted, lax, grey. Spikelets 0.4-0.6 cm long, linear-oblong, 8-20-flowered, breaking up from below upwards, grey. Caryopsis long, ellipsoid, oblong, brown

Fls. & Frts.: Sept.-Dec.

Specimen examined: AMJ 1278

Occasional at moist places, along stream banks.

Eragrostis minor Host. Gram. Austr. 4: 15. 1809; Stapf. in Hook.f. Fl. Brit. Ind. 7: 321. 1896; Blatt. & McC., Bombay Grass. 288. 1935; Cooke, Fl. Pres. Bombay 3: 548. 1958 (Repr. ed.); Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 484. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 580. 2002. *E. poaeoides*. P. Beauv. Ess. Agrost. 162. 1812; Bor, Grass. Bur. Cey. Ind. Pak. 512. 1960. *E. pappiana* Chiov. in Ann. 1st. Bot. Roma 8. 371. 1908; Bor, Grass. Bur. Cey. Ind. Pak. 511. 1960.

Annual herbs. Culms densely tufted, erect; nodes glabrous. Leaves 7-15 x 0.3 – 0.7 cm, flat or convolute, linear. Panicles 5-25 x 2-5 cm, ovate-oblong, rachis glabrous; branches spreading, yellowish at the base; pedicel shorter than the spikelet with or without small yellowish bands. Spikelets 0.3-1.0 x 0.1 cm, 5-16-flowered, breaking up from below upwards, greyish. Caryopsis ellipsoid, reddish-brown.

Fls. & Frts.: Throughout year.

Specimen examined: AMJ 1240

Common in open grasslands.

Eragrostis pilosa (L.) P. Beauv. Ess. Agrost. 71: 162, 175, 1812; Stapf in Hook.f. Fl. Brit. India 7: 323. 1896; Blatt & McC., Bombay Grass. 241. 1935; Cooke, Fl. Pres. Bombay 3: 550. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 512. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra. St. Monocot. 487. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 581. 2002. *Poa pilosa* L. Sp. Pl. 68. 1753.

Annual herbs. Culms densely tufted, terete, erect; branched; nodes glabrous. Leaves convolute, 4-12 cm long, glabrous, linear. Panicles oblong or pyramidal, open or contracted. Spikelets linear-oblong, 4-9 mm long, 5-12-flowered, breaking up from below upwards, slate-grey or purplish. Caryopsis ellipsoid.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1103

Common in ditches, along margins of ponds, roadside etc.

Eragrostis tenuifolia Hochst. ex Steud. Syn. Pl. Glum. 1: 268. 1854; Stapf in Hook.f. Fl. Brit. India 7: 323. 1896; Blatt & McC., Bombay Grass. 240. 1935; Cooke, Fl. Pres. Bombay 3: 549. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 514. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra. St. Monocot. 491. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 581. 2002.

Perennial herbs. Culms tufted terete, 20-25 cm tall, compressed. Leaves linear-lanceolate, glaucous, glabrous. Panicles ovate-oblong; pedicels capillary with one or two glandular bands. Spikelets linear-oblong, 6-13 flowered, breaking up from below upwards, olive green or slatey black.

Fls. & Frts. : Sept.-Nov.

Specimen examined: AMJ 1183

Occasional grass along road sides and water channels.

Heteropogon Pers.

Heteropogon contortus (L.) P. Beauv. ex R. & S. Syst. Veg. 2: 836. 1817; Blatt. & McC., Bombay Grass. 109. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 163. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 503. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 583. 2002. *Andropogon contortus* L. Sp. Pl. 1045. 1753; Hook.f. Fl. Brit. Ind. 7: 199. 1896; Cooke, Fl. Pres. Bombay 3: 510. 1958 (Repr. ed.). Kusali Gavat.

Perennial herbs. Culms 10-90 cm tall, terete, tufted. Leaves 5-14 x 0.2-0.3 cm, flat, linear-lanceolate, glabrous or sparsely hairy. Raceme 3-5 cm long, solitary,

terminating the culms and branches, with lower awnless, homogamous spikelet pairs and upper awned heterogamous ones. Caryopsis enclosed by lemmas.

Fls. & Frts. : July-Jan.

Specimen examined: AMJ 1224

Common in dry rocky places.

Ischaemum L.

1. Margins of the lower glume of sessile spikelet

expanded below the middle

I. indicum

1. Margins of the lower glume of sessile spikelet

narrowly and evenly inturned from base to apex

I. pilosum

Ischaemum indicum (Houtt.) Merr. In J. Arnold. Arbor. 19: 320. 1938 var. *indicum*; Bor, Grass. Bur. Cey. Ind. Pak. 180. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 517. 1996. *Phleum indicum* Houtt. Nat. Hist. 2, 13: 198, t. 90, f. 2. 1782. *Ischaemum aristatum auct non* L. 1753; Yadav & Sardesai, Fl. Kolhapur Dist. 588. 2002; Hook.f. Fl. Brit. Ind. 7: 126. 1896; Blatt. & McC., Bombay Grass. 11, t. 6. 1935; Cooke, Fl. Pres. Bombay 3: 476. 1958 (Repr. ed.). Bherda, Guj.

Annual herbs. Culms, terete, creeping or decumbent, rooting at lower nodes, slender; sparingly branched; nodes glabrous. Leaves linear-lanceolate, 1-4.5 cm long, glabrous or sparsely hairy. Racemes 2 or 3, appressed to each other; joints turbinate. Sessile spikelets and pedicelled spikelets awned.

Fls. & Frts.: Aug.-Nov.

Specimen examined: CBS 1110

Common grows in open grasslands.

Ischaemum pilosum (Klein ex Willd.) Wight, Madras Lit. Sci. J. 138. 1835; Hook.f. Fl. Brit. Ind. 7: 130. 1896; Blatt. & McC., Bombay Grass. 14. 1935; Cooke, Fl. Pres. Bombay 3: 479. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 183. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra. St. Monocot. 523. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 588. 2002. *Andropogon pilosus* Klein ex Wild. Sp. Pl. 4: 920. 1806.

Perennial herbs. Culms rhizomatous, long creeping. Leaves linear-lanceolate, glabrous, acuminate. Racemes 3-7, digitate or subdigitate. Sessile spikelets and Pedicelled spikelets oblong-lanceolate, awned.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1231

Common on black cotton soil.

Iseilema Anders.

Iseilema anthephoroides Hack. in DC. Monogr. Phan. 6: 683. 1889; Hook.f. Fl. Brit. Ind. 7: 219. 1896; Blatt. & McC., Bombay Grass. 112. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 187. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra. St. Monocot. 532. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 590. 2002.

Annual herbs. Culms tufted, compressed, simple or branched. Leaves linear-lanceolate. Panicles narrowly oblong; lower spathes foliaceous, longer, upper shorter. Proper spathe boat shaped. Racemes enclosed partly or wholly in spathe. Pedicel of involucre spikelets as long as broad, flattened, hairy on the margins. Involucral spikelets muticous, unawned. Pedicelled spikelets reduced or short, empty. Hermaphrodite spikelets awned.

Fls. & Frts.: Aug.-Dec.

Specimen examined: AMJ 1177

Common in open grassland, involucre spikelets longer.

Lophopogon Hack.

Lophopogon tridentatus (Roxb.) Hack. in Engl. & Prantl, Pflanzenf. 2 (2): 26. 1887; Hook.f. Fl. Brit. Ind. 7: 149. 1896; Blatt. & McC., Bombay Grass. 28. 1935; Cooke, Fl. Pres. Bombay 3: 484. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 190. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra. St. Monocot. 537. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 591. 2002. *Andropogon tridentatus* Roxb. Fl. Ind. 1: 261. 1820.

Perennial herbs. Culms terete, tufted, leafy at the base. Leaves flat or involute, linear, erect, acuminate. Racemes 2, closely appressed to each other and appearing like a solitary head. Sessile spikelets brownish. Pedicelled spikelets awned.

Fls. & Frts.: Aug.-Nov.

Specimen examined: AMJ 1082

Common in open grassland, can be identified by its terminal brownish black coloured raceme.

Melanocenchris Nees

Melanocenchris jacquemontii Jaub. & Spach, Illustr. Pl. Or. 4: 36. 1851; Bor, Grass. Bur. Cey. Ind. Pak. 473. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 537. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 591. 2002. *Gracilea royleana* var. *plumosa* Hook.f. Fl. Brit. Ind. 7: 284. 1896; Blatt. & McC., Bombay Grass. 248. 1935; Cooke, Fl. Pres. Bombay 3: 553. 1958 (Repr. ed.).

Annual herbs. Culms 10-25 cm tall, densely tufted, erect, branched; nodes glabrous. Leaves linear-lanceolate, glabrous. Inflorescence on flexuous often recurved peduncle; rachis trigonous; cluster of spikelets often purple, spikelets 3-5 in a cluster; sessile with 2 perfect florets; 1.5-3.0 cm long.

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1119

Common on rocky places, disguised by its silky white coloured tooth brush like inflorescence.

Microchloa R. Br.

Microchloa indica (L.f.) P. Beauv. Ess. Agrost. 20. 1812; Blatt. & McC., Bombay Grass. 248. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 473. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra st. Monocot. 538. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 591. 2002. *Nardus indica* L.f. SupPl. 105. 1781. *Microchola setacea* R. Br. Prodr. 208. 1810. Hook.f. Fl. Brit. Ind. 7: 283. 1896; Cooke, Fl. Pres. Bombay 3: 553. 1958. (Repr.).

Annual herbs. Culms densely tufted, branched; nodes glabrous. Leaves linear-lanceolate, glabrous. Spike solitary, terminal, very slender, curved, purplish; rachis slender minutely ciliate. Spikelets sessile, oblong-lanceolate, green purplish, 1-flowered in a single row. Caryopsis oblong, smooth.

Flst. & Frts.: July-Aug.

Specimen examined: AMJ 1022

Frequent on rocky soil, easily recognised by its green purplish curved spikes.

Mnesithea Kunth.

Mnesithea granularis (L.) Koning & Sosef in Blumea 31: 295. 1886; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 539. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 591. 2002. *Cenchrus granularis* L. Mant. 2, App. 575. 1771. *Manisuris granularis* (L.) L.f. Nov. Gram. Gen. 40. 1779; Hook.f. Fl. Brit. Ind. 7: 159. 1896; Blatt. & McC., Bombay Grass. 32. 1935; Cooke, Fl. Pres. Bombay 3: 473. 1958. (Repr.). *Hackelochloa*

granularis (L.) O. Ktze. Rev. Gen. Pl. 2: 776. 1891; Bor, Grass. Bur. Cey. Ind. Pak. 159. 1960. Kanjani.

Annual herbs. Culms densely tufted, terete. Leaves linear-lanceolate, hispid; margins ciliate. Racemes solitary on short or long peduncles, partly or wholly exposed from the spathe like sheath. Sessile spikelets globose, awnless. .

Fls. & Frts.: July-Dec.

Specimen examined: AMJ 1086

Common on hill slopes. .

Ophiuros Gaertn. f.

Ophiuros exaltatus (L.) O. Ktze. Rev. Gen. Pl. 2: 780. 1891; Bor, Grass. Bur. Cey. Ind. Pak. 199. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 541. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 594. 2002. *Aegilops exalata* L. Mant. 2: 575. 1771. *Ophiuros corymbosus* Gaertn. f. Fruct. 3: 4. t. 181, 1805; Hook.f. Fl. Brit. Ind. 7: 160. 1896; Blatt. & McC., Bombay Grass. 40. 1935; Cooke, Fl. Pres. Bombay 3: 468. 1958 (Repr. ed.).

Perennial herbs. Rhizome thick; horizontal culms bulbous at base. Leaves linear-lanceolate, flat or involute, acuminate. Spikes terete. Spikelets awnless; apex obtuse. Caryopsis oblong.

Fls. & Frts.: July-Feb.

Specimen examined: CBS 1242

Common on hill slopes, bunds and fields.

Oplismenus P. Beauv.

Oplismenus burmannii (Retz.) P. Beauv. Ess. Agrost. 54, 168, 169. 1812; Hook.f. Fl. Brit. Ind. 7: 68. 1896; Blatt. & McC., Bombay Grass. 154. 1935; Cooke, Fl. Pres.

Bombay 3: 448. 1958 (Repr. ed.); ; Bor, Grass. Bur. Cey. Ind. Pak. 317. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 541. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 594. 2002.

Annual herbs. Culms terete, slender, branched, creeping or ascending, rooting at lower nodes; nodes pubescent. Leaves thin, undulate, ovate to elliptic-lanceolate. Panicles 3-7 cm long; peduncle slender, short. Spikelets solitary or fascicled. Caryopsis elliptic-oblong.

Fls. & Frts.: July-Feb.

Specimen examined: AMJ-1260

Common under shades of trees, forming continuous mat.

Oropetium Trin.

1. Annuals, easy to uproot; spikes upto 4 cm long;

green

O. thomaeum

1. Perennials, hard to uproot; spikes 4-10 cm long,

often purple

O. roxburghianum

Oropetium thomaeum (L.f.) Trin., Fund. Agrost. 98, t. 3. 1822; Hook.f. Fl. Brit. Ind. 7: 366. 1896; Blatt. & McC., Bombay Grass. 247. 1935; Cooke, Fl. Pres. Bombay 3: 568. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 474. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 544. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 595. 2002. *Nardus thomacea* L. f. Suppl. 105. 1781.

Annual herbs. Culms densely tufted, terete. Leaves setaceous, hispid. Spikes much compressed; rachis flexuous, 4-gonous. Spikelets sessile sunken into the hollow of rachis, 1-flowered.

Fls. & Frts.: July-Aug.

Specimen examined: CBS 1031

Gorws in open grassland on rocky soil.

Oropetium roxburghianum (Steud.) S. M. Phillips in Kew Bull. 30: 469. 1975; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 542. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 594. 2002. *Lepturus roxburghianus* Steud., Syn. Pl Glum. 1: 357. 1854; Hook.f. Fl. Brit. Ind. 7: 365. 1896. *Tripogon roxburghianus* (Steud.) Bhide in J. Proc. Asiat. Soc. Bengl. 1911 (n.s.). 7: 515. 1912; Blatt. & McC., Bombay Grass. 268. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 524. 1960.

Perrenial herbs, 10-20 cm tall, erect. Culms densely tufted, erect, branched; nodes glabrous. Leaves filiform, 1.5-5.0 cm long, linear. Spikes solitary, straight or curved, 5-10 cm long, often purple. Spikelets 0.2-0.3 cm long, deeply sunk into the hollow of the rachis, 1-2-flowered, rachis flattened, produced beyond the upper spikelet. Caryopsis terete, reddish brown.

Fls. & Frts.: July-Sept.

Specimen examined: AMJ 1037

Frequent on rocky soil.

Panicum L.

Panicum trypheron Schult. Syst. Veg. 2: Mant. 244. 1824; Hook.f. Fl. Brit. Ind. 7: 47. 1896; Blatt. & McC., Bombay Grass. 158. 1935; Cooke, Fl. Pres. Bombay 3: 452. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 331. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 553. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 597. 2002.

Annual herbs. Culms tufted or not. Leaves convolute, linear-lanceolate. Panicles oblong-lanceolate, lax; branches filiform to capillary, angular, flexous, scaberulus. Spikelets acuminate, greenish-purple. Caryopsis oblong-elliptic.

Fls. & Frts.: July-Dec.

Specimen examined: CBS-1185

Common in grasslands

Paspalidium Stapf

Paspalidium flavidum (Retz.) A. Camus in Lecomte, Fl. Gen de'l IndoChine 7: 419. 1922; Blatt. & McC., Bombay Grass. 141. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 333. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 555. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 597. 2002. *Panicum flavidum* Retz. Obs. Bot. 4: 15. 1786; Hook. f. Fl. Brit. Ind. 7: 28. 1896; Cooke, Fl. Pres. Bombay 3: 445. 1958 (Repr. ed.).

Annual or perennial herbs. Culms subcompressed, erect or decumbent; nodes glabrous. Leaves inrolled, linear-lanceolate. Spikes 3-10, sessile, distant, erect or ascending, alternate, shorter than internodes. Spikelets 0.2 cm long, ovoid. Caryopsis orbicular.

Fls. & Frts.: Aug.-Oct.

Specimen examined: AMJ 1132

Occasional in damp places.

Pennisetum Rich. ex Pers.

Pennisetum pedicellatum Trin. in Mem. Acad. Sci. Petersb. Ser. 6, 3: 184. 1834; Hook.f. Fl. Brit. Ind. 7: 86. 1896; Blatt. & McC, Bombay Grass. 180, t. 115. 1935; Cooke, Fl. Pres. Bombay 3: 431. 1958 (Repr. ed.); Bor, Grass.Bur. Cey. Ind. Pak. 346. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 564. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 600. 2002.

Annual herbs, 1 m tall. Culms tufted, terete, erect, simple or branched, glabrous. Leaves 7-24 x 0.6-0.8 cm, flat, sparsely hairy. Linear-lanceolate, margins scabrid.

Panicles spiciform, dense, purplish. Involucres sessile, bristles unequal. Pedicels of the Spikelets slender, woolly. Spikelets solitary, or 2-3 together. Caryopsis oblong-lanceolate.

Fls. & Frts.: Sept-Dec.

Specimen examined: AMJ 1263

Occasional along the roadsides, can be distinguished by its pinkish white coloured panicles.

Rhynchelytrum Nees

Rhynchelytrum repens (Willd.) C. E. Hubb. in Kew Bull. 1934: 110. 1934; Bor, Grass. Bur. Cey. Ind. Pak. 355. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 579. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 602. 2002. *Saccharum repens* Willd. Sp. PL. 1: 332. 1798. *Tricholaena wightii* Nees & Arn. ex Steud. Syn. Pl. Glum. 1: 93. 1854; Hook.f. Fl. Brit. Ind. 7: 65. 1896; Blatt & McC., Bombay Grass. 176. 1935; Cooke, Fl. Pres. Bombay 3: 441. 1958 (Repr. ed.). *Rhynchelytrum villosum* (Parl.) Chiov. in Ann. Ist. Bot. Roma 8: 310. 1908; Bor, Grass. Bur. Cey. Ind. Pak. 355. 1960.

Annual herbs, 30 to 45 cm tall. Culms tufted, terete, rooting at lower nodes. Leaves linear, acuminate, 2-15 cm long, glabrous or pubescent. Panicles 5-12 cm long; pyramidal, lax, rachis flattened, pubescent. Spikelets 1 cm long, solitary or paired, densely silky villous with reddish brown hairs. Lower oblong, base bearded with brownish red hairs. Caryopsis 0.5 cm long, oblong, ellipsoid, brownish.

Fls. & Frts.: Sept-Dec.

Specimen examined: AMJ 1143

Rare on dry rocky soil.

Setaria P. Beauv.

Setaria pumila (Poir.) R. & S. Syst. Veg. 2: 891. 1817; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 595. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 605. 2002. *Panicum pumilum* Poir. Encycl. Meth. Bot. SupPl. 4: 273. 1816. *Setaria pallide-fusca* (Schum.) Stapf & Hubb. in Kew Bull. 1930: 259. 1930; Bor, Grass. Bur. Cey. Ind. Pak. 363. 1960. *Setaria glauca auct non* (L.) P. Beauv. 1812; Hook.f. Fl. Brit. Ind. 7: 78. 1896; Blatt. & McC., Bombay Grass. 172. 1935; Cooke, Fl. Pres. Bombay 3: 435. 1958 (Repr. ed.).

Annual herbs, 20-60 cm tall. Culms tufted, terete; nodes bearded. Leaves 3-10 x 0.2-0.5 cm, linear-lanceolate. Panicles cylindric, yellowish, green or purplish; rachis angular, pubescent. Spikelets broadly ovate-oblong or elliptic. Caryopsis plano-convex. *Fls. & Frts.*: July-Dec.

Specimen examined: AMJ 1126

Common along roadsides and in moist places.

Sporobolus R. Br.

Sporobolus coromandelianus (Retz.) Kunth, Rev. Gram. 1: 68. 1829; Hook.f. Fl. Brit. Ind. 7: 252. 1896; Blatt. & McC., Bombay Grass. 228. 1935; Cooke, Fl. Pres. Bombay 3: 542. 1958 (Repr. ed.); Bor, Grass. Bur. Cey. Ind. Pak. 627. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 610. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 607. 2002.

Annual herbs. Culms densely tufted, branched from the base. Leaves flat, convolute, lanceolate. Panicles effuse, narrowly pyramidal lax; branches capillary, lower whorled, upper alternate, horizontally spreading, 3-9 in a whorl; branches numerous; pedicels unequal. Caryopsis obovate.

Fls. & Frts.: July-Nov.

Specimen examined: AMJ 1130

Frequent in marshy places.

Themeda Forssk.

Themeda quadrivalvis (L.) O. Ktze. Rev. Gen Pl. 2: 794. 1891; Blatt. & McC., Bombay Grass. 118. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 252. 1960; Lakshmi. in Sharma et al. Fl. Maharashtra St. Monocot. 622. 1996. *Andropogon quadrivalvis* L. in Murr. Syst. Veg. ed. 13. 758. 1774. *Anthistiria ciliata* L.f. SupPl. 113. 1781; Yadav & Sardesai, Fl. Kolhapur Dist. 608. 2002; Hook.f. Fl. Brit. Ind. 7: 213. 1896. *Themeda ciliata* Hack. Mon. 6: 664. 1889; Cooke, Fl. Pres. Bombay 3: 514. 1958 (Repr. ed.).

Annual herbs. Culms terete, tufted. Leaves linear-lanceolate, margins scabrid, acute. Panicles of fascicled raceme, erect or dropping. Spathe boat shaped, acuminate, margins with tubercle based hairs. Involucral spikelets sessile. Pedicelled spikelets unawned.

Fls. & Frts.: Sept.-Jan.

Specimen examined: AMJ 1271

Common along road sides.

Tripogon R. & S.

1. Lemmas cleft at the apex into 2 lobes, awned in the cleft *T. jacquemontii*

1. Lemmas cleft at the apex into 4 lobes or with a definite

lobe between each lateral and median awn

T. bromides

Tripogon bromides R. & S. Syst. Veg. 2: 600. 1817; Hook. f. Fl. Brit. Ind. 7: 287. 1896; Blatt. & McC., Bombay Grass. 269, t. 182. 1935; Bor, Grass. Bur. Cey. Ind. Pak. 521. 1960; Lakshmi, in Sharma et al. Fl. Maharashtra St. Monocot. 626. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 610. 2002.

Perennial herbs. Culms tufted, terete; nodes glabrous. Leaves convolute, linear-lanceolate. Racemes spiciform. Spikelets linear-oblong, sessile, 5-13-flowered. Caryopsis oblong-elliptic.

Fls. & Frts.: Aug.-Oct.

Specimen examined: CBS-1190

Occasional on hill slopes.

Tripogon jacquemontii Stapf in Kew Bull. 1892: 85, 1892; Hook. f. Fl. Brit. Ind. 7: 286. 1896; Blatt. & McC., Bombay Grass. 267. 1935; Cooke, Fl. Pres. Bombay 3: 599. 1958 (Repr. ed.); Bor, Grass, Bur. Cey. Ind. Pak. 522. 1960; Lakshmi, in Sharma et al. Fl. Maharashtra St. Monocot. 628. 1996; Yadav & Sardesai, Fl. Kolhapur Dist. 610. 2002.

Perennial herbs. Culms densely tufted, erect; nodes glabrous. Leaves linear-lanceolate. Racemes erect or curved towards the apex. Spikelets linear-lanceolate, 4-20-flowered, lower distant. Caryopsis linear-oblong, brown.

Fls. & Frts.: Aug.-Oct.

Specimen examined: AMJ 1035

Common in open grasslands and along the road sides.

Urochloa P. Beauv.

Urochloa panicoides P. Beauv. Ess. Agrost. 53. f. 1. 1882; Bor, Grass. Bur. Cey. Ind. Pak. 372. 1960; Lakshmi, in Sharma et al. Fl. Maharashtra St. Monocot. 630. 1996. *Panicum javanicum* Poir. in Lam. Encycl. Meth. Bot. Suppl. 4: 274. 1816; Hook.f. Fl. Brit. Ind. 7: 35. 1896; Cooke. Fl. Pres. Bombay 3: 450. 1958 (Repr. ed.). *Urochloa helopus* (Trin.) Stapf in Prain, FL. Trop. Afr. 9: 595. 1920; Blatt. & McC. Bombay Grass. 146. 1935. *U. marathensis* Henr. in Meded. Rijks. Herbs. Leiden 43: 2. 1922. *U.*

panicoides P. Beauv. var. *marathensis* (Henr.) Bor, op.cit. 373; *U. panicoides* P. Beauv. var. *pubescens* (Kunth) Bor, op.cit; *U. panicoides* P.Beauv.var. *velutina* (Henr.) Bor,op.cit. 373. Padhya.

Annual herbs. Culms tufted. Inflorescence subsessile. Spikelets ovate or oblong-elliptic, glabrous or pubescent. Caryopsis elliptic.

Fls. & Frts.: Aug.-Oct.

Specimen examined: AMJ 1047

Common on bunds of fields.