Morphology and
Medicinal uses of Plants
MORPHOLOGY OF PLANTS

1. **Family:** Malvaceae


**Vernacular name:**

**English:** East-Indian screw tree, Nut-leaved screw tree, **Hindi:** Maror phalli, **Marathi:** Murud sheng, **Sanskrit:** Mriga shringa, **Kannada:** Yedmuri, **Telugu:** Valambiri, **Tamil:** Vadampiri, **Bengali:** Antamora, **Sanskrit:** Avaratnna

**Description:**

Large shrubs, 1-3 m tall; branchlets apically stellate hairy. Leaves oblong, ovate, obliquely cordate-orbicular, 7-12 × 5 -10 cm, margin serrate, subsessile, pubescent on both surfaces, cordate, 3 lobed. Flowers 2-3cm long in axillary few flowered cymes; pedicles pubescent, bracts minute hairy, calyx tubular 15 - 2 cm long, 2 lobed, stellate pubescent outside; lobes triangular, unequal. Corolla red, unequal staminal tube much exerted; stamens 10 surrounded ovary alternating pairs with 5 minute staminodes. Ovary 5 loculed, style united. Follicles 4 - 6 cm long spirally twisted, beaked. Seeds many, wrinkled black. Common on hill slopes.
Soil type: Rocky soil on hill slopes.

Flowers and fruits: September to January.

Locality: In all districts.

Exsiccata: Kannad forest, Aurangabad SDS 104.

2. Family: Zygophyllaceae


Vernacular name:


Description:

Procumbent, annual herb; stems 30-60 cm long terete, pubescent. Leaves opposite 2.5-4 cm long; petioles 4-8 mm long; stipules subulate, hairy. Leaflets 3-6 pairs mucronate, pubescent on both surfaces, cuneate or rounded at base; petiolules minute. Flowers solitary, 4-8 mm across; pedicels 0.5-2 cm long pubescent. Sepals ovate-lanceolate, 3-4 mm long, acute, hirsute, scarious, pubescent. Petals yellow, obovate. Ovary
superior, syncarps, 5 locular, lobed with one ovule; style minute. Fruits with 5 angles, globose, 5-11 mm. 5 mericarps; lateral spines longer. Seeds many.

**Soil type:** Rocky soil.

**Flowers and fruits:** Almost throughout the year.

**Locality:** In all districts.

**Exsiccata:** Gogababa hill, Aurangabad SDS 109.

3. **Family:** Oxalidaceae


**Vernacular name:**

**English:** Creeping Wood Sorrel, Creeping Oxalis,

**Hindi:** Amrul

**Manipuri:** Yensil,

**Tamil:** Paliakiri,

**Bengali:** Amrulshak,

**Malayalam:** Poliyarala

**Description:**

Small perennial herbs; stems creeping brownish red and rooting at the nodes; branches erect, pubescent 9-25 cm tall. Leaves pinnately compound, 3-foliolate: leaflets subsessile, entire margin obovate, 1-2 × 1.5-2 cm hairy; petioles long; stipules oblong, adnate to the petiole. Flowers 2-8, subumbellate cymes, 0.5-7 cm long peduncles. Bracts 3-
4 mm long; pedicels 0.5-1.5 cm long. Sepals lanceolate oblong 3-4.5 mm long, obtuse. Petals yellow, oblong, 6-8 mm long. Filaments in two whorls of 5 each long and short alternating connate at base. Ovary oblong; styles distinct hairy. Fruit capsules, cylindrical 1-2 cm long, pubescent. Seeds broadly ovoid traversely striate. Common, in shaded and wet localities.

**Soil type:** Wet and shaded soil.

**Flowers and fruits:** Almost throughout the year

**Locality:** In all districts.

**Exsiccata:** *University campus*, Aurangabad. *SDS* 103.

4. **Family:** Fabaceae


**Vernacular name:**

**Sanskrit:** Avalguja, **Assamese:** Habucha, **Bengali:** Bakuchi, **Somraji,** **Gujrati:** Bavachi **Hindi:** Bakuchi, **Kannada:** Bauchige, **Kashmiri:** Babchi, **Malayalam:** Karkokil, **Marathi:** Bawchi, **Oriya:** Bakuchi, **Punjabi:** Babchi, **Tamil:** Karpokarisi, **Telugu:** Bavanchalu, **Urdu:** Babchi
Description:

Erect, annual herbs, 40-80 cm tall; stems and branches grooved, gland-dotted with few appressed hairs. Leaves simple, petioles 5-8 mm long, hairy, gland-dotted; stipules lanceolate, 4-7 mm long, persistent. Leaflets broadly ovate, broadly elliptic, 3-10 x 3-9 cm, rounded mucronate at apex, pubescent and black punctate on both surfaces. Flowers in dense, short, axillary 10-30 racemes; pedicels very short. Calyx 2-4 mm long, pubescent outside. Upper teeth linear lanceolate, lower one ovate, twice the length of upper. Corolla blue or white clawed glabrous. Pods shape ovate oblique, 5-7 x 2-4 mm, compressed, black, punctate, seeds brownish black, oblong, flattened 2-4 mm long.

Soil type: Moist black soil.

Flowers and fruits: September to November.

Locality: Throughout the region

Exsiccate: Paithan, Aurangabad. SDS 116.

5. Family: Onagraceae

Vernacular name:

**English:** Creeping water primrose  **Marathi:** Pan Lawang,  
**Bengali:** Van Lawang

**Description:**

Erect herbs, 60 cm tall; stem more or less angular, much-branched. Leaves lanceolate or elliptic-lanceolate, 2-7 \( \times \) 0.4-2 cm, tapering at base, acute, margin entire; petioles minute. Flowers solitary, axillary, pedicels short. Calyx tube cylindric, pubescent; 4 teeth, ovate, 1-1.5 mm long, acute. Petals 4, yellow, Stamens 3-5, inserted with the petals. Capsules subterete 0.3-1 cm, straw-coloured 4 ribbed. Seeds multiseriate in each locule, brown.

**Soil type:** Marshy soil

**Flowers and fruits:** September to November.

**Locality:** Nanded, Aurangabad districts.

**Exsiccata-** Kannad, Aurangabad SDS 117.

6. **Family:** Asteraceae

Vernacular name:

Hindi: Utakatira  Marathi: Utkatarai, Gujarati: Utkanto,
Sanskrit: Kantaphala, Urdu: Untkatar, English: Indian Globe Thistle,
Telugu: Brahmadandi, Kannada: Brahmadande

Description:

 Erect, annual herbs, 35-50 cm tall; branches covered with white cottony pubescence. Leaves alternate, sessile lyrate, lanceolate pinnatifid, oblong, 4-13×2-6 cm; ovate lobes, sinuate, spinous pointed. Heads globose compound, 2-3 cm in diam. in stout peduncles. Involucral bracts of individual simple heads scale-like; outer oblanceolate, 4-6 mm long, glabrous, spinous tipped; intermediate bracts often turned into sharp spines 1.5-3 cm long; capitula 1 flowered in dense globose, involucral bracts spinescent, intermediate bracts spiny. Florets white bisexual with tubular, 5-lobed; corolla lobes linear, 4-5 mm long, acute. Achenes elongated, villous, 3-4 mm long.

Soil type- Black soil.

Flowers and fruits: November to March.

Locality: In all districts.

Exsiccate-Phulambri, Aurangabad. SDS 105.

7. Family: Asteraceae


**Vernacular name:**
- **Assamese**: Bhrngaraja, **Bengali**: Bheemraja, **Gujrati**: Bhangaro, Bhangro, **Hindi**: Bhangara, **Kannada**: Keshavardhana, **Malayalam**: Kayyonni, **Marathi**: Bhringiraja, **Punjabi**: Bhangra, **Tamil**: Karisalankanni, **Telugu**: Guntakalagara, **Urdu**: Bhangra

**Description:**
Prostrate or erect, herbs, occasionally rooting at nodes. Stems 15-25 cm long, cylindrical rough due to appressed white hairs. Leaves opposite, sessile or subsessile, oblong-lanceolate, sub entire or ovate-lanceolate, 3-7 x 0.5-2.3 cm, narrowed at the base, entire or faintly serrate, acute with appressed hairs, hispid. Heads solitary or 2-7 together 4-9 mm across, axillary and terminal, on 0.3-4 cm peduncles. Receptacle convex. Involucral bracts 2-seriate, ovate-obtuse, acute, appressed hairy. Ray florets ligulate white, dentate, 2-5 mm long. Disc florets with tubular, white corollas 2-4 mm long. Minute teeth on the top of achenes, 5 stamens, epipetalous, anthers united into tube, ovary inferior, unilocular.

**Soil type**: Black wet soil.

**Flowers and fruits**: More or less throughout the year.

**Locality**: Throughout the region.

**Exsiccata-Chauka**, Aurangabad SDS 110.
8. **Family**: Asteraceae


**Vernacular name:**

- **Hindi**: Phattar-Suva, Seri
- **Kannada**: Ghattarasva
- **Marathi**: Khadakshepu
- **Sanskrit**: Pithari
- **Tamil**: Parapalanam
- **Telgu**: Parapalanamu

**Description:**

Prostrate, annual diffuse herbs 24 cm tall; stems numerous 6-23 cm long spreading, grooved, pubiscent. Leaves decompounds rosette at the base 1-6 cm long; pinnules 0.5-2 cm long linear apex apiculate; petioles variable in length. Heads solitary, axillary and terminal 0.4 cm across, short peduncles. Receptacle flat, ray florets 1-seriate, ligulate, yellow corolla. Disc florets few, bisexual with tubular, 4-5 fid, yellowish corolla. Achenes compressed, pappus on two awns 4-8 mm long, brown, densely hairy and ciliate.

**Soil type**: Rocky soil.

**Flowres and fruits**: July to November.

**Locality**: Throughout the region

**Exsiccata-Gogababa hill**, Aurangabad. **SDS 101**.
9. **Family**: Asteraceae


**Vernacular name:**

**English**: Tridax Daisy, Coat Buttons, Mexican Daisy, **Hindi** : Khal-muriya, **Tamil**: Vettukkaaya-thalai , **Telugu** : Gaddichamanthi, **Kannada** : Sanna gida

**Description:**

Small, perennial, procumbent herbs; branches creeping, 20-35 cm long, pubescent. Leaves simple opposite, lanceolate-ovate, 3-7 × 0.6-2.8 cm, pinnatifid or dentate margin, acute, wedge shape base pubescent on both side; petioles hairy on both surfaces, 7-10 mm long. Flowers solitary 10-13 mm across, long peduncles inflorescence capitulum, receptacle flat. Involvcral bracts few seriate, the outer ones ovate, densely hairy, the inner ones membranous, oblong, pubescent. Ray florets 4-8, with white or yellow, ligulate. Disc florets many, tubular, corolla 5-lobed yellow. Anther bases sagittate with short, auricles. Achene 1.5-3 mm long covered with hairs and having a feathery, plume like white pappus at one end.
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Soil type:  Black, rocky soil.

**Flowers and fruits:** Almost throughout the year.

**Locality:** In all districts.

**Exsiccatia-Aurangabad**  

10. **Family:** Sapotaceae

_Mimusops elengi_ L.  

**Vernacular name:**

**English:** *Bullet-wood tree, Indian Medlar*  
**Hindi:** *Maulsari*  
**Urdu:** *Kirakuli*  
**Tamil:** *Magizhamboo*  
**Malayalam:** *Ilanni*  
**Bengali:** *Bakul*  
**Marathi:** *Bakuli*  
**Kannada:** *Ranjal*  
**Gujarati:** *Barsoli*

**Description:**

Tree, much branched 5-8 m tall; bark dark gray fissured, scaly; branches compact, glabrous. Leaves arranged spirally alternate, ovate-elliptic or oblong-elliptical, 4-12 x 2-5 cm, acute or rounded at base, margin entire and undulate, shortly acuminate; petioles 1-2 cm long with minute caducous stipules. Flowers axillary, solitary, fragrant, 1.5-2 cm across; pedicels 7-18 mm long, pubescent. Sepals 7-10 mm long, brown-pubescent outside; 2 whorles of 4 outer ones ovate-lanceolate, inner ones lanceolate; Corolla creamy white, with a short tube and 8 lobes, each deeply divided into 3; lobes linear oblong, 8-10 mm long,

**Soil type:** Black soil  
**Flowers and fruits:** January to July.  
**Locality:** In all districts.  
**Exsiccatia:** Aurangabad. SDS 119.

11. **Family:** Apocynaceae  

**Vernacular name:**  
**English:** American Serpent Wood, Devil Tree, Milkbush  
**Hindi:** Barachandrika,  
**Tamil:** Pampukaalaachchedi,  
**Bengali:** Barchandrika,  
**Sanskrit:** Vanasarpagandha

**Description:**  
Small, erect shrub, 40-60 cm tall. Leaves simple in a whorl of 4 at each node, thin obtuse or acute both ends, oblong-lanceolate 4-16 × 2-5 cm, pubescent on both surfaces, nerves 8-12 pairs. Flowers 5-7 in axillary or terminal cyme small, white. Calyx, pubescent 5 lobes, equal or subequal. ovate, ciliate, subacute. Corolla white, pubescent; lobes ovate-rounded 0.7 cm across. Obtuse. Stamens 5. Ovary globose; Stigma capitate, 2 lobed. Drupes dark red, 4-10.5 mm.
Soil: Black rocky soil.

**Flowers and fruits**: June-march

**Locality**: In all districts.

**Exsiccata**: University campus, Aurangabad. SDS 111.

12. **Family**: Apocynaceae


*Periploca indica* L. Sp. Pl. 211. 1753.

**Vernacular name:**

**English**: Indian Sarasa Parilla **Assamese**: Vaga Sariva, **Bengali**: Anantamul, **Gujrati**: Upalsari, **Hindi**: Anantamul **Kannada**: Anantamool, **Kashmiri**: Anant mool **Malayalam**: Nannari, **Marathi**: Upalsari, Anantamula **Oriya**: Anantamool **Punjabi**: Anantmool, **Tamil**: Ven Nannar **Telugu**: Sugandhi Pala, **Urdu**: Ushba

**Description:**

Creeping and wiry twining shrubs: root stock woody; stem terete, wiry. Leaves simple, exstipulate, opposite, linear-lanceolate, 3-10 ×1 -5 cm, margin entire, acute or obtuse and apiculate at apex, subcordate at base, pubescent at below; petioles 2-4 mm long. Flowers, sessile cymes; pedicels minute, clothed with many ovate, acute, imbricating bracts. Calyx 5 lobed, glabrous outside; Corolla gamopetalous, yellow to
greenish outside. dull yellow to light purple within; Filaments distinct, stamens 5 inserted near the base of corolla terminated by an inflexed membrane. Follicles cylindrical straight, 9-14 × 4-0.6 cm, tapering to a point at apex, pubescent. Seeds many, flat, ovate-oblong, 4-7 mm long, with white silky hairs. 1.4-2.3 cm long.

**Soil type:** Black soil.

**Flowers and fruits:** August to December.

**Locality:** In all districts

**Exsiccata:** *University campus* Aurangabad SDS 121.

13. **Family:** Plantaginaceae


**Vernacular name:**

**English:** Branched Cancerwort, Branched Fluellen, **Marathi:** Banwel.

**Description:**

Perennial, diffuse or pendent, much branched, herbs, pubescent. 25-45 cm long. Leaves alternate, triangular-hastate 1-5×0.5-3 truncate
or subcordate base, acute at apex, glabrous the younger leaves lanceolate - sagitate, much smaller, the lower ones 5-7-lobate. Petioles slender 3-14 mm long, flowers small solitary on axillary filiform pedicels. Calyx tube 2-3 mm; sepals lobe linear- lanceolate, membranous toward base apex acute. Corolla yellow, 6-11 mm long, outside pubescent; spur long 2-3 mm. Upper lip lobes obtuse 1-1.5 mm long, lower lip smaller than upper lip. Stamens didynamous, 4; filaments pubescent, papilose above. Ovary globose, style stout 0.4 mm long. Capsules ovoid- globose, 1.5-2 mm in diameter; seeds many, echinate, brown.

**Soil type:** Rocky soil.

**Flowers and fruits:** Oct- Dec.

**Locality:** In all districts.

**Exsiccate:** Cave hills, University campus, Aurangabad SDS 112.

14. **Family:** Scrophulariaceae

Vernacular name:

**English:** Chinese Mullein, **Hindi:** Kokhima, Gadartambaku **Marathi:** Kutki, **Bengali:** Kukshima, **Gujarati:** Kalhar, **Sanskrit:** Bhutakeshi

**Description:**

Annual herbs, 30-70 cm tall; branched apically. Leaves elliptic or ovate, triangular, sessile, 2-17 × 3-7 cm. pinnatisect or lyrate 3-5 lobes. Pubescent on both surfaces, upper leaves gradually smaller. Flowers simple branched, reacemes; rachis 20-28 cm long, glandular-pubescent; pedicels 4-9 mm long, glandular-pubescent; bracts ovate, foliaceous, acute, gradually becoming smaller upwards. Calyx deeply divided, 4-5 mm long, glandular-pubescent, persistent; Corolla, yellow, 9-14 mm across; lobes 5, rounded. Stamens didynamous, 4; filaments wooly. Reniform anther. Capsules ovoid, 5-7 mm in diam. Seeds many, warded, pale yellow.

**Soil type:** Sandy soil.

**Flowers and fruits:** September to May

**Locality:** In all districts.

**Exsiccate:** University campus, Aurangabad. SDS 122.

15. **Family:** Bignoniaceae

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**Vernacular name:**


**Description:**

Deciduous trees, 5-8 m tall; bark grey; young parts densely hairy tomentose. Leaves opposite, uni-pinnate, 4-7 cm long; opposite cuneate or rounded at base, orbicular to obovate pubescent, margin undulate. Flowers terminal, racemes; pedicellate 6-10 mm long. Calyx pubescent, corolla white, 1.5-2 cm long; lobes obovate-oblong. Stamens 4, included; capsules flat, falcately curved, 28-40 cm long, acute. Seeds many 1-2 cm long, winged rectangular, brown.

**Soil type:** Rocky soil.

**Flowers and fruits:** March to June.

**Locality:** In all districts.

**Exsiccate:** Gogababa hill, Aurangabad. SDS 118.

16. **Family:** Acanthaceae

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Vernacular name:


Description:

Herbs, 40-100 cm tall with unbranched, subquadrangular stems with numerous fasciculate, swollen node, hispid with long hairs. Leaves sub-sessile, lanceolate, 6-15×1.5-3 cm, acute, hairy, in whorls of 6 at each node, the two outer ones much larger than the four inner ones. Thorns from the axils of leaves sharp, 2-3 cm long, yellowish-brown. Flowers in axillary clusters of eight at each node in 4 pairs. Bracts lanceolate, hairy and ciliate, like the leaves; bracteoles linear-lanceolate, 1.5-2 cm long, with hyaline margins in the lower part, hairy and ciliate with long white hairs. Calyx 4 partite; upper sepals broader unequal, longer than the other three, all linear lanceolate, 1.2-2 cm long, with hairy on the back and hyaline ciliate margin. Corolla purple-blue, 2-3 cm long, bilipped; tube 11-13 mm long, swollen at top; stamens
didynamous 4; filaments glabrous. Ovary 2 celled with 4 ovule, capsules linear-oblong, 4 seeded 5-7 mm long, pointed. Seeds, ovate, compressed, hairy, hygroscopic, black.

**Soil type:** Wet soil of Marshy places.

**Locality:** In all districts.

**Flowers and fruits:** June to February.

**Exsiccata:** Aurangabad. *SDS* 115.

17. **Family:** Verbenaceae


**Vernacular name:**

**English:** Frog Fruit, Turkey tangle, **Hindi:** Jalbuti, Jalpapli

**Marathi:** Jalapimpali **Tamil:** Podutalei **Malayalam:** Nirtippali

**Telugu:** Bokkena **Kannada:** Nelahippali **Konkani:** Adali

**Description:**

Prostrate, perennial herbs; stem much-branched, sub quadrangular creeping, glabrous, rooting at the nodes. Leaves opposite subsessile, spatulate, 1.5-3.5 × 1-2 cm, cuneate at base, margin deeply serrate,
obtuse at apex, appressed pubescent on both the surface. Flowers minute, sessile, packed in long peduncle axillary spike; peduncles 4-6 cm long; bracts elliptic, 2.4 mm long, mucronate, glabrous. Calyx spathaceous, 1.5 mm long, bilobed, pubescent. Corolla white or pink, 2-3 mm long, bilipped. Stamens didynamous, 4. Ovary superior. Fruits small, globose, 1.5 mm long, flat, splitting into 2, seeds pyrenes.

**Soil type:** Wet soil.

**Flowers and fruits:** Almost throughout the year.

**Locality:** In all districts.

**Exsiccate:** Aurangabad. *SDS* 120.

18. **Family:** Lamiaceae


**Vernacular name:**

**English:** Feather-leaved Lavender  **Marathi:** Ghodegui  **Gujarati:** Asmani Galgoto.

**Description:**

Erect, aromatic, pubescent herbs, 25-100 cm tall. Leaves sessile, deeply divided or pinnatifid, 5-13 cm long, pubescent on both the
surfaces. Flowers in simple or branched spikes; floral bracts broadly ovate, 6-8 mm long, pubescent, persistent, nerved base and capillary setaceous awns apex. Calyx tubular, 4-5 mm long, curved, teethed, pubescent; Corolla tubular pale blue or white, 7-9 mm long, bilipped. Stamens 4; filaments bearded. Nutlets ellipsoid, 1.5-2 mm long.

**Soil type:** Rocky soil.

**Flowers and fruits:** September to January.

**Locality:** In all districts.

**Exsiccata:** *Gogababa hill*, Aurangabad. *SDS* 113.

19. **Family:** Lamiaceae


**Vernacular name:**

- **Sanskrit:** Katumba
- **Assamese:** Dronaphool
- **Bengali:** Bholghasiya
- **Gujrati:** Kubo
- **Hindi:** Guma
- **Malayalam:** Tumba
- **Marathi:** Tumba
- **Oriya:** Gaisha
- **Punjabi:** Gomobati
- **Tamil:** Tumbai
- **Telugu:** Tummi

**Description:**

Erect, pubescent herbs, 30-60 cm tall; stems glabrous, quadrangular with distinct nodes and internodes, leaves ovate or lanceolate, 3-7 × 2-4 cm, margin serrate, pubescent; petioles 0.5-1 cm long, pubescent.
Flowers sessile, terminal, globose, crowded dense whorls 2-3 cm in diam., surrounded by many foliaceous bracts. Floral bracts ovate-lanceolate, thin 9-14 × 2-4 mm ciliate, acuminate. Calyx tubular 1-2.2 cm long, slightly curved; the lower part glabrous smooth, the upper part half pubescent outside, villous throat 10 dentate. Corolla white, 1.6 - 2 cm. long; bilipped, upper lip 3.5 mm long woolly, the lower lip nearly twice as long; fruit schizocarpic nutlets 3 mm long, smooth, brown. Seed brown trigonous dark brown.

**Soil type**: Moist black soil.

**Flowers and fruits**: August to November

**Locality**: In all districts.

**Exsiccate**: *Aurangabad. SDS 114.*

**20. Family**: Hypoxidaceae


**Vernacular name:**

**Assamese**: Talmuli, **Bengali**: Talmalu **Gujrati**: Kalirmusali **Hindi**: Kalimusli **Kannada**: Neltal, **Malayalam**: Nilappenea **Marathi**: Kali musali **Oriya**: Talamuli **Punjabi**: Musali safed, **Tamil**: Nilappanai **Telugu**: Nel tadi gadda **Urdu**: Kali Musali.
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Description:

Small, Perennial, herbs with elongate, fleshy tuberous 5-30 cm. rootstock. Leaves variable crowded stem with sheathing leaf bases, short petioles, linear-lanceolate, acute 5-70 x1.5-4 cm, flat or plicate. Corolla yellow distichous, raceme bisexual, sessile perianth yellow six lobed; Stamens 6, fliform filament ovary glabrous; stigmas 3. Fruit oblong, 7-9 mm long, hairy. Seeds 8 black, globose beaked, vertically striated.

Soil type: Black soil.
Flowers and fruits: June to November.
Locality: In all districts.
Exsiccata: Kannad forest, Aurangabad. SDS 106.

21. Family: Asparagaceae


Vernacular name:

Description:

Perennial herbs with onion like white bulbs and aerial shoots. Bulbs globose, 2.4-9 × 2-7 cm. Leaves many, linear, or sword shaped long 12-28 ×1-2 cm. Scapes 10-90 cm tall, inflorescence racemes 10 -55 cm long, corolla light brown, long stalked. Bracts deltoid, 1-2 mm long; pedicels spreading or drooping. Perianth purplish green; Stamens in pairs 6. Ovary superior ovoid, style thick and narrow; stigma 3-lobed. Capsules brownish ellipsoid, 9-18 ×4-9 mm. Seeds clustered, superposed compressed.

Soil type: Rocky soil.
Flowers and fruits: February to May.
Locality: in all districts
Exsiccata: Gogababa hill, Aurangabad. SDS 107.

22. Family: Asparagaceae

Vernacular name:

**English:** South Indian Squill, Common Ledebouria  
**Kannada:** Kaadu Bellulli  
**Marathi:** Bhuikanda, Khajkanda  
**Telugu:** Adavitellagadda  
**Hindi:** Koli-Kanda  
**Tamil:** Narivengayam

Description:

Perennial small smooth herbs, 8-18 cm tall, bulbs ovoid bitter to taste; Leaves, oblong linear to lanceolate, margin entire, obtuse, brown spotted. Scapes 5-18 cm tall, branched; inflorescence raceme, corolla small dull pinkish, pedicels minute; bracts obovate, 1mm long, serrate. Perianth persistent, greenish-pink, 3-5 mm long; segments; ovary roundish, style short; stigma curved. Capsules ovoid-globose, 4 mm in diam., unequally 3-lobed. Bulb ovoid 2-3 mm diam with brown scale. Seeds 3, obovoid, 2.5 mm long.

**Soil type:** Rocky soil.

**Flowers and fruits:** May to July.

**locality:** In all districts.

**Exsiccate:** Gogababa hill, Aurangabad. SDS 108.
MEDICINAL USES

1. *Helicteres isora* L.

Fruits are astringent, refrigerant, stomachic, vermifuge, vulnerary and useful in bowel gripes (Chopra et al., 1956). Fruits shows antispasmodic activity (Pohocha and Grampurohit 2001). The fruit is use in diarrheal diseases (Krishnaraju et al., 2006). Seed is decoction orally taken for the relief from snake bite (Maheshwari, 2006). Extracted juice from the raw fruit is mixed with equal amount of mustard oil, or the ground fruit is mixed with turmeric paste, along with *Cyanodon dactylon* and is used for massaging the body of children to relieve them of profound weakness (Ragaland, 2000). The fruit and bark of the plant are used for treatment of diabetes (Vedavathy et al., 1997). Seeds are used for colic infections and dysentery (Waheed et al., 2011). Stems of this plant are used as anthelmintic, colic disorders while the fruits are used as colic, anticonvulsant agent (Eisai, 1995). The pods are crushed well and added with gingili (Sesame) oil. The mixture is then boiled and used as ear drops (2-3 drops) for pricking pain in ears and other ear ailments. About 4-6 gm powder of the pod is given 2 times a day for venereal diseases, hiccup, fever etc. Paste of the leaves is effective for various skin ailments like scabies, eczema etc. (http://siddham.in/helicteres-isora)

2. *Tribulus terrestris* L.

The fruits are traditionally used in the form of decoctions and infusions for the treatment of phosphaturia and disease of the genito urinary system as well as kidney, liver and eye diseases in Ayurvedic
and Chinese traditional medicine (Bedir and Khan, 2000: Bhuktar, 2000). Whole plant extracts are mainly used for kidney disorders. The fruit removes gravel from urine and stone in the bladder. The plant is regarded as cooling, diuretic, tonic and it is used in painful micturition, calculus affections, urinary disorders and impotence (Gupta et al., 1997). It is used in folk medicine as tonic, analgesic, astringent, stomachic, anti-hypertensive, diuretic, lithotriptic and urinary anti-infective (Ody, 2000). The powder of fruit is mixed with honey and given as an aphrodisiac. Fruit is crushed in water and taken orally to treat painful urination and spermatorrhoea (Rahmatullah et al., 2011). Fruits are anabolic, anti-inflammatory, demulcent (Gupta and Arya, 2011). Plant and dried fruit are used in the treatment of burning urination. The leaves are diuretic and tonic, increase the menstrual flow, cures gonorrhoea and gleet. Decoction of the leaves is useful as a gargle for mouth troubles and painful gums, paste is administered in stones of bladder. (http://www.mpbd.info/plants/tribulusterrestris.php)

3. *Oxalis corniculata* L.

This plant is well known for its medicinal value as a good appetizer and as a remover of kapha, vata and pitta. It cures dysentery, diarrhea and skin diseases (Raghvendra et al., 2006). The juice of the plant is given in jaundice and stomach troubles it is also used as antiseptic, refrigerant, diaphoretic, diuretic and anti diabetic (Hussain et al., 2008). Decoction of roots is useful for worms and giddiness (Kirtikar and Basu, 1975). It shows hypoglycemic, antihypertensive, antipsychotic, nervous system stimulant and have chronotropic and inotropic effect
(Achola et al., 1995; Raghavendra et al., 2006). It is used in Siddha preparations like Uppuchenduram which is used in the treatment of pitta disorder colic, burning sensation of the chest, hyper acidity, indigestion and menstrual disorders (Anonymous, 1972). It is rich in niacin, vitamin C and β-carotene (Manandhar, 2002). It is used as complementary medicine in wound healing, anemia, dyspepsia, cancer, dementia and convulsions (Taranalli et al., 2004; Madhavachetty et al., 2008). It is anthelmintic, anti-inflammatory, astringent, depurative, emmenagogue, febrifuge, lithontripic, stomachic and styptic. It is also used in the treatment of influenza, fever, urinary tract infections, enteritis, traumatic injuries and sprains (Chopra et al., 1986).

4. **Cullen Coryfolium** (L.) Medik.

In chronic skin disease, a mixture of bakuchi and karanja oil is commonly used with Vaseline in the treatment of Scabies, Psoriasis, ringworm and *Tinea versicular* (Xiong et al., 2003) It is known as Leprosy destroyer (http://www.herbsguide.net). Seeds are given in scorpion-sting and snake bite. (Panda 2000: Nadkarni,1976). Seeds are useful in bilious disorders. (Kapoor and Boca, 2001). Seed and extract powder are used as diuretic, anthelminthic, laxative, and for healing wounds. Seeds are used as stomachic, stimulant, aphrodisiac, (Mukherjee, 2002). In scabies and ringworm infestations, the bakuchi seed powder is mixed with buttermilk and applied externally. In leprosy, the seed oil is recommended orally (Sun et al., 1998). The seeds act as de-obstruent and heal ulcer, heart troubles and cure blood disorders and elephantitis (Khatune et al., 2002). Seeds are sweet, bitter, acrid, and
astringent. They impart vigor and vitality, improve digestive power and receptive power of mind. (Joshi, 2000). Seeds are antipyretic and alexiteric. (Agharkar, 1991). Seeds are used for the treatment of various kinds of disorders such as asthma, cough, nephritis, and calvities (Peng et al., 2006). In Leucoderma the seed powder is mixed with Haratala Bhasma (Yellow arsenic) in 4:1 proportion and mashed with the cow's urine. This paste is applied on the lesions of leucoderma (Jeyakumar and Jayabalan, 2000). The seeds are as laxative, diuretic, and diaphoretic (Drury, 1873)

5. *Ludwigia perennis* L.

Fruits are boiled and half cup of decoction is given for 2-4 days to cure leucorrhoea. It also regulates menstruation. Fresh plant is used against snake bite (Ahirrao et al., 2010). The whole plant except root is recommended as an antibacterial and diuretic in case of fever, cystitis, hemorrhagic, dysentery (Rothe, 2011). The plant is boiled in oil and applied externally to reduce fever (Datta, and Banerjee, 1979).


The patients suffering from respiratory troubles, particularly asthma, are advised to inhale the fumes obtained by burning the leaves and roots of *E. echinatus* in order to get quick and permanent relief (Oudhia, 2003). Plant has been reported as anti-inflammatory (Singh et al., 1989) hypoglycemic and diuretic (Abraham et al., 1986) antibacterial and antifungal (Sharma et al., 1989) and Antispasmodic (Bhakuni et al., 1969). Roots are carminative and diuretic which are used in cough.
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Powdered roots are mixed with *Acacia* and applied to the hair to destroy lice (Afzal *et al*., 2009). The root is used as abortifacient and aphrodisiac (Kirtikar & Basu, 1976). Infusion of the root is given in seminal debility, impotence, hysteria, and its decoction is given in dyspepsia, scrofula, syphilis and fever (Nadkarni, 1976). Root bark powder is used in poor sexual vitality in males. An aqueous paste of the root is applied to the lower abdominal region to hasten the process of delivery. It is also advised to take paste internally for to quick and safe delivery (Kakarni *et al*., 2005).


The extracted juice if taken internally and applied to the scalp it blackens the hair (Chopra *et al*., 1955; Kritikar and Basu, 1975). Leaves juice is used against baldness and as hair tonic, ulcer, medicin, and in scorpion sting (Bhuktar, 2000). It is used as a tonic and diuretic in hepatic and spleen enlargement. It is also used in catarrhal jaundice for skin diseases (Dalal *et al*., 2009). The alcoholic extract of the plant show antiviral activity against Ranikhet disease virus (Khare, 2004). The plant is commonly used in hair oil all over India for healthy black and long hair (Roy *et al*., 2008). The fresh juice of leaves is used for increasing appetite, improving digestion and as a mild bowel regulator (Cheryl, 2007). It is commonly used in viral hepatitis to promote bile flow and protect the parenchyma (Thakur and Mengi, 2005), and popularly used to enhance memory and learning (Jadhav, 2009). The plant has a reputation as an ant ageing agent in Ayurveda (Thakur and Mengi, 2005). It is used as a general tonic for debility. Externally it is
used for inflammation (Singh *et al*, 2005), minor cuts and burns and the
fresh leaf juice is considered very effective in stopping bleeding (Khan
and Khan, 2008). Leaf juice mixed with honey is also used for children
with upper respiratory infections and also used in eye and ear infections.

8. *Glossocardia bosvallea* (L.f.) DC.

Spoon full extract of this plant is given with cow milk twice a
day to cure typhoid (Birasdar and Ghorband, 2010). A paste of the fresh
plant is applied to promote healing of sores and wounds. Root stock
decocction with tea is used for alcohol addicts (Patil and Patil, 2006).
Few drops of leaf decoction are dropped into the ears for earaches
(Fawar and Patil, 2001). The leaf powder is used in ‘kutana’ disease,
two times for one week, when animal becomes lame, (Sikarwar and
Kumar, 2005).

9. *Tridax procumbence* (L.) L.

The leaves of the plant are known to be used for the treatment of
wound in traditional medicine. The young leaves are squeezed and
rubbed on the affected parts two or three times per day. It is used as
an antidote to arrow poison by applying the powdered leaves to the
wound (Collier 2001; Copper *et al*., 2003). It has been found to possess
significant medicinal properties against blood pressure, bronchial catarrh,
malaria, dysentery, diarrhea, stomach ache, headache, wound healing,
hair fall and hemorrhage from cuts and bruises. (Ali *et al*., 2001). Its
flowers and leaves possess antiseptic, insecticidal and parasiticidal
properties (Sahoo *et al*., 1998; Pathak *et al*., 1991). Flowers are
extensively used in ayurvedic system of medicine for various ailments and is dispensed for “Bhringraj”. It is well known medicine for liver disorders (Bhagwat et al., 2008). It is used as an ornamental or fodder plant, and its leaves are cooked as vegetables (Prajapati et al., 2008; Acharya and Srivastava, 2010).

10. Mimusops elengi L.

Seeds of *M. elengi* are astringent to bowels, and bruised seed kernels are applied locally within the anus of children in case of constipation (Kirtikar and Basu, 2001). Hot water extract of dried seeds is used to fix loose teeth (Singh et al., 1980). The unripe fruit is used as a masticatory and helps to fix loose teeth. The flowers are used for preparing a lotion of wounds and ulcers (Nadkarni, 1976; Mitra, 1981). The fruits are believed to be effective in preventing chronic dysentery and constipations. The aqueous concoctions of the fruits are believed to promote delivery during child birth. It prevents premature ejaculations. The ripe fruit is supposed to be a general tonic and are used to decrease the vitiated pitta dosha (Nadkarni, 1976; Mitra, 1981). Bark is used as an astringent and applied externally too. Bark extract is also given orally to cure diseases of gums and teeth, biliousness as an anthelmintic, stomachic and cardiotonic (Singh et al., 1980). Bark extracts is used as a gargle for odontopathy (Chunekar et al., 2002). It is valuable aid in dental ailments like bleeding gums, pyorrhoea, dental caries and loose teeth. In such conditions, the tender stems are used as tooth brushes or the powder of bark is used for cleansing the teeth. Bark works well as an antidiuretic (Koti and Ashok, 2010; Katedeshmukh et
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*al., 2010* in polyuria and antihyperglycemic in diabetes (Jerline, 2009; Ganu *et al.* 2010). It shows several medicinal properties such as astringent, tonic and febrifuge etc. (Nadkarni, 1996; Sharma *et al.*, 2000). Preclinical studies have shown that the bark possess Anti-anxiety, Antihyperlipidemic, Antiulcer, Anticonvulsant, Anti-inflammatory, analgesic, antipyretic, antioxidant, cytotoxic, diuretic and hypotensive activities. (Manjeshwar *et al.*, 2011)

**11. Rauvolfia tetraphyla L.**

The roots are useful in the treatment of hypertension, cardiovascular diseases and as a tranquilizing agent. The extract of the root is valuable for intestinal problems. Roots are believed to stimulate uterine contraction in case of difficult delivery (Ramchandra and Kashyapa *et al.*, 1986). Six ml decoction of root bark is given once daily for 7 days for regulating blood pressure (Babu *et al.*, 2010). It is used for treatment of cholera, eye disease and fever. It is also used as antihypertensive, as well as diarrhea and dysentery (Anonymous, 1969). Paste of the whole plant is mixed with castor oil and applied topically to treat skin diseases. (Muthu *et al.*, 2006). Roots are sedative, tonic and febrifuge, madness, painful affections of the bowels, hypochondria and irritative conditions of the central nervous system. Roots have been employed for centuries for relief of various nervous disorders like anxiety, excitements, schizophrenia, insanity, insomnia and epilepsy. Root paste along with orange peel is used against fever by the tribal in Madhupur. They also use root or leaf juice against piles and as a remedy for sterility in women (Yusuf *et al.*, 2009).
12. Hemidesmus indicus (L.) R.Br.

Roots are used as blood purifier, inflammation, diarrhoea, respiratory disorders, skin diseases, syphilis, fever, bronchitis, asthma, eye diseases, epileptic fits in children, kidney and urinary disorders, loss of appetite, burning sensation and rheumatism (Vaidya et al., 1991: Nadkarni, 1989). It has also been used in combination with other drugs for snake bite (Kirtikar & Basu, 198: Mors 1991). The plant is employed in traditional medicine for gastric ailments. (Jain and Singh 1994).

13. Naorrhium ramosissimum (Wall.) Betaxhe

Plant shows therapeutic properties like, Bleeding disorders, pugative, diuretic, bitter (Bambhadai, 1951). Root are used in case of snake and scorpion bite (Bole and Pathak : Thakar, 1926). The whole plant is dried under shade and is ground to make powder. Plant powder is prescribed for treatment of diabetes (Ahmad et al., 2009).

14. Verbascum Chinese (L.) Santapau

Infusion of leaves is used internally in the treatment of gout. Local application of lukewarm leaf poultice reduces swelling of joints. (Mali et al., 2011). In case of root Goiter in human and cattle Juice from crushed roots are given to human or cattle (Mohammed et al., 2010). It checks bile disorders and causes vomiting, keeps brain happy and calm. It cures diseases due to vatta and blood disorders. It also useful for the patient of diabetes (http://www.jkhealthworld.com). For the treatment of piles powder of leaves and seeds is given in cupful of water twice a day till it gets cured. (Kamble et al., 2010).

The leaves are used as anti-oxidant, antiallergic, anti-inflammatory, anti cancer, antiestrogenic and for anxiolytic activities (Shin *et al*., 1999). Leaves are used in Lucorhea, body aches, abortions, piles etc. (Bhuktar, 2008). About 5 gm leaf powder consumed at morning, is effective for diabetes (Patil and Ahirrao 2011). The patients suffering from piles are cured by oral administration of 100 ml leaf juice with 100 ml curd twice a day for a week (Korpenwar and Borkar, 2011). The fruits have also medicinal value and the bark is used as a fish poison. It is used as abortifacient. It is also used in the treatment of Jaundice, boils, skin eruption and fever. (Mungle *et al*., 2012).

16. *Hygrophila auriculata* (Schumach.) Heine

The plant is used in cancer and tubercular fistula (Yusuf *et al*., 2009). Root and seeds used as tonic, for asthma and dysentery (Bhuktar, 2000) Decoction of the root is used as a diuretic in dropsy. The root is considered cooling, bitter, tonic and diuretic, and is used in rheumatism, urinary affections, and anasarca. The ash of the plant is used as diuretic in dropsy. ([http://chestofbooks.com](http://chestofbooks.com)). The roots possess anti-diabetic activity. Roots are sweet, sour, bitter, refrigerant, antiinflammatory, analgesic, haemopoictic, hepatoprotective and tonic. It is useful in inflammations, hyperdipsia, strangury, jaundice and vesical calculi. It is also used in flatulence and dysentery. A paste of the seeds mixed with buttermilk or honey, is given for diarrhoea. ([http://www.motherherbs.com](http://www.motherherbs.com)). The leaf, root and seed of this plant are traditionally used for the treatment of inflammation, jaundice,
hepatic obstruction, urinary infection, oedema, gout, diabetes, bacterial infection etc. (Chopra et al., 1986; Nadkarni, 1978; Anonymous, 1986.).

Leaves are used in jaundice, rheumatism and diseases of urinogenital tract. Seeds are rejuvenating, nervine tonic and useful in gonorrhea and renal disorders (Warrier et al., 1995).

17. Phyla nodiflora (L.) Greene

The aerial parts are used as anodyne, antibacterial, diuretic, emmenogogue, parasiticide, refrigerant, febrifuge and cooling (Agrawal, 1997), the plant is acrid, hot and diuretic, maturant, useful in fevers and cold, astringent to bowels, stomachic, used in lack of bowel movements, pain in knee joints and in lithiasis (Kirtikar and Basu, 1935: Nadkarni, 1954: Anonymous, 1962). It shows antispasmodic property (Bhakuni et al., 1969). It is Hair afflictions (Panniachamy et al., 1989), anti inflammatory, analgesic, antipyretic (Forestieri et al., 1996), antiinflammatory, antineoplastic (Ahmed et al., 2004) antioxidant (Durairaj et al., 2008). Infusion of leaves and tender stalks are used in indigestion in children and also after delivery in women. It is also used in lithiasis. (Akhtar, 1993). Chutney made from the leaves and fruits are eaten to relieve the irritation of internal piles (Yusuf et al. 2009).

18. Lavandula bipinnata (Roth.) kuntze.

In literature review it was found that the plant is useful in stings or bites of poisonous animals and it act as an antidote against poison. The roots are rubbed with water and the solution or the paste is applied over the sting of wild animals, the powdered leaves are given for inhalation to the person who has been stung by a serpent in order
to prevent him from falling into sleep (Kanga, 1914). Used as a Shankhpushpi substitute for *Convolvulus pluricaules* Choisy (Khare, 2007). Root paste is applied daily on boils (Kamble *et al.*, 2010). In combination with other herbs, it is used internally in treatment of rheumatism. Leaf paste is applied on decayed tooth to reduce pain (Khyade *et al.*, 2010). Paste of roots are used externally for stings and bites of poisonous animals. In combination with other herbs, it is used internally in rheumatism (Oudhiana, 2005).

**19. Leucas cephalotes** (Roth.) Spreng.

Flowers are used as anti-inflammatory, edema, and obstinate urinary troubles including diabetes for diseases due to the aggravator of pitta in the Ayurved. It is useful in the treatment of cough, cold, and gastric complaints for warm and dry in second order in the Unic system of medicine. (Usmanghani *et al.*, 1997). The plant is useful in bronchitis, inflammation, asthma, dyspepsia, paralysis and leucoma. The leaves are useful in fever and urinary discharge (Kirtikar & Basu, 2005). According to Ayurveda, the plant is mild stimulant, diaphoretic and used in fever and also used in liver disorder. Flowers mixed in honey are used as domestic remedy of cough and colds (Caius, 1986). It is valuable homoeopathic drug and as such is used for the treatment of chronic malaria and asthma (Ghosh, 1988). Dry leaves along with tobacco (1:3) are smoked to treat bleeding as well as itching piles (Khare, 2007). The plant shows antifilarial (Qamaruddin *et al.*, 2005) and antidiabetic activity (Mishra, 2002). The plant contain triterpenes, oleanolic acid, sterols and flavones (Miyaichi *et al.*, 2006).
20. **Cruculigo orchioides** Gaerth.

Rhizome paste with goat’s milk or honey applied locally over the face, brightens the complexion of the face (Soni *et al.*, 2012). The drug is given with warm milk and sugar in disease of gonorrhea, dysuria, menorrhagia, leucorrhoea and menstrual derangements (Raghunathan & Mitra, 2001; Nadkarni, 2002). Rhizomes are prescribed in treatment of piles, jaundice, asthma, diarrhoea, and gonorrhoea. The plant is demulcent, diuretic, tonic and aphrodisiac (Chauhan *et al.*, 2010; Chopra *et al.*, 1956). A decoction of the pounded rhizome along with the crushed ajwain (fruits of *Trachyspermum ammi*) is reportedly given to children in order to gain consciousness. Rhizomes have been claimed for the antidiabetic properties in various studies (Parrotta, 2001).

21. **Drimia indica** (Roxb.) Jessop.

Daily eating of tuberous root for one week relieves jaundice and burning micturition (Neelima *et al.*, 2011). On snake bite Half of the bulb is ground with 10 black pepper fruits in 50 g of pure ghee and is given orally 3 times a day (Chandra *et al.*, 2010). Paste of the bulb powder is applied to remove warts (Nadkarni, 1976). For Pyrexia and as an anti nematode the bulb paste is used (Choudary *et al.*, 2008). Boiled paste of tuber is used for boils and tumours (Singh and Pandey, 1988). Bulb paste is applied externally for joint pains (Prusti and Behera, 2008). Poultice of crushed tuber is tied to cure abscesses (Anitha *et al.*, 2008). The leaf paste of *Achyranthus aspera* and bulb paste are used against scorpion sting (Kala, 2009). It is used as antitoxic
Juice of bulb is given to cure asthma and fever (Jadeja et al., 2006). Tuberous root crushed on stone is applied over boils for 2-3 days at night (Patil and Bhavsar, 2006). Bulb paste is applied on scorpion sting (Nath and Katri, 2010). Bufadienolides isolated from *Drimia indica* are cardioactive steroids that have digoxin like effects (Manning, 2004). To cure ulcers, bulb paste along with oil of Mahua (*Madhuca longifolia*) is used on affected part of the body (Tiwar and Yadav, 2003).

22. *Ledebouria revoluta* (L. f.) Jessop.

The paste of bulb is applied on headache (Day and De, 2010). The bulb is used as anthelmentic, cardiac stimulant, digestive, diuretic, emmenagogue and expectorant. It is also used in asthma, cough and bronchitis, paralytic attacks, ailments of the heart, calculous affections, rheumatism and skin diseases (Rao and Ragaswami, 1967). Leaf of this plant, leaf of *Lawsonia inermis*, bulbs of *Aloe vera*, *Scilla indica*, fruit juice of *Citrus limon* and rhizome of *Curcuma longa* are ground into a paste and applied topically on affected places to treat felon or the wound on nail (Ayyanar et al., 2009). Daily intake of tuber for one week relieves giddiness and chest pain (Neelima et al., 2011), bulb paste is applied externally for inflammatory swelling (kuru et al., 2011). Its pharmacological action is similar to digitalis, i.e. it has negative inotropic response and gives strength to the heart by reducing the rate of heart beat. Clinically, it has been observed that its response time is less than digitalis, because of its quick elimination from the body. It shows antioxidant property in low dose while at higher dose it is toxic.
(Yamini et al., 2001) *Scilla indica* and *Euphorbia hirta* are used to cure corn in foot (Usha, 2012).
**PLATE - 1**

*Helicteres isora* L.

- **flowering twig**
- **fruit**

*Tribulus terrestris* L.

- **flowering plant**
- **fruit**
Oxalis corniculata L.

flower

Cullen corylifolium (L.) Medik

seeds
PLATE - 3

*Ludwigia perennis* L.

*Echinops echinatus* Roxb.
Eclipta prostrata (L.) L.

Glossocardia bosvallea (L.f.) DC.
Rauvolfia tetraphylla L.

Hemidesmus indicus (L.) R.Br.
PLATE - 7

_Nanorrhinum ramosissimum_ (Wall.) Betsche.

_Verbascum chinese_ (L.) Santapau.
Dolichandrone falcata (Wall.ex DC.) Seem.

Hygrophiæ aericulata (Schumach) Heine
Phyla nodiflora (L.) Greene

flower

Lavandula bipinnata (Roth) Kuntze.
Leucas cephalotes (Roth.) Spreng.

Curculigo orchioides Gaerth.

Rhizome
Drimia indica (Roxb.) Jessop.

Ledebouria revoluta (L.) Jessop.