

# ENUMERATION OF PLANTS

## 1. RANUNCULACEAE

1. Climber with twining petioles; petals  
absent, sepals petaloid, flowers  
not spurred ..... 1. Clematis
1. Erect herb with sheathing petioles;  
petals present, sepals not petaloid;  
flowers spurred ..... 2. Delphinium

### 1. Clematis Roxb.

Clematis gouriana Roxb. ex DC. Syst. 1: 138, 1818; Wt. Icon.  
t. 933-4; FBI. 1: 5; C. 1: 2; Sant. 1.

Flowers creamy-white. Etaerio of achenes, each with  
long feathery, persistent style.

Cultivated in the botanical garden of P.T. Sarvajani  
College of Science.

Local name : Morvel.

Flowers and fruits : August - January.

JVJ 1613.

### 2. Delphinium Linn.

Delphinium ajacis Linn., Sp. Pl. 531, 1753; Bailey, Man. Cult.  
Pl. 398, 1960 & Std. Cycl. Hort. 1: 975, t. 1231, 1961.

Flowers blue, rosy or purple; sepals 4, upper one spurred; petals 5, upper pair appendaged.

Grown in gardens as a seasonal ornamental plant.

Flowers and fruits : January - March.

JVJ 636.

## 2. MAGNOLIACEAE

### Michelia Linn.

Michelia champaca Linn., Sp. Pl. 536, 1753; FBI. 1: 42; C. 1:8;

Benthall, Trees Calc. 5; Sant. 2; M. 51.

An evergreen lofty tree. Leaves ovate-lanceolate.

Flowers orange-yellow, fragrant. Follicles with scarlet seeds.

Planted in the botanical garden of P. T. Sarvajani  
College of Science.

Local name : Pilo-champo.

Flowers and fruits : March - May.

JVJ 1717.

## 3. ANNONACEAE

(Key to flowering specimens)

1. Flowers with hooked peduncles ..... 2. Artabotrys

1. Flowers without hooked peduncles :

- 2. Tepals in 2 series; flower solitary ... 1. Annona
- 2. Tepals in 3 series; flowers in  
fascicles or umbels ..... 3. Polyalthia

(Key to fruiting specimens)

- 1. Fruit a cluster of druplets or berries :
  - 2. Fruit aggregate of 2-seeded berries;  
fruitlets sessile ..... 2. Artabotrys
  - 2. Fruit aggregate of 1-seeded druplets;  
fruitlets stalked ..... 3. Polyalthia
- 1. Fruit compact, fleshy, formed by the fusion  
of carpels and receptacle ..... 1. Annona

1. Annona Linn.

- 1. Fruit with well-marked areoles ..... 2. A. squamosa
- 1. Fruit with lightly-marked areoles ..... 1. A. reticulata
- 1. Annona reticulata Linn., Sp. Pl. 537, 1753; FBI. 1: 76;  
C. 1: 15; Gam. 1: 14; Saur. 1: 2.

A shrub or small tree. Leaves larger than A. squamosa L.; oblong-lanceolate. Flowers greenish yellow.

Occasionally cultivated in gardens at Surat, Ved, Dumas and Udhana, not seen in wild state.

Local name : Ramphal.

Uses : Fruits are edible.

Flowers and fruits : September - December.

JVJ 1068, 1289.

2. Annona squamosa Linn., Sp. Pl. 537, 1753; FBI. 1: 78;

C. 1: 15; Gam. 1: 14; Saur. 1: 2; M. 51.

A shrub or small tree. Flowers greenish-yellow.

Mostly wild along roadside hedges; occasionally cultivated for its delicious edible fruits.

Local name : Sitaphal.

Uses : Fruits are edible.

Flowers and fruits : May - December.

JVJ 99.

2. Artabotrys R. Br.

Artabotrys hexapetalus (Linn. f.) Bhandari, in Baileya 12 :  
147, 1964.

Annona hexapetala Linn. f. Suppl. 270, 1781.

A. uncinata Lamk., Encycl. 2: 127, 1790.

Artabotrys odoratissimus R. Br., in Bot. Reg. 5: t. 423,  
1820; FBI. 1: 54; C. 1: 10; Bailey, 420.

A. uncinatus (Lamk.) Merr., in Philipp. Journ. Sc. Bot. 7:

234, 1912 & Trans. Amer. Phil. Soc. 24: 162, 1935;  
Blatter, in JBNHS. 34: 291, 1930.

A large scandent shrub. Leaves oblong-lanceolate. Flowers greenish-yellow, sweet scented.

Planted in gardens for its fragrant flowers.

Local name : Lilo champo.

Flowers and fruits : October - January.

JVJ 1413.

### 3. Polyalthia Blume

Polyalthia longifolia (Sonner) Thw., Enum. 398, 1864; FBI. 1:

62; C. 1: 12; Benthall Trees Calc. 9; Saur. 1: 3;

Santapau & Wagh, in Bull. Bot. Surv. India 5: 108.

Uvaria longifolia Sonner, Voy. Ind. 2: 233, t. 131, 1782.

Gutteria longifolia Wall., Cat. 6442 (nom. nud.) Ex Wt. et.

Am. Prodr. 10, 1834.

A tall, handsome, evergreen tree. Leaves lanceolate, glabrous, undulate. Flowers yellowish-green. Fruit an etaerio of 1-seeded berries.

Planted as an ornamental tree in avenues, gardens and at the front of houses.

Local name : Asopalav.

Flowers and fruits : March - May.

JVJ 1069.

## 4. MENISPERMACEAE

## (Key to male specimens)

1. Sepals 4, petals 4; anthers sessile,  
connate in a ring ..... 1. Cissampelos
1. Sepals 6, petals 6; stamens free :
  2. Petals embracing the stamens,  
plants leafy, at the time of flowering..2. Cocculus
  2. Petals not embracing the stamens;  
plants leafless, when the flowers  
appear .....3. Tinospora

## (Key to female specimens)

1. Carpel solitary .....1. Cissampelos
1. Carpels 3 :
  2. Style-scar basal .....2. Cocculus
  2. Style-scar terminal .....3. Tinospora

1. Cissampelos Linn.

Cissampelos pareira Linn., Sp. Pl. 1031, 1753; FBI. 1: 103;

C. 1: 24; Blatter, in JBNHS. 31: 555; Saur. 1: 5;

M. 52.

A twining perennial shrub, softly pubescent. Leaves sub-orbicular to peltate. Male flowers in axillary branched cymes; females in the axils of conspicuous bracts.

Occasional in hedges.

Local name : Venivel.

Flowers and fruits : August - October.

JVJ 381, 465.

2. Cocculus DC. (nom. cons.)

Cocculus hirsutus (L.) Diels, in Pflanzenr. 46: 236, 1910;

Blatter, in JBNHS. 31: 552; Saur. 1: 5; Sant. 4; M. 52.

Menispermum hirsutum Linn., Sp. Pl. 341, 1753.

Cocculus villosus DC. Syst. 1: 525, 1818; FBI. 1: 101;

C. 1: 22; Gam. 1: 21.

A herbaceous, scandent twiner, villous. Flowers minute, green; male in short axillary panicles; female in axillary clusters. Drupes dark-purple.

Common on the hedges throughout the area.

Local name : Vasan-vel or Vevadi.

Flowers and fruits : November - March.

JVJ 535, 618.

3. Tinospora Miers.

Tinospora cordifolia (Willd.) Miers, in Ann. & Mag. Nat. Hist.  
Nat. Ser. 2, 7: 38, 1851; FBI. 1: 97; C. 1: 20; Gam. 1:  
18; Saur. 1: 6; Sant. 3: M. 53.

Menispermum cordifolium Willd., Sp. Pl. 4: 826, 1806.

Cocculus cordifolius DC. Syst. 1: 518, 1818 & Prodr. 1: 97;  
Gr. 4; Wt. Icon. tt. 485, 486.

A climbing shrub. Leaves deciduous when flowering.  
Flowers small, yellowish-green; male in fascicles; female  
usually solitary.

Occasionally seen in the hedges near Rander, Dumas and  
Katargam.

Local name : Galo.

Uses : A decoction of the stem is well-known tonic (Galo  
satva) which is used in Ayurvedic medicine.

Flowers and Fruits : August - December.

JVJ 100, 917, 1414.

## 5. NYMPHAEACEAE

Nymphaea Linn. (nom. cons.)

1. Leaves glabrous on both the sides; stigmatic  
rays without appendages ..... 1. N. nouchali



1. Leaves densely pubescent on lower side;  
stigmatic rays with clavate appendages ...2. N. pubescens

1. Nymphaea nouchali Burm. f. Fl. Ind. 120, 1768; P. Van  
Royan, in Nova Guinea 8, 1967; Sant. 5.

N. stellata Willd., Sp. Pl. 2: 1153, 1799; FBI. 1: 114;  
Wt. Icon. t. 178; C. 1: 27; Gam. 1: 24; Saur. 1: 8;  
M. 54.

An aquatic herb with floating leaves. Flowers variable  
in colours (white, blue, pink or rose), sweet scented.

Occasionally seen in ditches and puddles along the  
roadsides and canals, wild as well as cultivated.

Local name : Poyana.

Flowers and Fruits : August - April.

JVJ 835. Plate 36.

2. Nymphaea pubescens Willd., Sp. Pl. 2: 1154, 1799; Gam. 1:  
24; P. Van Royan loc. cit. 8, 1967; Fl. Raj. 18.

N. nouchali auct. (non Burm. f.); Subramanyam, in  
Aquat. Angios. 6; Saur. 1: 8.

N. lotus var. pubescens Hk. f. and Thoms. Fl. Ind. 241,  
1855; FBI. 1: 114; C. 1: 27.

An aquatic floating herb. Leaf blade sharply dentate,  
glabrous above, velvety pubescent beneath. Flowers red, white



or pink, mildly scented.

Found in tanks, ditches along the canals and roadsides, also cultivated.

Local name : Poyana.

Flowers and fruits : August - March.

JVJ 836.

#### 6. NELUMBONACEAE

##### Nelumbo Adanson

Nelumbo nucifera Gaertn. Fruct. 1: 73, t. 19, f. 2, 1788;

Sant. 6; Saur. 1: 7; Subramanyam, loc. cit. 8, f. 4, 1962; M. 54.

Nymphaea nelumbo Linn., Sp. Pl. 511, 1753.

Nelumbium speciosum Willd., Sp. Pl. 2: 1258, 1799; FBI. 1: 116; C. 1: 28; Gam. 1: 24.

A large aquatic herb with creeping rhizome. Leaves peltate, entire, raised above the water on long, fleshy, warty, petioles. Flowers large, rosy-white or pink, fragrant. Fruits aggregate of single-seeded nutlets, sunk in expanded thalamus.

Occasionally cultivated in the tanks at Dumas, Bhimpor, Hajira, Katargam for its beautiful flowers and edible-fruits.

Local name : Kamal.

Flowers and fruits : October - April.

JVJ 832. Plate 18 A.

## 7. PAPAVERACEAE

- Wild; prickly ..... 1. Argemone
- Cultigen; not prickly ..... 2. Eschscholzia

1. Argemone Linn.

Argemone mexicana Linn., Sp. Pl. 508, 1753; FBI. 1: 117;

C. 1: 29; Gam. 1: 25; Saur. 1: 10; Sant. 6; M. 55.

An erect, prickly, robust herb with yellow juice. Leaves pinnatifid-sinuate, ash-green, prickly. Flowers yellow. Capsule dark-glaucous green, brown to black on drying. Seeds many, minute, black.

Fairly common on the middle-belt of river bank, along the roadsides, in waste places near habitation and in fallow fields.

Local name : Darudi.

Flowers and fruits : September - May.

JVJ 627, 701, 2092.

2. Eschscholzia Cham.

Eschscholzia californica Cham., in Nees, Hor. Phys. Berol.

74, 1820; Bailey, 426.

An erect or sub-erect annual herb with light-yellow

flowers. Cultivated in the gardens of B.R.C. (Udhana) during winter season as an seasonal ornamental.

Flowers and fruits : December - February.

JVJ 2071.

## 8. BRASSICACEAE (CRUCIFERAE)

1. Leaves radical, roots white, fleshy, fusiform..4. Raphanus

1. Leaves cauline and radical; roots not as above :

2. Pods flattened, 2-seeded .....3. Lepidium

2. Pods not flattened, many-seeded :

3. Flowers yellow, seeds 1-seriate .....1. Brassica

3. Flowers lilac or pale yellow with purple  
veins, seeds 2-seriate .....2. Eruca

1. Brassica Linn.

1. Stems elongated, flowers yellow :

2. Pods terete, pedicels and pods spreading .....1. B. juncea

2. Pods angular, pedicels and pods appressed  
to the axis .....2. B. nigra

1. Stems short :

- 3 Leaves fleshy, packed into a globular structure ..... 3 b. B. oleracea  
var. capitata
- 3 Leaves not packed into a globular structure but flowers aggregated to form a head ..... 3 a. B. oleracea  
var. botrytis

1. Brassica juncea (L.) Czern. & Coss., in Czern. Consp. Pl. Chark. 8. n. 5, 1859 et Coss. in Bull. Soc. Bot. France 6 : 609, 1859; FBI. 1: 157; C. 1: 37; Saur. 1: 12; M. 61.  
Sinapis juncea Linn., Sp. Pl. 668, 1753 (excl. Syn. Herm.).

A tall erect herb. Leaves variable. Flowers yellow. Pods narrow, torulose with a conical beak.

Occasionally cultivated during winter months with wheat or vegetable crops.

Local name : Rati rai or Zinni rai.

Uses : The seeds are used in cookery.

Flowers and fruits : September - April.

JVJ 1078, 1278.

2. Brassica nigra Koch, in Roehl. Deutsch. Fl. 4: 713, 1833;  
FBI. 1: 156; C. 1: 37; Saur. 1: 11; M. 62.

An erect annual. Pods somewhat angular. Seeds black, somewhat larger than previous taxon.

Cultivated throughout the area during the winter months.

Local name : Kali rai.      English name : Black mustard.

Uses : Seeds are used in cookery.

JVJ 1081, 1227.

3 a. Brassica oleracea L. var. botrytis Linn., Sp. Pl. 667,  
1753; Bailey, 436; Saur. 1: 12; M. 60.

The edible portion is formed by the peduncles which are condensed and thickened into fleshy mass which bears abortive flowers at the top.

Cultivated during winter months at Ved, Katargam and Nana-Varachha.

Local name : Fulevar.      English name : Cauliflower.

Uses : Eaten as vegetable.

Flowers : October - February.

JVJ 1101, 1648.

3 b. Brassica oleracea L. var. capitata Linn., Sp. Pl. 667,  
1753; Blatter, in JBNHS. 34: 297, 1930; Saur. 1:  
12; M. 60.

Leaves fleshy, crowded into a large bud on short thick stem.

Cultivated at Ved, Katargam, Nana-Varachha and Dunbhalav

Local name : Kobi.      English name : Cabbage.

Uses : Eaten as vegetable.

JVJ 1525

Brassica oleracea L. var. gongloides Linn. (Knol-Khol) sold in market during winter months but not seen in cultivation.

## 2. Eruca Adans.

Eruca vesicaria (L.) Cav. Subsp. sativa (Mill.) Thell. in Hegi. Ill. Fl. Mitteleur 4(1): 201, 1918.

E. sativa Mill. Gard. Dict. n. 1, 1768; FBI. 1: 158; C. 1: 33; M. 62.

Brassica vesicaria Linn., Sp. Pl. 668, 1753.

An erect annual. Leaves variable. Flowers pale-yellow to whitish-yellow with purple veins. Petals clawed. Pods appressed against the stem.

Rare, a winter weed of the irrigated wheat fields.

Local name : Jangali sarsav.

Flowers and fruits : December - February.

JVJ 1936.

## 3. Lepidium Linn.

Lepidium sativum Linn., Sp. Pl. 644, 1753; FBI. 1: 159; C. 1:

37; Bailey, 441; Wealth of India 6: 70; Saur. 1: 13; M. 62.

An erect, branched, glabrous herb. Leaves radicle and cauline. Flowers pinkish-white. Pods oblong-orbicular, deeply notched, 2-seeded.



Not common. A winter weed of the irrigated fields.

Local name : Alsi.

Flowers and fruits : September - February.

JVJ 283, 1224.

#### 4. Raphanus Linn.

1. Roots fusiform, fleshy .....2. R. sativus

1. Roots not as above .....1. R. caudatus

1. Raphanus caudatus Linn., Mant. 1: 95, 1766; C. 1: 37.

A simple-rooted herb. Leaves cauline, variable. Flowers purplish-white. Siliqua very long, deep purple in colour.

Occasionally cultivated during winter months at Katargam, Ved and Aswanikumar.

Local name : Mogari. English name : Rat-tail radish.

Uses : Fruits are eaten as vegetable.

Flowers and fruits : September - February.

JVJ 1109, 1516.

2. Raphanus sativus Linn., Sp. Pl. 669, 1753; FBI. 1: 166; C. 1: 37; Bailey, 439; M. 57.

A fusiform tuberous, fleshy, tap-rooted herb. Leaves radical, lyrate. Flowers white to lilac.

Cultivated throughout the area.

Local name : Mula.                      English name : Radish.

Uses : Roots and green leaves are used as vegetable.

Flowers : January - February.

JVJ 593.

## 9. CLEOMACEAE

Cleome Linn.

1. Leaves simple ..... 2. C. simplicifolia

1. Leaves compound :

2. Plants spiny, cultigen ..... 3. C. spinosa

2. Plants not spiny, wild :

3. Flowers white, stamens 6 ..... 1. C. gynandra

3. Flowers yellow, stamens

more than 6 ..... 4. C. viscosa

1. Cleome gynandra Linn., Sp. Pl. 671, 1753; Iltis, in  
Brittonia, 12(4): 279-294, 1960; Jacobs, in Fl. Males.  
6(1): 100, 1960; Sant. 9.

Gynandropsis pentaphylla DC. Prodr. 1: 238, 1824; FBI. 1:  
171; C. 1: 42; Gam. 1: 29.

G. gynandra (L.) Briq. in Ann. Cons. Jard. Bot. Geneve  
17: 382, 1914; Saur. 1: 15; M. 64.

An erect, glandular-pubescent herb with repelling odour. Leaves digitately 5-foliolate. Flowers in bracteate racemes. Capsule 5-8 cm. long.

Occasionally <sup>72</sup>seed as a weed in waste places; often mixed with Urena lobata L. and Crotalaria medicaginea Lamk.

Local name : Gandhatu or Tanmani.

Flowers and fruits : August - April.

JVJ 488, 657, 962.

2. Cleome simplicifolia Hook. f. & Thoms., in FBI. 1: 69;

C. 1: 40; Saur. 1: 14.

C. monophylla Law., in Gr. 7.

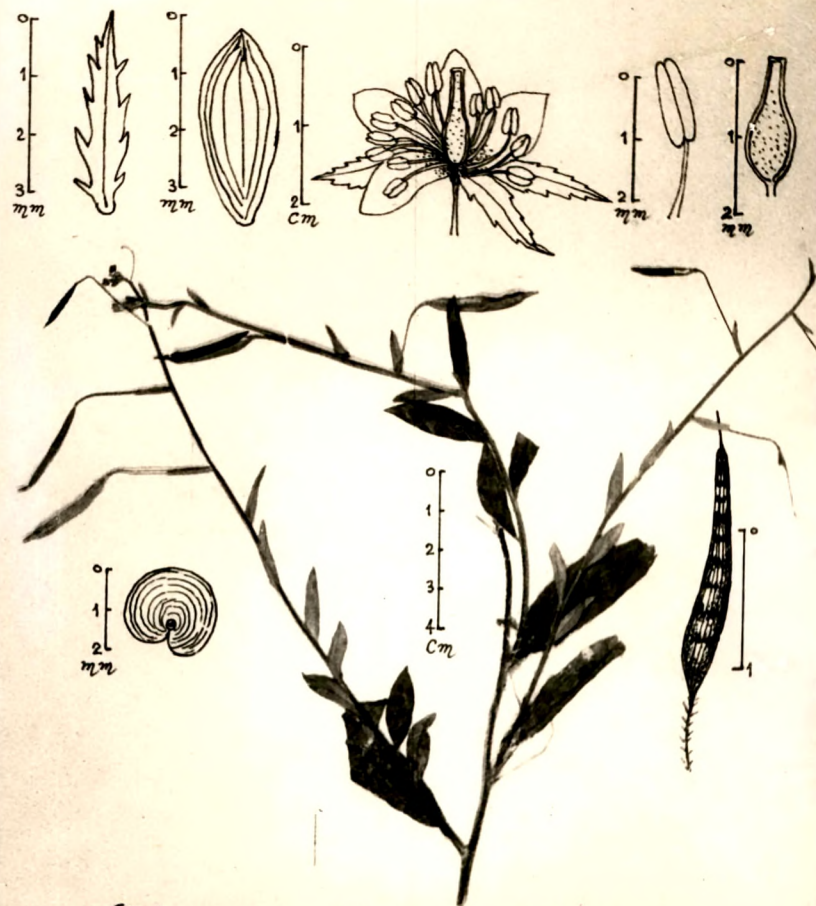
Polanisia simplicifolia Camb., in Jacq., Voy. Bot. 20, t. 20; D. & G. 8.

P. burtporensis Munro, in Wt. Icon. t. 1072.

An erect or sub-erect annual herb, clothed with rigid, spinulose, glandular hairs. Leaves obovate or oblong-elliptic. Flowers pinkish-rose; stamens were 18 and not 8-12 as mentioned in floras. Capsule 1-2 cm. long.

A rare plant; collected once near Kurukshetra (Rander) from dry crevices of river banks and hidden amongst grasses. Flowers and fruits : August - October.

JVJ 981. Plate 37.



*Cleome simplicifolia* Hook. f.

PLATE-37

3. Cleome spinosa Linn., Sp. Pl. 939, 1753; Bailey, 431-f. 82.

A beautiful garden annual with rose-purple to pinkish-white flowers. Capsules on long stipe.

A native of Tropical America or West Indies, cultivated in private garden of B. R. C. (Udhana).

English name : Spiny Spider flower.

Flowers and fruits : December - February.

JVJ 1570.

4. Cleome viscosa Linn., Sp. Pl. 672, 1753; FBI. 1: 170; Wt.

Icon. t. 2; C. 41; Gam. 1: 29; Saur. 1: 15; M. 63.

An erect, glandular, pubescent herb. Leaves 3-5-foliolate. Flowers yellow. Capsule sticky, 8-10 cm., hairy.

Common in all localities, observed in open waste places, along the boundaries of fields and on the bank of canals.

Local name : Pili Kanfutti.

Flowers and fruits : August - April.

JVJ 362, 824.

#### 10. CAPPARACEAE

1. Trees; leaves 3-foliolate ..... 3. Crataeva

1. Shrubs; leaves simple :

2. Plants armed with stipular spines..... 2. Capparis

## 2. Plants unarmed :

3. Sepals united at the base, androphore  
not as long as the sepals, fruit  
moniliform ..... 4. Maerua

3. Sepals free, androphore longer than  
the sepals, fruit cylindric ..... 1. Cadaba

1. Cadaba Forsk.

Cadaba fruticosa (L.) Druce, in Rep. Bot. Exch. Cl. Brit.

Isles 1913(3): 415, 1914; Saur. 1: 17.

Cleome fruticosa Linn., Sp. Pl. 671, 1753.

Cadaba farinosa Forsk., Fl. Aeg.-Arb. 68, 1775; FBI. 1:

173; C. 1: 46; Blatter, in JBNHS. 31: 901.

C. indica Lamk., Encycl. 1: 544, 1783; FBI. 1: 172;

C. 1: 45; Gam. 1: 31.

A straggling shrub. Leaves simple, oblong-ovate.

Flowers yellowish-white; petals clawed. Capsules 3-4 cm. long.

Seeds globose, scarlet.

Common throughout the area, always found in the hedges  
and wall of deserted buildings.

Local name : Khordo.

Flowers and fruits : September - March.

JVJ 670.

2. Capparis Linn.

1. Flowers in umbels, white ..... 1. C. sepiaria

1. Flowers in supra-axillary, pinkish-purple 2. C. zeylanica

1. Capparis sepiaria Linn., Syst. (ed. 10) 1071, 1759;

FBI. 1: 177; Gr. 9; C. 1: 48; Sant. 9; Saur. 1: 19;

M. 65.

An armed woody shrub often climbing. Leaves ovate to elliptic-lanceolate. Flowers white. Berries globose.

Common in the hedges along roadside.

Local name : Kanther.

Flowers and fruits : December - March.

JVJ 617, 1957.

2. Capparis zeylanica Linn., Sp. Pl. (ed. 2) 720, 1762;

Gam. 1: 33; Blatter, in JBNHS. 31: 903 (Sub. C. brevispina)

& 906 (non C. zeylanica Hk. f. & Thoms., in FBI. 1:

174); Jacobs, Blumea 12: 505, 1965; Sant. 9.

C. horrida Linn. f. Suppl. 264, 1781; Wt. Icon. t. 173;

FBI. 1: 178; C. 1: 47; N. 18.

A large climbing shrub, thorny tomentose. Leaves ovate-elliptic. Flowers pinkish-purple. Filaments purple. Berries globose red.

Occasional, in the hedges along the borders of fields.

Local name : Govind fal.

Flowers and fruits : October - February.

JVJ 1527, 1913.

### 3. Crataeva Linn.

Crataeva adansonii DC. ssp. odora (Buch.-Ham.) Jacobs, in  
Blumea 12(12): 177-384, 1964.

C. odora Buch.-Ham. Trans. Linn. Soc. 15, 1827.

C. religiosa var. roxburghii (R. Br.) Hook. f. & Thoms. in  
FBI. 1: 172; C. 1: 45.

C. religiosa Hook. f. & Thoms. (non Forsk. f.) in FBI. 1:  
172; C. 1: 44; Talb. 9.

C. nurvala (non Buch.-Ham.) Blatter, in JBNHS. 35: 293,  
1931; Saur. 1: 17; M. 65.

A medium-sized tree with ash-coloured bark. Leaves  
3-foliolate. Flowers whitish-pale yellow, appear after the  
deciduous leaves. Berries hard, globose.

Not common, seen along the hedges or planted near the  
habitation.

Local name : Vaivarno.

Flowers and fruits : August - January.

JVJ 904, 1528.



4. Maerua Forsk.

Maerua oblongifolia (Forsk.) A. Rich., in Guill. et Perr.

Fl. Seneg. Tent. 1: 32, t. 5, 1831; Keay, in Hutch. et  
Dalz. Fl. W. Tr. Africa, ed. 2: 89, 1974.

Capparis oblongifolia Forsk., Fl. Aeg.-Arab. 99, 1775.

Maerua arenaria (DC.) Hook. f. et Thoms., in FBI. 1: 171;  
1872; Duthie, 50; Gam. 1: 30.

M. ovalifolia Cambess. in Jacq. Voy. Bot. 22, t. 24, 1844;  
C. 1: 43.

A scandent shrub. Leaves linear-lanceolate. Flowers  
greenish-pale white. Fruits moniliform twisted and knotted  
berries.

Occasional in the hedges.

Local name : Hemkand.

Flowers and fruits : November - April.

JVJ, 656, 1911.

## 11. VIOLACEAE

Hybanthus Jacq.

Hybanthus enneaspermus (L.) F. Muell. Fragm. Phyt. Austr.

10: 81, 1876; Tennant, Kew Bull. 16: 431, 1963;  
Hassan, 165.

Viola enneasperma Linn. Sp. Pl. 937, 1753.

V. suffruticosa Linn., Sp. Pl. 937, 1753.

Ionidium enneaspermum (L.) Vent. Jard. Malm. Sub. t. 27,  
1803; D. & G. 12.

I. heterophyllum Vent. Jard. Malm. in addn. Sub. t. 27;  
1803; C. 1: 55.

I. suffruticosum Gring, in DC. Prodr. 1: 311, 1824;  
Wt. Icon. t. 308; FBI. 1: 185; Gam. 1: 35.

Hybanthus suffruticosus (L.) Baillon, Bot. Med. 2: 841, 1884.

A glabrous herb. Leaves linear-lanceolate. Flowers pink-rose coloured. Petals variable. Seeds striate.

'Rare in occurrence, found growing on old wall.

Flowers and fruits : July - September.

JVJ 817, 1311.

## 12. POLYGALACEAE

### Polygala Linn.

1. Wings acute ..... 1. P. arvensis

1. Wings obtuse ..... 2. P. erioptera

1. Polygala arvensis Willd., Sp. Pl. 3(2): 876, 1802;

D. & G. 12; Burtt. Notes-Roy. Bot. Gard. Edinburgh,  
32: 404, 1973; Hassan, 410: 1976.

P. chinensis Linn. Sp. Pl. 704, 1753; FBI. 1: 204;

C. 1: 64; Gam. 1: 42; Saur. 1: 22; M. 67.

A small, sub-erect herb. Leaves ovate-oblong or obovate. Flowers yellow. Capsule oblong, emarginate. Seeds with strophiole.

Not common in all localities, occasionally occurs on waste-moist soil near ditches or on the wet soil of fallow land, along the bank of canals.

Flowers and fruits : July - October.

JVJ 37, 429, 1571.

2. Polygala erioptera DC. Prodr. 1: 326, 1824; FBI. 1: 203;

C. 1: 63; Gam. 1: 42; Saur. 1: 22; Sant. 11; M. 68.

An erect or procumbent herb. Leaves narrow-linear. Flowers pinkish-rose, fading to white, wings petaloid. Strophiole without appendages.

A comparatively rare plant than previous taxon. Occurs on sandy-wet soil along the sea-coast at Hajira, also as a weed; often mixed with grasses.

Flowers and fruits : August - December.

JVJ 856, 1641.

### 13. CARYOPHYLLACEAE

1. Cultigen ..... 1. Dianthus

## 1. Wild plants :

2. Leaves narrow, linear, stipules scarious;  
flowers white; sepals scarious, free .... 2. Polycarpaea

2. Leaves broad-oblong, stipules absent;  
flowers pink; sepals green, united ..... 3. Vaccaria

1. Dianthus Linn.

Dianthus caryophyllus Linn., Sp. Pl. 410, 1753; Bailey, 375  
& Std. Cyclo. Hort. 999 (17th Prin.), 1958.

An erect annual herb. Leaves long-linear, 5-nerved.  
Flowers solitary, rose-purple or white, showy; petals  
fimbriate.

Cultivated in most of the private and public gardens  
as a seasonal ornamental during winter months.

English name : The Carnation.

Flowers : Cold season.

JVJ 1786.

2. Polycarpaea Lamk.

Polycarpaea corymbosa (L.) Lamk., Ill. 12: 129, 1800; FBI. 1:  
245; Wt. Icon. t. 712; C. 1: 70; Gam. 1: 46; Saur. 1: 24;  
M. 70.

Achyranthes corymbosa Linn. Sp. Pl. 205, 1753.

An erect, dichotomously, branched annual herb; stems purplish-white. Leaves fascicled at nodes, linear, stipules fimbriate. Flowers crowded in terminal and axillary cymes forming large, silvery heads; bracts and sepals chaffy, much elongated in the capsules.

Occasionally found on sandy-wet soil near Hajira, also noted as a weed.

Flowers and fruits : August - October.

JVJ 899.

### 3. Vaccaria Medik.

Vaccaria pyramidata Medik., Phil. Bot. 1: 96, 1786; Cufodontis, in Bull. Jard. Bot. Brux. Suppl. 23: 1041, 1953; Sant. 12; M. 68.

Saponaria vaccaria Linn., Sp. Pl. 409, 1753; FBI. 1: 217; C. 1: 66; Gam. 1: 44; Saur. 1: 24.

An erect, glabrous, branched herb. Flowers pink, in corymbose dichotomous cymes. Calyx gamosepalous with 5 green nerves. Capsule ovoid, included within calyx. Seeds minute, granulate, black.

Occasionally found as a weed during winter in irrigated wheat-fields at Ved, Rander and Katargam.

Flowers and fruits : October - February.

JVJ 281, 583, 1787.

## 14. PORTULACACEAE

Portulaca Linn.

1. Flowers purple-pink, more than  
2 cm. across, cultivated ..... 2. P. pilosa ssp.  
grandiflora
1. Flowers yellow, less than  
2 cm. across, wild :
  2. Nodes without hairs, flowers in  
terminal clusters ..... 1. P. oleracea
  2. Nodes with hairs, flowers  
solitary ..... 3. P. quadrifida
1. Portulaca oleracea Linn., Sp. Pl. 445, 1753; FBI. 1: 246;  
C. 1: 72; Saur. 1: 26; Sant. 13; M. 71, Pavagadh, 39.  

A prostrate, glabrous, more or less succulent herb.  
Leaves oblong-obovate, succulent. Flowers yellow.

Occasionally, a weed in cultivated places and gardens,  
also along the railway-track.

Local name : Moto luno.

Flowers and fruits : Throughout the year.

JVJ 534, 1371.
2. Portulaca pilosa Linn. ssp. grandiflora (Hook.) Geissint,  
in Blumea 17: 297, 1969.

P. grandiflora Hook., in Bot. Mag. t. 2885, 1829; Bailey, 365; Saur. 1: 26; M. 71.

A small, prostrate, succulent, glabrous herb. Leaves fascicled at nodes, linear-lanceolate. Flowers purple-pink, in terminal clusters.

Mostly cultivated in gardens as a pot herb for its attractive flowers. A native of Brazil.

Local name : Button-flowers.

Flowers and fruits : September - December.

JVJ 1130.

3. Portulaca quadrifida Linn., Mant. 1: 73, 1767; FBI. 1: 247; C. 1: 72; Saur. 1: 26; Sant. 13; M. 70.

A prostrate, filiform, branched, annual, often rooting at the nodes. Leaves ovate-lanceolate, stipular appendages with a ring of hairs. Flowers yellow, solitary, terminal.

Occasional on waste-salty soil, also as a weed.

Local name: Zini Luni.

Uses : Tender stems and fresh leaves are used as vegetable.

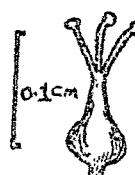
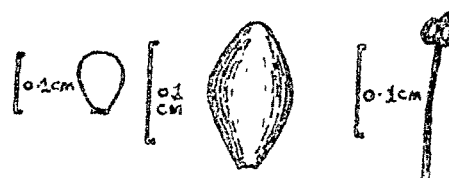
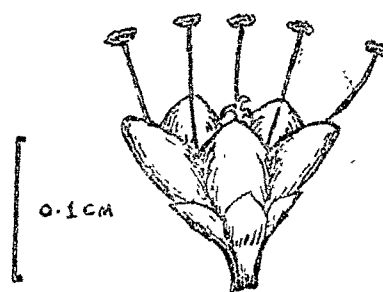
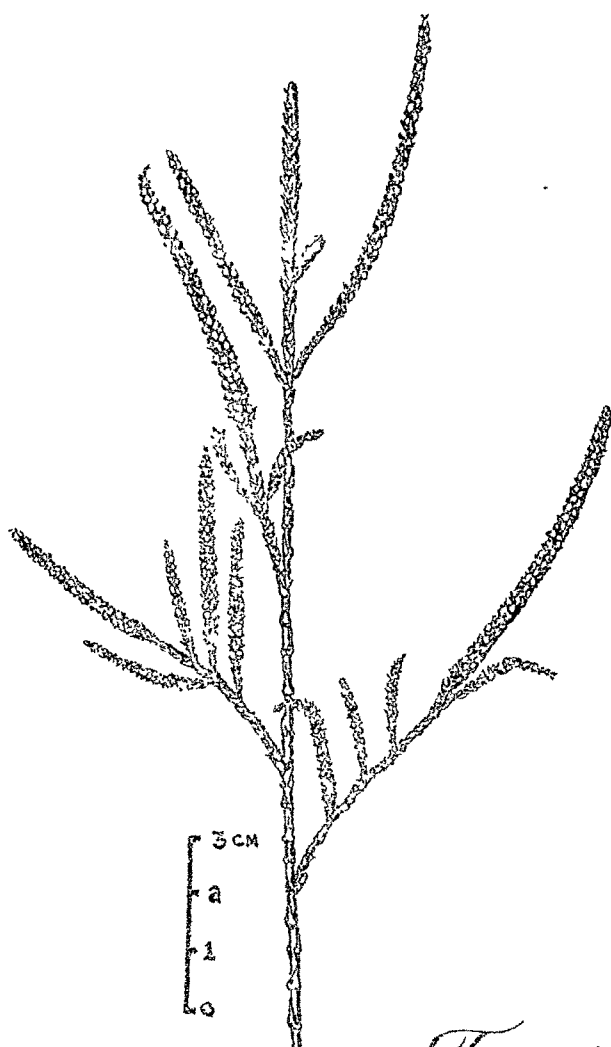
Flowers and fruits : July - December.

JVJ 246, 1642.

## 15. TAMARICACEAE

Tamarix Linn.

Tamarix troupii Hole, in Indian For. 45: 247, 1919; Troup.,



*Tamarix troupis* Hole



Silvic. Ind. Tree 1: 16; Blatt., in JBNHS. 34: 305,  
1930; Saur. 1: 28; M. 71.

Tamarix gallica Dyer., in FBI. 1: 248 (non Linn.); C. 1:  
75 (var. indica Willd.); Brandis, 45.

A bushy shrub with slender articulated pendulous  
branches. Leaves minute, semiamplexicaul. Flowers pink,  
crowded in panicled spike like raceme.

Cultivated in the gardens of P.T.S.C.S. and Seventh  
Day Advent Hospital, also seen on the way to Hajira, on the  
sandy-river bed of Tapi near Variav and on the river bank at  
Varachha.

Flowers and fruits : August - March.

JVJ 231, 438, 842, 1899. Plate 38.

## 16. ELATINACEAE

### Bergia Linn.

1. Stamens 5; plants of semi-aquatic

habitat .....1. B. ammannioides

1. Stamens 10; plants of dry habitat ....2. B. suffruticosa

1. Bergia ammannioides Roxb., Hort. Beng. 34, 1814

(nom. nud.); Roth, Nov. Pl. Sp. 219, 1821; FBI. 1:  
251; C. 1: 77; Gam. 1: 50; M. 72.

Elatine ammannioides Wight & Arn., Prodr. 41, 1834.

Lechea verticillata Willd., Sp. Pl. 1: 495.

An erect, slender, herb. Stem and branches reddish-green, glandular-pubescent. Flowers pinkish-red to reddish-white, capsule ovoid.

Occasional on the margins of ditches and canals, fairly common in the water-lodged soil along the sides of Udhana-Bhestan railway track.

Flowers and fruits : September - March.

JVJ 1238, 1323, 1568, 1817.

2. Bergia suffruticosa (Del.) Fenzl, in Danks. Bot. Gesel.

Reg. 3: 183, 1841; Bhandari, 57.

Lancretia suffruticosa Delile, Fl. Egypt. 213, t. 25, 1813.

Bergia odorata Edgew., in Journ. Asia. Soc. Beng. 7:

765, 1838; FBI. 1: 251; C. 1: 77; Blatter, in

JBNHS. 34: 623, 1930; Saur. 1: 29; Fl. Raj. 27.

A prostrate herb, spreading on the ground. Leaves fascicled, hispid, elliptic, obtuse, serrate. Flowers pale pink or white with pinkish shade.

Not common as previous taxon. Seen along the margins of canals, also noted as a weed from Cajanus fields.

Flowers and fruits : September - April.

JVJ 194, 500, 1045, 1968.

## 17. GUTTIFERAE

Calophyllum Linn.

Calophyllum inophyllum Linn., Sp. Pl. 513, 1753; FBI. 1: 273;

Wt. Icon. t. 77; D. & G. 31; C. 1: 85; Talb. 15; Gam. 1:

85; Brandis, Ind. Trees 54, f. 28 (5th imp.) 1971.

A handsome, medium-sized tree with grey, smooth bark. Leaves broadly elliptic, coriaceous. Flowers white, scented. Fruit yellow, globose, smooth.

Cultivated in the Botanical gardens of P.T.S.C.S. and in the Pharmacy gardens of Swami A. Saraswati.

Local name : Naag-Kesar.

Flowers and fruits : November - February.

JVJ 1106, 1596.

## 18. MALVACEAE

1. Trees; leaves cordate ..... 11. Thespesia

1. Herbs or shrubs; leaves various :

2. Epicalyx absent :

3. Carpels 1-seeded ..... 10. Sida

3. Carpels more than 1-seeded ..... 2. Abutilon

2. Epicalyx present :

## 4. Fruit capsular or berry-like :

## 5. Fruit berry-like; flowers

opening slightly ..... 8. Malvaviscus

## 5. Fruit capsular; flowers opening fully:

## 6. Bracteoles 3, large, foliaceous,

stigmas connate ..... 4. Gossypium

## 6. Bracteoles more than 3, not

foliaceous, stigmas free :

## 7. Calyx spathaceous, desiduous

in the ripe fruit ..... 1. Abelmoschus

## 7. Calyx not spathaceous; equally

5 lobed; persistent in the

ripe fruit ..... 5. Hibiscus

## 4. Fruit neither capsular nor berry-like :

## 8. Bracteoles less than 5 :

9. Bracteoles 3; flowers solitary ...7. Malvastrum

## 9. Bracteoles 4, large, leafy,

flowers in dense heads .....6. Malachra

## 8. Bracteoles 5 or more :

## 10. Styles 5, flowers more than

2 cm. across; cultivated .....3. Althea

10. Styles 10; flowers less than  
2 cm. across; wild :

11. Bracteoles 5; leaves glandular  
at the base of mid-rib beneath ..... 12. Urena

11. Bracteoles more than 5; leaves not  
glandular at the base of mid-rib ... 9. Pavonia

1. Abelmoschus Medic.

1. Epicalyx segments narrow, linear :

2. Epicalyx segments equalling the calyx ..... 1. A. esculentus

2. Epicalyx segments shorter than the calyx ... 4. A. moschatus

1. Epicalyx segments broad, leafy :

3. Epicalyx segments 4-6, persistent; leaves  
more or less deeply-lobed; flowers yellow....3. A. manihot

3. Epicalyx segments 4-6, caducous; leaves more  
or less orbicular and deeply 3-lobed; flowers  
pale-white .....2. A. ficulneus

1. Abelmoschus esculentus (Linn.) Moench, Menth. 617, 1794;  
Merr., Enum. 3: 40; Saur. 1: 49; Sant. 19; M. 81.

Hibiscus esculentus Linn., Sp. Pl. 696, 1753; FBI. 1: 343;  
C. 1: 119; Duthie, 87.

An erect, hispid annual. Leaves variable in shape and size; 3-5-lobed, hairy. Flowers yellow with purple centre; involucral bracts deciduous. Capsule 5-8-ribbed.

Cultivated on a large scale in all localities.

Local name : Bhinda.

Uses : Fresh fruits are used as vegetable.

Flowers and fruits : Throughout the year.

JVJ 1416.

2. Abelmoschus ficulneus (Linn.) Wight & Arn. ex Wight, Cat.

14, 1833; Wight. Icon. t. 154; Grah. 14; Saur. 1: 50;  
Borssum, Blumea 14: 101, 1966.

Hibiscus ficulneus Linn., Sp. Pl. 695, 1753; FBI. 1: 340;  
C. 1: 117; Gam. 69.

An annual with palmately 5-lobed leaves; lobes crenate-serrate. Flowers white or whitish pink to pale yellow with purple centre. Epicalyx segments 5, linear-subulate, deciduous. Capsule oblong- 5 angled.

Rare; found as a weed from the cotton-fields, also noted from the muddy river bed.

Flowers and fruits : October - March.

JVJ 1457, 1981.

Plate 39.



*Abelmoschus ficulneus* Wt. & Arn.

3. Abelmoschus manihot (Linn.) Medic., Malv. Fam. 46, 1787;  
Sant. 18; Saur. 1: 50; Bates, in Bailey 16(3):  
99-112, 1968.

Hibiscus manihot Linn., Sp. Pl. 696, 1753; Gam. 1: 69;  
Blatter, 633.

H. tetraphyllus Roxb., Fl. Ind. 3: 211, 1832; FBI. 1: 341;  
C. 1: 118; Talb. 1: 123, t. 74; N. 31.

An erect, annual undershrub. Leaves 3-5-lobed. Flowers yellow with dark purple centre; epicalyx segments 4-6, ovate, densely hairy along the margins. Capsule densely bristly.

Occasionally found on hard, waste soil; often mixed with grasses.

Local name : Vagadav Bhindo.

Flowers and fruits : September - December.

JVJ 1041, 1119, 1367.

4. Abelmoschus moschatus Medic., Malv. 46, 1787; Saur. 1: 49;  
Borssum, Blumea 14: 90, 1966; Bates, in Bailey 16(3):  
99-112, 1968.

Hibiscus abelmoschus Linn., Sp. Pl. 696, 1753; FBI. 1:  
342; C. 1: 118; Gam. 1: 69.

A tall annual with reflexed hairs on the stem. Leaves variable, 3-6-lobed. Flowers yellow with dark purple base. Capsule globose, hairy.

Not so common in all localities, seen on wet-fallow land.



Flowers and fruits : October - December.

JVJ 1339, 1866.

2. Abutilon Linn.

1. Carpels more than 10 :

2. Carpels awned, longer than the calyx .... 1. A. indicum

2. Carpels awnless, shorter than the calyx.. 2. A. pannosum

1. Carpels 10 or less ..... 3. A. ramosum

1. Abutilon indicum (Linn.) Sweet, Hort. Brit. 54, 1827;

Wt. Icon. t. 12; FBI. 1: 326; C. 1: 102; Saur. 1: 40;

M. 75.

Sida indica Linn., Cent. Pl. 2: 26, 1756 & Sp. Pl. (ed. 2)  
964, 1763.

S. asiatica Linn., Cent. Pl. 2: 26, 1756 & Sp. Pl. (ed. 2)  
964, 1763.

Abutilon asiaticum (Linn.) Sweet, Hort. Brit. 53, 1826;  
FBI. 1: 326; C. 1: 102.

A perennial, branched, undershrub, tomentose. Leaves  
ovate to orbicular-cordate. Flowers orange-yellow. Carpels  
reniform, black at maturity.

Common in all localities, along the boundry of fields  
and in hedges.

Local name : Moti Kanski.

Flowers and fruits : August - March.

JVJ 146, 236, 1969.

2. Abutilon pannosum (Forst. f.) Schlect. Bot. Zeit. 9: 828, 1851; Hassan, 149; Bhandari, 62.

Sida pannosa Forst. f. Comm. Phys. Soc. Reg. Goetting 1787: 62 : 1789.

S. glauca Cav., Icon. 1: 8, t. 11, 1791.

Abutilon glaucum (Cav.) G. Don, Gen. Syst. 1: 504, 1826;

Gam. 1 : 66; Saur. 1: 40; M. 76; Pavagadh, 45.

A. muticum (DC.) Sweet, Hort. Brit. ed. 2: 65, 1830;

FBI. 1: 327; C. 1: 102.

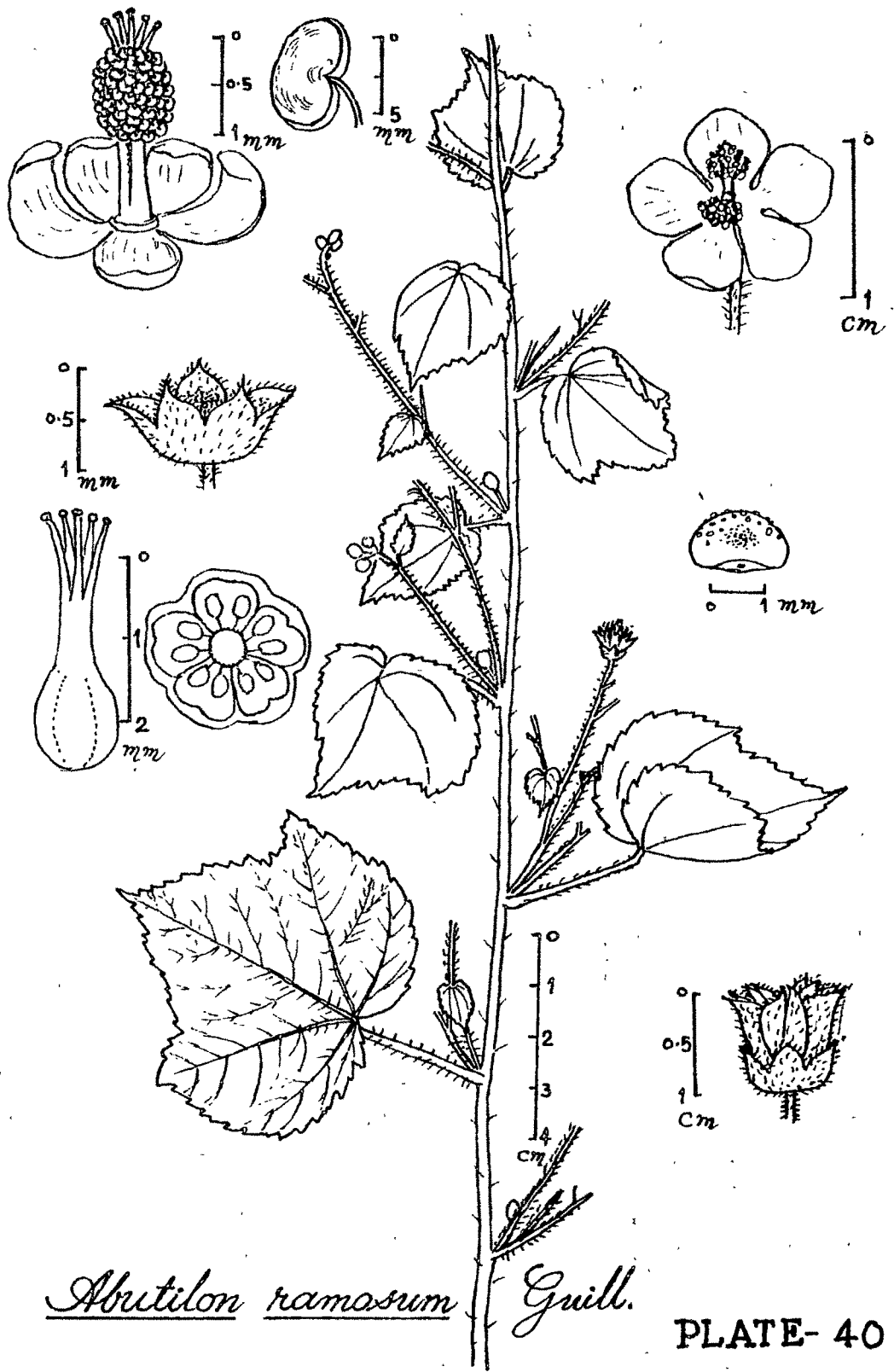
An erect, branched, velvety undershrub. Leaves broadly ovate to cordate, irregularly toothed. Flowers orange-yellow, larger than I. indicum. Fruits globose, densely silky villous, 20-25 awnless carpelled.

Common throughout the area, found on waste land, along the slope of river bank, near the hedges along the border of fields.

Flowers and fruits : August - February.

JVJ 147, 1168, 1629.

3. Abutilon ramosum (Cav.) Guill. & Perr., Fl. Seneg. Tent. 1: 68, 1831; FBI. 1: 328; C. 1: 103; Saur. 1: 39; M. 76.



*Abutilon ramosum* Guill.

Sida ramosa Cav., Diss. 1: 28, t. 6, f. 1, 1785.

An erect undershrub, branches with thin spreading hairs. Leaves ovate to roundish-cordate, hairy on both surfaces. Flowers orange-yellow to pale-yellow. Carpels 6-10 with spreading awns.

A rare plant, only once collected from the vertical slope of river bank near Fulpada, since then it has not been observed again.

Flowers and Fruits : October - December.

JVJ 1630.

Plate 40.

### 3. Althea Linn.

Althea rosea (Linn.) Cav., Diss. 2: 91, t. 28, f. 1, 1786;

C. 1: 95; Sant. Fl. Purandhar, 23; Saur. 1: 55; Bailey, 658.

An erect, unbranched, undershrub. Leaves large rounded, heart-shaped or lobed. Flowers white, purple or rose-coloured.

Cultivated in gardens as a seasonal ornamental.

Local name : Gulkair.

English name : Hollyhock.

Flowers and fruits : November - March.

JVJ 632, 1731.

4. Gossypium Linn.

1. Bracteoles free, pectinate ..... 3. G. hirsutum
1. Bracteoles united, not pectinate  
or laciniate :
2. Shrub or small tree, plant pilose,  
capsules oblong ..... 1. G. arboreum
2. Herb or undershrub, plant hairy,  
capsules ovate ..... 2. G. herbaceum

1. Gossypium arboreum Linn., Sp. Pl. 693, 1753; FBI. 1: 347;  
C. 1: 125; Saur. 1: 57; M. 82; Duthie, 90.

A tall shrub or small tree. Leaves 5-7-lobed. Flowers  
purplish yellow with a crimson centre.

Not common, planted near Shiv temples or in gardens.

Local name : Dev Kapas.

Flowers and fruits : September - January.

JVJ 1108, 1725.

Cultivated throughout India as fibre yielding plants.

2. Gossypium herbaceum Linn., Sp. Pl. 693, 1753; FBI. 1: 346  
(in part); C. 1: 123; M. 82; Duthie, 91.

An erect herb or undershrub, branching near the soil.  
Leaves 3-5-lobed, cordate at base. Flowers yellow with purple  
centre; calyx spotted with black glands.

Cultivated as a Kharif crop.

Local name : Kapas.

Flowers and fruits : August - February.

JVJ 901, 1861.

3. Gossypium hirsutum Linn., Sp. Pl. 975, 1753; Hutchinson,  
Silow & Stephen, Evol. Gossyp. 30, t. 4, 1947;  
Saur. 1: 56; M. 82.

G. herbaceum var. hirsutum Mast., in FBI. 1: 347; C. 1:  
124; Haines, 1: 75.

A much-branched undershrub clothed with woolly hairs.  
Leaves 3-5-lobed with cordate base. Flowers yellow, fading to  
pinkish-purple. Capsule spherical.

Cultivated at Cotton Research Farm, during rainy season.

Local name : Kapas.

Flowers and fruits : September - January.

JVJ 1830.

## 5. Hibiscus Linn.

### 1. Cultigens :

2. Calyx red, fleshy, edible ..... 7. H. sabdariffa

2. Calyx not as above :

3. Leaves unlobed :

4. Petals much divided or laciniate;  
 segments of epicalyx free,  
 flowers drooping .....8. H. schizopetalus

4. Petals entire, segments of epicalyx  
 connate at the base .....6. H. rosa-sinensis

3. Leaves 5-7 angled or lobed .....4. H. mutabilis

1. Wild plants :

5. Involucral bracts absent .....3. H. lobatus

5. Involucral bracts present :

6. Involucral bracts filiform, much  
 longer than the calyx, spreading like  
 a ray-beneath the flowers; stems with  
 bristles and prickles .....2. H. caesius

6. Involucral bracts not as above; stems  
 without prickles and bristles :

7. Leaves unlobed or faintly lobed;  
 segments of epicalyx linear-  
 spathulate .....5. H. panduraeformis

7. Leaves lobed; segments of  
 epicalyx linear :

8. Leaves 3-lobed, middle lobe  
 very long, punctate, flowers  
 pale-rose, capsule as long

- as the calyx ..... 1. H. amblyocarpus  
 8. Leaves 3-7 equally lobed, not  
 punctate; flowers yellow with  
 purple centre; capsule  
 shorter than the calyx ..... 9. H. vitifolius

1. Hibiscus amblyocarpus Hochst., in Kotschy, Pl. Nubic.  
 n. 183, 1841; Boiss., Fl. Orient 1: 840, 1867; Hochr.,  
 in Ann. Cons. Jard. Bot. Geneve 4: 159, 1900  
 (H. amblyocarpus); Rakshit & Kundu, Bull. Bot. Surv.  
 India 12: 169, 1972.  
H. obtusilobus Garcke, in Bot. Zeit. 837, 1859; Masters  
 in FBI. 1: 340; Woodr., in JBNHS. 11: 127, 1897;  
 C. 1: 116; Saur. 1: 47; Pavagadh, 47.  
H. laguneoides Edgew., in Jour. Linn. Soc. 6: 199, 1862.

An erect, branched annual, stellately pubescent and  
 glutinous. Leaves usually 3-lobed, middle lobe very long,  
 pellucido-punctate. Involucral bracts 8-10, linear, acute,  
 connate at the base. Flowers pale rose-coloured. Capsule as  
 long as the calyx, ovoid, beaked, pubescent.

Occasionally along the boundary of fields, in waste  
 soil of cotton Res. Farm.

Flowers and fruits : August - January.

JVJ 195, 1818.



2. Hibiscus caesius Gareke, in Oester Bot. Zeit. 7: 850, 1849; C. 1: 116; Saur. 1: 45; Rakshit & Kundu, l. c. pp. 173-174, 1970.
- H. pentaphyllus F. Muell. Fragm. 2: 13, 1860; Oliver, Fl. Trop. Africa 1: 198, 1868 (non Roxb.).
- H. gibsoni Stocks ex Harv. & Sond., Fl. Cap. 2: 587, 1861-1862; FBI. 1: 339; Duthie, 1: 91, 1903.

An erect, herbaceous annual with minute bristle-pointed prickles. Leaves 3-7-lobed, deeply divided. Involucral bracts 10, filiform, much longer than the calyx, spreading like a ray beneath the flowers. Flowers yellow with purple centre. Capsule ovoid, pointed, shorter than calyx.

Rare; growing along the margins of field.

Flowers and fruits : August - October.

JVJ 143.

3. Hibiscus lobatus (J.A.Murray) O. Kuntze, Rev. Gen. Pl. 3(2): 19, 1898; Saur. 1: 43; Borssum, Blumea 14: 77, 1966; Rakshit & Kundu, l. c. 12: 169, 1972.
- Solandra lobata Murr., Comm. Soc. Reg. Sc. Goetting 6: 20, t. II, 1785.
- Hibiscus solandra L'Herit., Strip. Nov. 1: 103, t. 49, 1788; FBI. 1: 336; C. 1: 114; Gam. 1: 70.

An erect annual herb. Leaves entire or 3-5 lobed. Flowers

small white, epicalyx absent. Capsule ovoid, short beaked, not exceeding the calyx.

Not common, growing as a weed, often mixed with grasses.

Flowers and fruits : August - October.

JVJ 152, 1166.

4. Hibiscus mutabilis Linn., Sp. Pl. 694, 1753; FBI. 1: 344; C. 1: 120; Bailey, 666; M. 81; Rakshit & Kundu, l.c. 167.

H. sinensis Miller, Dict. 8(2): 1768.

A large bushy shrub. Leaves 3-5 lobed or angled. Flowers pinkish-red, showy.

Cultivated in gardens, not common.

Flowers : October - November.

JVJ 1878.

5. Hibiscus panduraeformis Burman, Fl. Ind. 151, t. 47, f. 2, 1768; DC. Prodr. 1: 455, 1824; D. & G. 20; FBI. 1: 338; C. 1: 115; Gam. 1: 70; Rakshit & Kundu, l. c. 172, 1972.

An erect annual with densely stellately and simple tomentose. Leaves lower ovate-cordate, lobed, upper oblong-lanceolate, covered with silky hairs. Flowers yellow with purple centre; epicalyx with 9 segments, shorter than calyx,

densely hairy.

Common in all localities. Noted as a winter weed, along the border of fields and on the slope of elevated river-bank.

Flowers and fruits : August - March.

JVJ 274, 1167, 1507, 1927.

6. Hibiscus rosa-sinensis Linn., Sp. Pl. 694, 1753; FBI. 1: 344; C. 1: 120; Saur. 1: 48; Bailey, 665; Bor & Raizada, 237, f. 137 & t. 88; M. 80.

A shrub, stem woody at the base. Leaves ovate, serrate with linear stipules. Flowers usually red, petals entire, epicalyx 7-9, linear.

Cultivated in private and public gardens. There are many single and double varieties of different colours, seen in cultivation.

Local name : Jasud, English name : Shoe flower.

Flowers : All the year round.

JVJ 685.

7. Hibiscus sabdariffa Linn., Sp. Pl. 695, 1753; FBI. 1: 340;

Watt, 4: 243; C. 1: 117; Wealth Ind. 5: 92; Saur. 1: 45; M. 79; Borss. Waalkes; in Blumea 14: 64, 1966; Rakshit & Kundu, 1. c. 162.

An erect undershrub with reddish-green stems. Leaves deeply

3-5-lobed. Flowers yellow; calyx fleshy, red, persistent.  
Capsule ovoid, beaked, shorter than the calyx.

Often cultivated at Variav, Ved, Katargam and Rander.

Local name : Khati Ambadi.

Uses : Fleshy calyces are edible.

Flowers and fruits : November - February.

JVJ 256, 1736.

8. Hibiscus schizopetalus (Mast.) Hook. f., in Bot. Mag. 106:  
t. 6524, 1880; Bailey, 665; Bor & Raizada, 236; Sant.  
18; Saur. 1: 48; M. 80.

H. rosa-sinensis L. var. schizopetalus Mast., in Gard.  
Chron. 12: 272, 1879.

A glabrous shrub with drooping branches. Leaves sub-  
rhomboidally elliptic, glabrous. Flowers scarlet-red or red  
with white or creamy lines. Petals deeply laciniate.

A native of Tropical Africa. Planted in gardens.

Local name : Latkan Jasud.      English name : Coral Hibiscus.

Flowers : September - April.      Fruits : not seen.

JVJ 1291, 1774.

9. Hibiscus vitifolius Linn., Sp. Pl. 696, 1753; Roxb. 3:  
200, 1832; D. & G. 20; FBI. 1: 338; C. 1: 115; Gam.  
1: 70; Blatter, in JBNHS. 34: 633, 1931; Saur. 1:  
45; Pavagadh, 47.

An erect, hispid, undershrub. Leaves 3-7-lobed, smooth. Flowers sulphur-yellow with purple centre, drooping; epicalyx segments 7-12, linear, hairy, persistent. Capsule suborbicular, apiculate, shorter than the calyx, 5-winged. Seeds reniform, black.

Occasional on waste-shady places, under the shade of trees. Flowers and fruits : August - December.

JVJ 425, 972, 1040.

#### 6. Malachra Linn.

Malachra capitata Linn., Syst. ed. 12, 2: 458, 1767; FBI. 1: 329; C. 1: 105; Saur. 1: 33.

An erect, branched, annual hispid herb. Leaves more or less angled. Flowers yellow, 4-6 within each involucre forming a dense head; involucral bracts 4, leafy, with stiff bristles on the margins.

Occasionally seen along the railway track, on fallow-waste land and along the bank of canals. Introduced from Brazil.

Local name : Pardeshi bhindo.

Flowers and fruits : August - January.

JVJ 879, 1012.

#### 7. Malvastrum A. Gray (nom. cons.)

Malvastrum coromandelianum (Linn.) Garcke, in Bonplandia 5:

297, 1857; Blatter, in JBNHS. 34: 627; Gam. 1: 64;

Haines 1: 60; M. 77; Pavagadh, 41.

Malva coromandeliana Linn., Sp. Pl. 687, 1753.

Malvastrum tricuspidatum A. Gray, Pl. Wright 1: 16, 1852;

FBI. 1: 321; Duthie 1: 75.

An erect, stout, appressed-hairy herb. Leaves ovate-lanceolate, crenate, serrate, hairy. Flowers yellow, bracteoles 3. Carpels reniform, provided with 3 spiny projections.

Frequently found in well-guarded premises like Ajana farm, Varachha water works. Also on waste land, under the shade of trees.

Flowers and fruits : September - January.

JVJ 1295.

#### 8. Malvaviscus Dill.

Malvaviscus arboreus Cav. Diss. 3: 131, t. 48, f. 1, 1787;

Bailey, 661; Saur. 1: 55; Jindal, 84.

A shrub, resembling Hibiscus rosa-sinensis. Leaves ovate, crenate-serrate, cordate, rough. Flowers crimson-scarlet, red, opening slightly at the top. Staminal column exserted.

Planted as an ornamental plant in many private and public gardens. Native of South America.

English name : Chinese lantern.

Flowers : Most of the year. (Fruits not seen).

JVJ 1290, 1776.

9. Pavonia Cav. (nom. cons.)

Pavonia zeylanica (Linn.) Cav., Diss. 3: 134, t. 48, f. 2, 1787;  
 FBI. 1: 331; C. 1: 108; Blatter, in JBNHS. 34: 631,  
 1931; Saur. 1: 52; M. 77; Pavagadh, 46.

Hibiscus zeylanicus Linn., Sp. Pl. 697, 1753.

An erect, branched, sticky undershrub. Leaves simple and 3-lobed, long-petioled. Flowers pinkish-rose coloured; epicalyx 10, setaceous, hairy. Carpels glabrous, 3-angled.

Occasionally seen on the upper part of river bank, also in the hedges, on the margins of fields.

Flowers and fruits : August - November.

JVJ 982, 1240.

10. Sida Linn.

1. A weak, straggling herb, sparingly hispid..3. S. cordata

1. Erect to sub-erect herbs or undershrubs,  
 stellately hairy :

2. Carpels 5 or less; petioles spiny

at the base .....2. S. alba

2. Carpels more than 5; petioles not  
 spiny at the base :

3. Awns of carpels exceeding the calyx;  
flowers corymbose, fasciculate or  
subpaniculate; whole plant velvety... 4. S. cordifolia

3. Awns of carpels shorter than the  
calyx; flowers not as above;  
plants not velvety :

4. Leaves elliptic-obovate, downy  
on both sides ..... 5. S. ovata

4. Leaves not as above :

5. Leaves obovate-cuneate,  
glabrous on the upper surface.. 6. S. rhombifolia  
var. retusa

5. Leaves lanceolate, glabrous  
on both surfaces ..... 1. S. acuta

1. Sida acuta Burm., Fl. Ind. 147, 1768; C. 1: 98; Gam. 1:  
64; Saur. 1: 34; Sant. 15; Pavagadh, 44; Borssum,  
Blumea 14: 186, 1966.

S. carpinifolia Mast., in FBI. 1: 323 (non. L.) 1874.

A rigid undershrub. Leaves lanceolate, serrate,  
glabrous. Flowers yellow. Carpels 6.

Common throughout the area in all localities, found as  
a weed or sometimes gregarious on waste open ground and upper  
part of river bank or near hedges.



Local name : Bala.

Flowers and fruits : August - February.

JVJ 138, 1037, 1398.

2. Sida alba Linn., Fl. Jam. 18, 1759 (nom. nud.) and  
Sp. Pl. (ed. 2) 960, 1763; Saur. 1: 36.

S. spinosa Linn., Sp. Pl. 683, 1753 (Pro Parte); FBI. 1:  
323; C. 1: 98; Blatter, in JBNHS. 34: 628, 1930;  
M. 74; Pavagadh, 43; Robyns, in Ann. Miss. Bot.  
Gardn. 52: 563, 1965; Borssum, Blumea 14: 193, 1966.

Erect undershrubs with spiny tubercles at the nodes  
below the petioles. Leaves ovate-lanceolate, truncate serrate.  
Flowers pale-white or whitish yellow. Carpels 5, not hairy.

Occasional along the margins of fields, along the road-  
sides and on moist shady places.

Local name : Kantali Bala.

Flowers and fruits : August - October.

JVJ 196, 460, 1031.

3. Sida cordata (N. Burman) Borssum, Blumea 14: 182, 1966.

Melochia cordata N.B., Fl. Ind. 143, 1768.

Sida veronicifolia Lamk., Encycl. 1: 5, 1783; C. 1: 97;  
Blatter, l. c. 34, 627; Saur. 1: 37; Sant. & Wagh,  
in Bull. Bot. Surv. India 5: 108, 1931; M. 74.

S. humilis Cav., Diss. 5: 277, 1785; FBI. 1: 322;  
D. & G. 17; Bamber, 544.

A trailing, prostrate or sub-erect, branched herb. Branches with long villous, stellately hispid and scabrid hairs. Leaves ovate, cordate, crenate-serrate, hairy. Flowers yellow; carpels 5, muticous.

Fairly common in all localities, common in shade, undergrowth of the hedges, along the sides of cart-path but rare on open sandy-dry soil.

Local name : Bhoya-Bala.

Flowers and fruits : August - March.

JVJ 141, 744, 1490.

4. Sida cordifolia Linn., Sp. Pl. 684, 1753; Cav. Diss. 1: (19) t. 3, f. 2, 1785; FBI. 1: 324; C. 1: 99; Gam. 1: 64; Saur. 1: 38; M. 75; Pavagadh, 44; Borssum, Blumea 14: 193, 1966.

A robust, thick-branched undershrub, covered with stellate hairs. Leaves ovate, cordate, crenate. Corolla yellow. Carpels 10, strongly reticulated, 2-awned, scabrid hairy.

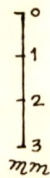
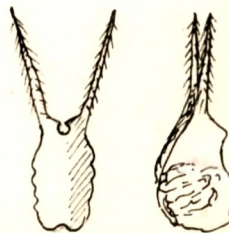
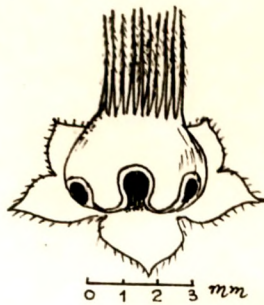
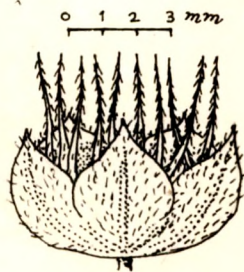
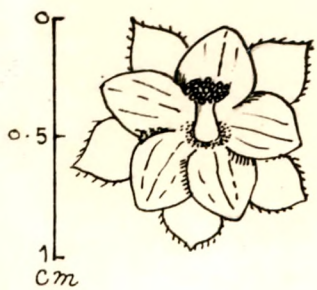
Not common in all localities. Gregarious on dry, open sandy river-bed near Singanpor.

Local name : Mahabala.

Flowers and fruits : September - February.

JVJ 139, 1511.

Plate 41.



*Lida cordifolia* Linn.

PLATE - 41



5. Sida ovata Forsk., Fl. Aeg.-Arab. 124, 1775; Andrews, Fl. Pl. Anglo-Egypt. Sud. 2: 41, 1952; Saur. 1: 36; Raizada, in Ind. For. 92(5): 323, 1966.

S. grewioides Guill. & Perr., Fl. Senegamb. Tent. 1: 71, 1831; FBI. 1: 323; C. 1: 98; Blatter, l. c. 628; M. 75; Pavagadh, 43.

An erect undershrub, hoary-tomentose. Leaves oblong-ovate or elliptic-oblong, crenate. Flowers pale-yellow. Carpels 7.

Occasional on moist shady places, also along the border of fields.

Flowers and fruits : September - December.

JVJ 1310.

6. Sida rhombifolia Linn. var. retusa Mast., in FBI. 1: 324; C. 1: 99; Saur. 1: 35; Sant. 16.

S. retusa Linn., Sp. Pl. (ed. 2) 961, 1762; Gr. 16; D. & G. 17.

S. rhombifolia Linn. forma retusa Blatter, in JBNHS. 34: 629, 1930.

An erect undershrub. Leaves obovate, cuneate at the base, retuse at apex, often coarsely toothed. Flowers yellow. Carpels 10.

A rare plant, collected once along the railway track between Surat-Bhestan, not found elsewhere.

Flowers and fruits : September - October.

JVJ 140, 336.

11. Thespesia Soland ex Correa (nom. cons.)

Thespesia populnea (Linn.) Sol. ex Corr., in Ann. Mus. Nat.

Hist. Nat. Paris 9: 290, t. 8, f. 1, 1807; Wt. Icon. t. 8, 1838; FBI. 1: 345; C. 1: 121; Gam. 1: 72; Blatter & Mill., Beaut. Ind. Trees (ed. 2): 141, t. 31; Saur. 1: 32; Sant. 19; M. 82.

Hibiscus populneus Linn., Sp. Pl. 694, 1753.

Evergreen tree with smooth, grey bark. Leaves broadly ovate, cordate, acuminate, glabrous above, pubescent beneath. Flowers bright yellow, bell-shaped, solitary-axillary. Capsule globose.

Planted in all localities along the roads as a shade tree, also seen in gardens, near the temples and in many private premises.

Local name : Paras piplo.

Flowers and fruits : Round the year.

JVJ 106.

12. Urena Linn.

Urena lobata Linn. Sp. Pl. 692, 1753; FBI. 1: 329; (excl.

U. palmata); C. 1: 106; Gam. 1: 66; Prain, 1: 178;

Saur. 1: 54; Borssum, Blumea 14: 138, 1966; Sant. 17:  
1967 (Rev. ed.); M. 77; Hassan, 156.

1. Leaves scarcely lobed; epicalyx

cupular in fruit ..... 1a. ssp. lobata

1. Leaves deeply lobed; epicalyx

spreading or reflexed in fruit.. 1b. ssp. sinuata

1a. ssp. lobata

An erect, branched, undershrub with woolly hairs. Leaves scarcely lobed. Flowers pink; involucre bracts 5; cupular in fruit.

Occurs in all localities during the monsoon; along the roadside or near the hedges.

Flowers and fruits : August - March.

JVJ 1213.

1b. sinuata (L.) Borssum, Blumea 14: 142, 1966;

Urena sinuata Linn., Sp. Pl. 692, 1753; FBI. 1: 329;

C. 1: 106; Gam. 1: 66; Hassan, 157.

More or less similar to previous taxon, but the leaves deeply palmately lobed, each lobe further segmented.

Flowers and fruits : September - November.

JVJ 148, 186, 1900.

## 19. BOMBACACEAE

1. Trunk without prickles; flowers white ..... 1. Adansonia

1. Trunk armed with prickles; flowers red .... 2. Salmalia

1. Adansonia Linn.

Adansonia digitata Linn., Sp. Pl. 1190, 1753; FBI. 1: 348,

C. 1: 126; Gam. 1: 73; Haines, 1: 77; Saur. 1: 58.

A large tree with bottle-shaped trunk, bark whitish-grey, smooth. Leaves digitately 3-9-foliolate. Flowers large, white, pendulous. Fruit oblong-obovoid, pendulous.

Not found in all localities. Two big trees are noted near the Govt. Girls' Poly. College, Athawa gate. Also seen at Adarsh Society, on the way to Katargam and Udhana. A very huge tree with more than 10 meters in diameter was reported from Ugat village (near to Rander) but destroyed completely during the monsoon-storm in 1977.

Local name : Rukhado or Gorakh ambalo.

English name : Baobab or Monkey-bread tree.

Flowers and fruits : July - September.

JVJ 1825.

2. Salmalia Schott & Endlicher

Salmalia malabarica (DC.) Schott & Endlicher, Melet. Bot.

35, 1832; Saur. 1: 59; M. 83; Hassan, 145-146.

Bombax malabaricum DC., Prodr. 1: 479, 1824; FBI. 1: 349; C. 1: 127; Gam. 1: 71.

B. ceiba auct., non L., 1753; Robyns, Taxon 10: 157, 1961 & Bull. Jard. Bot. Bryxelles 33: 1-315, 1963; Sant. 20; Pavagadh, 48.

A large, deciduous tree with wide spreading branches, armed with hard, conical prickles. Leaves digitately 5-7-lobed, leaflets lanceolate. Flowers large, red, showy. Capsule 5-valved, woody, lined with white silky hairs. Seeds many.

Not common in all localities, often planted in private premises.

Local name : Simalo. English name : Silk-cotton tree.

Flowering in the hot season when plants without leaves.

Fruits : April - May.

Uses : The cotton surrounding the seeds is used for stuffing pillows and mattresses.

JVJ 1877, 1950.

## 20. STERCULIACEAE

1. Herbs or undershrubs :

2. Flowers scarlet-red, axillary, solitary...5. Pentapetes

2. Flowers other than scarlet coloured,  
always in clusters :



- 3. Corolla yellow, petals clawed;  
ovary 1-celled, 1-seeded ..... 8. Waltheria
- 3. Corolla pinkish-rose, petals not  
clawed; ovary 5-celled, many-  
seeded ..... 4. Melochia
- 1. Trees or shrubs :
  - 4. Shrubs :
    - 5. Corolla scarlet-red; irregular,  
capsule spirally twisted ..... 3. Helicteres
    - 5. Corolla pinkish-red, regular;  
capsule not twisted ..... 1. Dombeya
  - 4. Trees :
    - 6. Petals absent ..... 7. Sterculia
    - 6. Petals present :
      - 7. Flowers white-pale white, large,  
seeds winged ..... 6. Pterospermum
      - 7. Flowers yellow; small, seeds  
not winged ..... 2. Guazuma
- 1. Dombeya Cav.

Dombeya spectabilis Boj., in Ann. Sc. Nat. Ser. II, 191, 1842;  
Bailey, 669.

A garden shrub. Leaves with long petioled, crowded at the ends of branches, pubescent. Flowers pinkish-red or rosy in umbellate cyme with large bracteoles.

Grown in gardens.

Flowers : October - March.

JVJ 1424.

## 2. Guazuma Plum. ex Adans.

Guazuma ulmifolia Lamk., Encyl. 3: 52, 1789; Wealth of India 4: 268, t. 134, 1956; Robyns, in Ann. Miss. Bot. Garden 51: 103, t. 7, 1964.

G. tomentosa H.B. & K., Nov. Gen. Pl. 5: 320, 1821; FBI. 1: 375; C. 1: 144; Benthall, 60-61.

A small tree. Leaves ovate-oblong, acuminate, serrate, scabrid. Flowers yellow in panicles. Capsule oblong, woody with tubercles.

Planted as an ornamental tree at many places. A native of T. America and West Indies.

Local name : Khoti Rudrax.

Flowers and fruits : November - February.

JVJ 1737.

## 3. Helicteres Linn.

Helicteres isora Linn., Sp. Pl. 963, 1753; Wt. Icon. t. 180;

C. 1: 136; Talb. 1: 146, t. 89; Saur. 1: 62; Sant. 22;  
M. 84; Pavagadh, 50.

A shrub. Leaves obovate-sub-orbicular. Flowers scarlet-red, corolla irregular. Follicles spirally twisted.

Rare; cultivated in the gardens of Swami Atmanand Saraswati Pharmacy and P.T. Science College; should be planted in public parks as a botanical curio.

Local name : Mardasing.

Flowers and fruits : August - December.

JVJ 416.

#### 4. Melochia Linn.

Melochia corchorifolia Linn., Sp. Pl. 675, 1753; FBI. 1:

374; C. 1: 142; Gam. 1: 79; Saur. 1: 63; Sant. 23; M. 86.

Erect branched, undershrubs. Leaves ovate-oblong, acute, serrate. Flowers pinkish-rosy fading to yellow in terminal clusters. Capsule globose, 5-valved.

Occasionally seen on wet soils near ditches, along the boundaries of fields.

Flowers and fruits : August - January.

JVJ 142, 1501, 1833.

#### 5. Pentapetes Linn.

Pentapetes phoenicea Linn., Sp. Pl. 698, 1753; FBI. 1: 371;

C. 1: 144; Haines, 1: 85.

An erect herb with a few, scattered, stellate hairs. Leaves lanceolate, hastate, crenate-serrate. Flowers deep-red, showy. Capsule sub-globose, covered with persistent calyx.

Not common, cultivated in many private gardens, also found as an escape; should be introduced in public parks as a seasonal ornamental because of the attractive colour combination of foliage and flowers. A native of Bengal.

Flowers and fruits : August - November.

JVJ 144, 430.

#### 6. Pterospermum Schreb. (nom. cons.)

Pterospermum acerifolium Willd., Sp. Pl. 3: 729, 1801;

FBI. 1: 368; Talb. 23; C. 1: 137; Sant. 23; Benthall, 57-58.

A medium-sized tree with ash-coloured bark. Leaves variable, orbicular or oblong, entire or lobed cordate or peltate. Flowers pale-white to creamy yellow turning brownish-yellow on drying, fragrant. Capsule woody.

Grown in Gandhi Baag and M.T.B. College campus.

Local name : Muchkund, Karnikar.

Flowers and fruits : December - March.

JVJ 1594.

7. Sterculia Linn.

Sterculia foetida Linn., Sp. Pl. 1008, 1753; FBI. 1: 354;

Gr. 18; Talb. 1: 136; Wt. Icon. tt. 181, 364; C. 1: 130; Gam. 1: 75; Brandis, Ind. Trees, 80; Benthall, 47-48.

A large deciduous tree with digitately compound, leaflets 7-13, elliptic-lanceolate. Follicles woody, scarlet.

Planted in the gardens of P.T.S.C.S. and B.R.C. (Udhana).

Flowers and fruits : January - March. (The flowers appear when the tree is leafless).

JVJ 1785.

8. Waltheria Linn.

Waltheria americana Linn., Sp. Pl. 673, 1753; Backer & Eakh.

f. Fl. Java 1: 406, 1963; Hassan, 144.

W. indica Linn., Sp. Pl. 673, 1753; FBI. 1: 374; C. 1:

144; Gam. 1: 79; N. 36; Saur. 1: 64; Pavagadh, 49;

Adams., Fl. Pl. Jamaica : 483, 1972.

An erect branched herb. Leaves elliptic ovate with crisped margins. Flowers pale-yellow in dense axillary heads. Capsule 1-seeded.

Not common in all localities. Found at Hajira, Udhana, Althan, along with hedge plants.

Flowers and fruits : September - November.

JVJ 145, 339.

## 21. TILIACEAE

1. Herbs or undershrubs; fruit capsular :

2. Capsules not prickly ..... 1. Corchorus

2. Capsules prickly ..... 3. Triumfetta

1. Shrubs; fruit drupe ..... 2. Grewia

1. Corchorus Linn.

1. Capsules spherical or sub-spherical.... 2. C. capsularis

1. Capsules cylindrical; elongate :

2. Capsules less than 2 cm. long ..... 3. C. fascicularis

2. Capsules more than 2 cm. long :

3. Capsules stout, winged ..... 1. C. aestuans

3. Capsules not winged :

4. Capsules 3-angled, beak stout,  
leaves without basal

appendages ..... 5. C. trilocularis

4. Capsules 10-ribbed, beak long;  
leaves usually with basal

appendages ..... 4. C. olitorius

1. Corchorus aestuans Linn., Syst. (ed. 10), 1079, 1759;  
 (non Forsk.); Sant. in RBSI. 16(1): 31, 1953;  
 Sant. 27; Saur. 1: 72; M. 89; Pavagadh, 53.  
C. acutangulus Lamk., Encycl. 2: 104, 1786; FBI. 1: 398;  
 C. 1: 160; Gam. 1: 86.

An erect, to sub-erect, branched herb. Leaves ovate-oblong, serrate, acute, appendaged. Flowers yellow; capsules 6-angled, 3-winged.

Common in all localities; in fallow and cultivated fields, along the roadsides and near the canals.

Flowers and fruits : August - January.

JVJ 151, 1208.

2. Corchorus capsularis Linn., Sp. Pl. 529, 1753; FBI. 1: 397;  
 C. 1: 157; Gam. 1: 87; Saur. 1: 70; Sant. 26; M. 89;  
 Pavagadh, 54.

Erect undershrubs. Leaves ovate-lanceolate or oblong with filiform appendages. Flowers yellow. Capsule spherical, muricated and ridged.

Not common in all localities. Weed of cultivated places, near the banks of canals and margins of ditches.

Local name : Gol chhunch.      English name : Jute plant.

Flowers and fruits : August - January.

JVJ 149, 1117, 1675.

3. Corchorus fascicularis Lamk., Encycl. 2: 104, 1786;

FBI. 1: 398; C. 1: 159; Gam. 1: 87; Saur. 1: 71;

Sant. 26.

An erect, small, glabrous herb. Leaves elliptic-oblong, obtuse, cuneate. Flowers yellow; capsules straight, shortly beaked.

Commonly found in fallow and cultivated fields and hard sandy soil.

Local name : Nani Chhunch.

Flowers and fruits : August - December.

JVJ 885, 1488.

4. Corchorus olitorius Linn., Sp. Pl. 529, 1753; FBI. 1: 397;

C. 1: 158; Gam. 1: 87; Saur. 1: 71; M. 88.

A tall, stout undershrub. Leaves elliptic-lanceolate to ovate-lanceolate with two basal filiform appendages. Flowers yellow. Capsule 10-ribbed.

Occurs throughout the area. Fairly common in protected campuses of Medical College and S.V.P.R. Engg. College; also found in University campus.

Local name : Moti Chhunch.

Flowers and fruits : August - January.

JVJ 150, 884, 1079, 1164.



5. Corchorus trilocularis Linn., Mant. 77, 1767; FBI. 1: 397;  
C. 1: 158; Gam. 1: 87; M. 89.

Erect annuals. Leaves oblong or elliptic-lanceolate.  
Flowers yellow. Capsule slightly curved, 3-angled, beak short,  
entire.

Weed of cultivation, found in wet-shady places.

Flowers and fruits : August - March.

JVJ 61, 1983.

## 2. Grewia Linn.

Grewia asiatica Linn., Mant. 1: 122, 1767; FBI. 1: 386; C. 1:  
150; Gam. 1: 84; M. 87.

A branched shrub. Leaves ovate, acuminate, serrate.  
Flowers yellow. Drupes globose, dark purple.

Cultivated at Dumas and Bhimpor in many private orchards;  
also grown in gardens. An introduced from east tropical Africa.

Local name : Phalsa.

Uses : Fruits are edible, pulp is made into sherbat which  
used as cooling drink.

Flowers and fruits : June - September.

JVJ 826.

## 3. Triumfetta Linn.

1. Lower or all leaves orbicular ..... 3. T. rotundifolia

1. Lower leaves more or less lobed :

2. Spines of capsule glabrous ..... 2. T. rhomboidea

2. Spines of capsule hispid ..... 1. T. pentandra

1. Triumfetta pentandra A. Rich., in Guill. and Per. et.

A. Rich., Fl. Senegamb. 1: 93, t. 19, 1830-1833;

Gam. 1: 86; Blatter, in JBNHS. 34: 890, 1931; Vartak,  
in JBNHS. 56(2): 365, 1959.

T. neglecta Wight & Arnott, Prodr. 1: 75, 1834; FBI. 1:

396; Haines, 1: 89.

An erect annual herb with dense stellate and bulbous-based simple hairs. Leaves rhomboid-ovate, simple and 3-lobed. Flowers yellow. Fruits oblong-ellipsoid with hispid spines.

Occasional along the border of fields, on waste land, near the hedges.

Flowers and fruits : August - February.

JVJ 426, 1165, 1306.

2. Triumfetta rhomboidea Jacq., Enum. Pl. Carib. 22, 1760;

FBI. 1: 395; Wt. Icon. t. 320; C. 1: 156; Gam. 1: 86;

Saur. 1: 73; Sant. 26; M. 89; Pavagadh, 52; Raizada,  
in Ind. For. 92(5): 325, 1966.

An erect, branched undershrub. Leaves variable; lower leaves 3-5-lobed, serrate. Flowers yellow. Fruits sub-globose, clothed with smooth hooked spines.

Fairly common, found as a weed, near hedges.

Local name : Jipti.

Flowers and fruits : August - March.

JVJ 43, 153, 431..

3. Triumfetta rotundifolia Lamk., Encycl. 3: 421, 1789;

FBI. 1: 395; C. 1: 157; Gam. 1: 86; Saur. 1: 73.

An undershrub with orbicular, irregularly toothed leaves, stellately hairy above, tomentose and greyish below. Flowers yellow. Capsules with hooked spines.

Fairly common on waste, fallow lands, also found as a weed, often mixed with hedge plants.

Local name : Jipto.

Flowers and fruits : August - January.

JVJ 154, 218, 1587.

## 22. MALPIGHIACEAE

1. Woody climber ..... 2. Hiptage

1. Shrubs or undershrubs :

2. Flowers yellow ..... 1. Galphimia

2. Flowers white ..... 3. Malpighia

1. Galphimia Cav.

Galphimia gracilis Bartl., in Linnaea 13: 552, 1839; Bor & Raiz., 188, Pl. 69-70.

Thryallis glauca Kuntze, Rev. Gen. 89, 1891; Bailey, 614.

A small shrub with reddish stems. Leaves oblong, glabrous. Flowers yellow, in many-flowered panicles.

Cultivated in gardens for dwarf hedging.

Flowers : February - May.      Fruits : Not seen.

JVJ 652.

2. Hiptage Gaertn.

Hiptage benghalensis (Linn.) Kurz., J. Asiat. Soc. Bengal 43(2): 136, 1874; Jacobs, in Steenis, Fl. Malesiana Ser. 1, 5: 132, 1955; Sant. in RBSI. 16(1): 1953; M. 90.

Banisteria benghalensis Linn. Sp. Pl. 427, 1753.

Hiptage madablota Gaertn., Fruct. 2: 169, t. 116, 1791; FBI. 1: 418; C. 1: 167; Gam. 1: 91; Haines, 1: 157.

A large, woody climber, young parts tomentose. Flowers creamy-white, showy, fragrant. Samara 3-winged.

Planted in botanical gardens of P. T. Science College.

Local name : Madhivilata.

Flowers and fruits : December - March.

JVJ 1602.

3. Malpighia Linn.

Malpighia coccigera Linn., Sp. Pl. 426, 1753; Woodrow, Gard. Trop. 210; Bailey, 614 & Stand. Encycl. Hort. 2: 1973, 1950.

A bushy undershrub. Leaves oval-obovate, margins spiny toothed, shining above and dull beneath. Flowers white. Fruits red, globose.

Planted in the gardens of P. T. Science College.

Flowers and fruits : September - December.

JVJ 654.

## 23. ZYGOPHYLLACEAE

1. Tree; flowers lavender blue ..... 1. Guaiacum

1. Herb; flowers yellow ..... 2. Tribulus

1. Guaiacum Linn.

Guaiacum officinale Linn., Sp. Pl. 381, 1753; Bailey, in Stand. Encycl. Hort. 2: 1414-1958; McCann, in Trees of Ind. Plt. 66.

A small, evergreen tree with smooth bark. Leaves paripinnate compound, leaflets 4-6, obovate, somewhat leathery. Flowers in umbellate cymes. Capsule yellow.

Grown in the gardens of Hari Nursery.

Flowers and fruits : April - May.

JVJ 634.

PLATE No. 31 B.

## 2. Tribulus Linn.

Tribulus terrestris Linn., Sp. Pl. 387, 1753; FBI. 1: 423;

C. 1: 170; Gam. 1: 92; M. 91.

A procumbent, silky herb. Flowers yellowp cocci of fruit 5, woody, each with 2 sharp spines.

Occasionally, on dry-sandy soil near Magdalla Port, Dumas, Hajira. Fairly common on dry, sandy river beds near Variav.

Local name : Kantaru Gokharu.

Uses : Fruits are used medicinally.

Flowers and fruits : August - March.

JVJ 155, 1241.

## 24. BALSAMINACEAE

### Impatiens Linn.

Impatiens balsamina Linn., Sp. Pl. 938, 1753; FBI. 1: 454;

C. 1: 184; Gam. 1: 101; Saur. 1: 77.

An erect annual. Leaves lanceolate, serrate. Flowers white, rose or pink-purple, showy. Capsule tomentose.

Grown in gardens during monsoon, also found as an escape on waste grounds near habitation.

Local name : Tanmania.

Flowers and fruits : August - December.

JVJ 377, 1088.

## 25. AVERRHOACEAE

### Averrhoa Linn.

Averrhoa carambola Linn., Sp. Pl. 428, 1753; FBI. 1: 439;

C. 1: 178; Gam. 1: 95; Haines, 1: 162; M. 92.

A small tree. Leaves imparipinnate, leaflets ovate-oblong, acuminate, base oblique. Flowers pink-rosy from the old wood. Fruits acutely 5-angled.

Cultivated at many places.

Local name : Kamarakh.

Uses : Fruits are edible which are often eaten raw or pickled.

Flowers and fruits : August - April.

JVJ 158, 1116, 1407, 1729.

## 26. OXALIDACEAE

1. Prostrate herbs; leaves 3-foliolate ..... 2. Oxalis

1. Erect herbs; leaves pinnate ..... 1. Biophytum

1. Biophytum DC.

Biophytum sensitivum (Linn.) DC., Prodr. 1: 690; 1824; FBI. 1: 436; C. 1: 177; Gam. 1: 95; Saur. 1: 79.

Oxalis sensitiva Linn., Sp. Pl. 434: 1753.

A small, erect herb. Leaves crowded at the tip of stem, sensitive. Flowers yellow in terminal umbels.

A fairly common weed during monsoon and post-monsoon in all localities. Found along the margins of canals, in wet, shady places, also as a winter weed of irrigated fields.

Flowers and fruits : Throughout the year.

JVJ 16, 156, 369.

2. Oxalis Linn.

Oxalis corniculata Linn., Sp. Pl. 435, 1753; FBI. 1: 436;

C. 1: 177; Gam. 1: 94; Bailey, 600; Saur. 1: 79; M. 93.

A slender, procumbent herb with spreading, slender branches. Flowers yellow. Capsule 5-angled, shortly beaked.

Not common; noted from moist, shaded places; also seen as a garden-weed; grown as pot herb in some gardens.

Local name : Abuti.      English name : Indian Sorrel.

Flowers and fruits : December - March.

JVJ 1599.



## 27. TROPAEOLACEAE

Tropaeolum Linn.

Tropaeolum majus Linn., Sp. Pl. 345, 1753; Sant. 30; Bailey,  
602. f. 99.

A sub-erect, more or less succulent herb. Leaves peltate,  
long-petioled. Flowers orange-pale yellow; sepals spurred,  
petals clawed.

Cultivated in gardens as a winter ornamental.

English name : A garden nasturtium.

Flowers and fruits : December - March.

JVJ 681.

## 28. RUTACEAE

1. Plants armed :

2. Leaves 3-foliolate; stamens many ..... 1. Aegle

2. Leaves not 3-foliolate; stamens 10-15:

3. Leaves unifoliolate ..... 2. Citrus

3. Leaves pinnately compound ..... 3. Limonia

1. Plants unarmed ..... 4. Murraya

1. Aegle Correa (nom. cons.)

Aegle marmelos (Linn.) Correa, Trans. Linn. Soc. London, 5:

223, 1800; Wt. Icon. t. 16; FBI. 1: 516; C. 1: 204;  
Talb. 1: 206, t. 125; Gam. 1: 115; Saur. 1: 81; M. 95.

Crateva marmelos Linn., Sp. Pl. 444, 1753.

A medium-sized, spinous, deciduous tree with greyish-white bark. Flowers greenish-white. Fruits woody, globose.

Often cultivated near Shiv temples; also seen along the road.

Local name : Bili.                      English name : Bael tree.

Uses : The leaves are offered to Bhagvan. Shiva. The fruits are used medicinally.

Flowers and fruits : September - March.

JVJ 979.

## 2. Citrus Linn.

1. Fruit large-sized, over 10 cm. broad .....2. C. maxima

1. Fruit under 10 cm. ....1. C. limon

1. Citrus limon (Linn.) Burm, f., Fl. Ind. 173, 1768;

Bailey, 609.

C. media var. limon Linn., Sp. Pl. 2: 782, 1753; C.1: 201.

A thorny shrub. Leaves ovate; petiole winged. Fruits medium-sized.

Grown in gardens throughout the area.

Local name : Limbu.                      English name : Lemon.

Uses : Cultivated for its acidic juice.

Flowers and fruits : August - March.

JVJ 1422.

2. Citrus maxima (Burm.) Merrill, Interpret. Herb. Amb. 296, 1917 & Sp. Blanconae 204; M. 94.

C. grandis (Linn.) Osb., Dagbok, Ostind. Resa 98, 1757; Bailey, 610.

A small tree. Leaves large, ovate-oblong. Flowers white. Fruits large, globose, rind-thick.

Not so common as the previous species, cultivated in gardens.

Local name<sup>e</sup> : Pomelo. English name : Pumelo.

JVJ 616.

The fruits of Citrus aurantium L., and C. limettoides are sold in local market but the plants are never seen under cultivation in the area.

### 3. Limonia Linn.

Limonia acidissima Linn., Sp. Pl. (ed. 2) 554, 1762; Airy Shaw, in Kew Bull. 293, 1939.

Feronia limonia (Linn.) Swingle, in Jour. Wash. Acad. Sci.

4: 328, 1914; Blatter, in JBNHS. 36: 320, 1933; Saur. 1:81.

Schinus limonia Linn., Sp. Pl. 389, 1753.

Feronia elephantum Correa, in Tras. Linn. Soc. 5: 225, 1800;

FBI. 1: 516; Wt. Icon. t. 15; C. 1: 203; Gam. 1: 114.

A tall, evergreen tree, armed with straight spines and brownish-grey bark. Leaflets 5-9, obovate, aromatic, petioles winged. Flowers greenish-yellow.

Often planted near human habitation.

Local name : Kothi. English name : Elephant or wood apple.

Uses : The pulp is eaten. Chatani is prepared from the pulp.

Flowers and fruits : October - March.

JVJ 566, 1506.

#### 4. Murraya Linn. (nom. cons.)

1. Leaves aromatic; leaflets 7-15,

pubescent beneath; berries black .....1. M. koenigii

1. Leaves not aromatic; leaflets 5-9,

glabrous; berries red .....2. M. paniculata

1. Murraya koenigii (Linn.) Spreng, Syst. 2: 315, 1825; FBI. 1:

503; C. 1: 193; Gam. 1: 111; Saur. 1: 80; M. 97.

Bergera koenigii Linn., Mant. 1: 565, 1767.

A shrub or small tree with grey bark. Leaflets ovate-lanceolate, aromatic. Flowers white; berries black.

Cultivated.

Local name : Mitho limado. English name : Curry plant.

Uses : Leaves are used to flavour curries.

Flowers and fruits : February - May.

JVJ 980, 1441.

2. Murraya paniculata (Linn.) Jack., in Mal. Misc. 1(5): 31, 1820;

FBI. 1: 503; C. 1: 193; M. 97; Hassan, 386.

Chalcas paniculata Linn., Mant. 68, 1767.

Murraya exotica Linn., Mant. Alt. 563, 1771 (Murraea);

FBI. 1: 502; Wt. Icon. t. 96; C. 1: 193; Gam. 1: 111.

A large, evergreen shrub. Leaflets dark-green, shining, ovate or obovate, oblique. Flowers white, fragrant.

Grown in gardens.

Local name : Kamini.

Flowers and fruits : August - March.

JVJ 533, 1753.

## 29. SIMAROUBACEAE

Ailanthus Desf. (nom. cons.)

Ailanthus excelsa Roxb., Pl. Cor. 1: 24, t. 23, 1795; FBI. 1:

518; C. 1: 205; D. & G. 46; Gam. 1: 116; Saur. 1: 83;

M. 97; Pavagadh, 58.

A large tree with pale-white trunk. Leaves pinnate, leaflets 8-14 pairs, coarsely and irregularly serrate. Flowers small, greenish-yellow in large panicles, polygamous. Samara

twisted near the base, 1-seeded.

Occasional; planted near Surat Railway station and along roadsides.

Local name : Moto Arduso.

Flowers and fruits : January - April.

JVJ 564.

### 30. BALANITACEAE

#### Balanites Delile (nom.cons.)

Balanites aegyptiaca (Linn.) Del., Ill. Fl. d'Eg., 263, t. 28, f. 1, 1813; Blatter, in JBNHS. 34: 895, 1931; Saur. 1: 84.

Ximenia aegyptiaca Linn., Sp. Pl. 1194, 1753.

Balanites roxburghii Planch, Ann. Sci. Nat. (Ser. 4): 258, 1854; FBI. 1: 522; C. 1: 207; M. 98.

An armed shrub or small tree. Leaves 2-foliolate, branchlets ending in sharp, straight thorns. Flowers greenish-white. Drupe ovoid, 1-seeded, woody and 5-ribbed.

Not common; seen along the way to Variav, Bhestan. Also seen on the upper belt of river bank where they are always found to grow together near Ved and Varachha.

Local name : Ingorio.

Flowers and fruits : December - April.

JVJ 273, 393.

## 31. OCHNACEAE

Ochna Linn.

Ochna squarrosa Linn., Sp. Pl. 732, 1762; FBI. 1: 523; G. 37;

D. & G. 17; Talb. 36; C. 1: 208; Gam. 1: 118; M. 98.

A small shrub. Leaves elliptic-lanceolate, serrate.  
Flowers yellowish-orange. Drupes black.

Rare; planted in the botanical gardens of P.T. Science  
College.

Flowers and fruits : August - October.

JVJ 697.

## 32. MELIACEAE

1. Fruits drupe; seeds not winged :

2. Leaves unipinnate; flowers white;

ovary 3-celled .....1. Azadirachta

2. Leaves bi- or tri-pinnate; flowers

lilac-blue; ovary 5-celled .....2. Melia

1. Fruits capsule; seeds winged .....3. Swietenia

1. Azadirachta A. Juss.

Azadirachta indica A. Juss., Mem. Mus. His. Nat. Paris 19:

221, t. 2, f. 5, 1830; Wt. Icon. t. 17; C. 1: 220;

Gam. 1: 127; Saur. 1: 87; M. 99; Pavagadh, 59.

Melia azadirachta Linn., Sp. Pl. 385, 1753; FBI. 1: 544.

A large tree with straight trunk. Leaflets 9-13, obliquely lanceolate, acuminate, serrate. Flowers scented. Drupe 1-seeded.

Planted all over the area, as a roadside tree and near habitation.

Local name : Limado.                      English name : Margosa tree.

Uses : All parts are used medicinally. Young twigs are used for cleaning the teeth.

Flowers and fruits : February - May.

JVJ 105.

## 2. Melia Linn.

Melia azedarach Linn., Sp. Pl. 384, 1753; FBI. 1: 544; C. 1: 218; Gam. 1: 126; Saur. 1: 88; M. 99.

A medium-sized tree. Leaflets 3-11, obliquely ovate-lanceolate, acuminate, serrate.

Frequently planted in gardens as an avenue tree.

Local name : Bakan Limado.      English name : Pride of India or  
Persian Lilac.

Flowers and fruits : March - June.

JVJ 628, 1277.



3. Swietenia Jacq.

Swietenia mahagoni Jacq., Enum. Pl. Carib. 20, 1760; Gam. 1: 134; Haines, 1: 181; Duthie, 140; Bailey, 613; M. 100.

A huge, evergreen tree. Leaflets pinnate, obliquely-ovate or lanceolate, entire, glabrous. Flowers greenish-yellow. Fruit a woody capsule; seeds winged at the upper ends.

A rare plant. Few trees are seen in the campus of M.T.B. College, also in a private garden at Dumas. Indi

Flowers and fruits : February - April.

JVJ 1757.

## 33. CELASTRACEAE

1. Climbing shrubs; flowers in racemes .....1. Celastrus

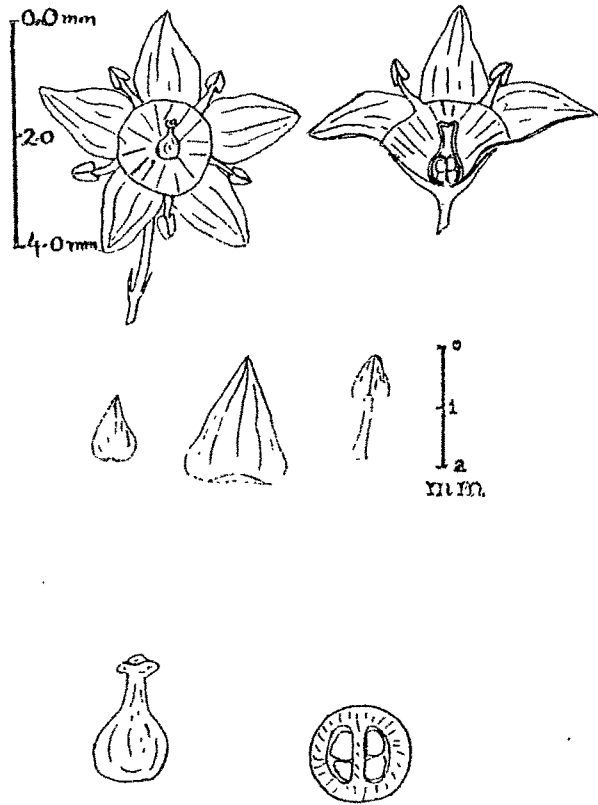
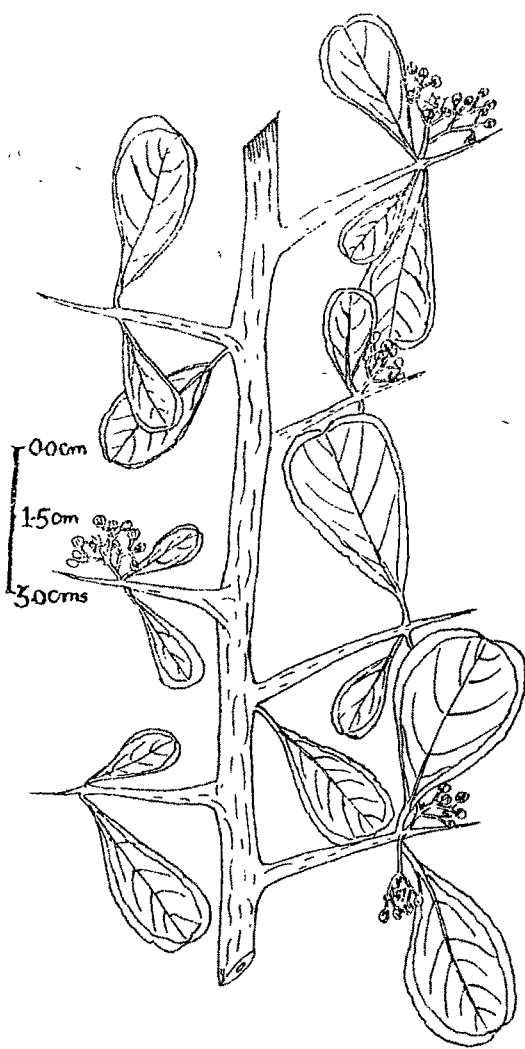
1. Thorny shrubs; flowers in cymose .....2. Maytenus

1. Celastrus Linn.

Celastrus paniculata Willd., Sp. Pl. 1: 1125, 1798; Wt. Icon. t. 158; FBI. 1: 617; C. 1: 245; Talb. 1: 276, t. 163; Gam. 1: 150; Saur. 1: 89.

A twining, shrubby climber. Leaves ovate-elliptic or obovate, acuminate, crenate in the upper part. Flowers yellowish-green in drooping panicles. Capsule globose, yellow when ripe.

Found along with hedge plants.



Maytenus emarginata (Willd) Ding Hou  
PLATE-42

Local name : Malkakadi.

Flowers and fruits : October - April.

JVJ 64, 157.

## 2. Maytenus Molina

Maytenus emarginata (Willd.) Ding-Hou, in Steenis, Fl. Malesiana  
(Ser. 1) 6(2): 241, 1962.

Celastrus emarginatus Willd., Sp. Pl. 1: 1128, 1798.

Gymnosporia montana (Roth) Benth, in Fl. Aust. 1: 400,  
1863; FBI. 1: 621; C. 1: 247; Gam. 1: 150

A large shrub; young branches purple. Leaves and flowers  
usually on thorns. Flowers whitish-green.

Common throughout the area, mostly along with hedge plants.  
A very elegant plant when it flowers. At the coastal regions of  
Hajira and Mora the plant attains a size of small tree.

Flowers and fruits : October - May.

Uses : Popular fodder plant of coastal regions.

JVJ 563, 1327, 1574.

Plate 42.

## 34. RHAMNACEAE

### Zizyphus Juss.

1. Leaves distichous; spines usually

one at each node .....3. Z. oenoplia

1. Leaves not distichous; spines  
two at each node :
2. Leaves glabrous above; densely  
tomentum beneath; tree .....1. Z. mauritiana
2. Leaves tomentose on both sides;  
a diffuse shrub .....2. Z. nummularia

1. Zizyphus mauritiana Lamk., Encycl. 3: 319, 1789; Sant. in  
JBNHS. 51: 802, 1953; FBI. 1: 632; Saur. 1: 92;  
Sant. 43; M. 101.

Z. jujuba Lamk., Encycl. 3: 318, 1789; FBI. 1: 632;  
C. 1: 256; Duthie, 1: 52; Gam. 1: 157.

A large shrub or medium-sized tree. Leaves ovate-elliptic  
to sub-orbicular. Flowers whitish-green. Drupes fleshy.

Wild as well as cultivated. 'The Randeri Bor' - a local  
variety is well known in the district.

Local name : Bor.

Uses : Fruits are edible, locally used for pickle.

Flowers and fruits : September - April.

JVJ 1307, 1657, 1944.

Plate 30.

2. Zizyphus nummularia (Burm. f.) Wt. & Arn. Prodr. 162, 1834;  
FBI. 1: 632; Saur. 1: 93; M. 102.

Rhamnus nummularia Burm. f. Fl. Ind. 61, 1768.

Zizyphus rotundifolia Lamk., Encycl. 3: 319, 1789;

C. 1: 257.

A straggling, tomentose shrub with zig-zag branches. Leaves ovate-orbicular, tomentose beneath. Flowers pale greenish-yellow. Drupes globose, edible.

Seen throughout the area, often gregarious in the dry waste lands near the railway track.

Local name : Chani Bor.

Uses : Fruits are edible. The young branches and leaves are sold in local market as a fodder for goats.

Flowers and Fruits : September - February.

JVJ 1377, 1589.

3. Zizyphus oenoplia (Linn.) Mill., Gard. Dict. (ed. 8) no. 3,

1768; FBI. 1: 634; C. 1: 257; Gr. 39; D. & G. 48;

Gam. 1: 158; Saur. 1: 93; Sant. 43; M. 102.

Rhamnus oenoplia Linn., Sp. Pl. 194, 1753.

A sub-scandent, straggling shrub, branches rusty pubescent. Leaves oblique at the base, margins denticulate, pubescent above, silky-beneath. Fruits small.

Occasionally, along with hedge plants.

Local name : Jangali Bor.

Flowers and fruits : August - January.

JVJ 506, 1399, 1589.

### 35. VITACEAE ( AMPELIDACEAE )

1. Leaves simple :

2. Stems quadrangular, fleshy ..... 3. Cissus

2. Stems not as above :

3. Flowers polygamo-monoecious;

wild plant ..... 1. Ampelocissus

3. Flowers polygamo-dioecious;

cultigen ..... 4. Vitis

1. Leaves trifoliolate ..... 2. Cayratia

1. Ampelocissus Planch. (nom. cons.)

Ampelocissus latifolia (Roxb.) Planch., Journ. Vigne. Amer.

374, 1884; and in DC. Mon. Phan. 5(2): 370, 1887;

Saur. 1: 96; Sant. 44.

Vitis latifolia Roxb., Hort. Beng. 18, 1814; FBI. 1: 652;

C. 1: 269.

A large, twining shrub. Leaves 3-7-angled or lobed, orbicular, base cordate. Flowers scarlet. Berry sub-globose, black.

Occasionally seen twining upon the hedge plants and trees.

Flowers and fruits : August - October.

JVJ 418, 801.

## 2. Cayratia Juss. (nom. cons.)

Cayratia carnosa (Lamk.) Gagnep., in Not. Syst. 1: 347, 1911;

Gam. 1: 169; Saur. 1: 98; M. 102; Pavagadh, 64.

Cissus carnosa Lamk., Encycl. 1: 31, 1783.

Vitis carnosa Wall. ex Wt., et Arn. Prodr. 127: 1834;

FBI. 1: 654; N. 62; Wt. Icon. t. 171.

V. trifolia Linn., Sp. Pl. 203, 1753; C. 1: 271; NG. 254.

A slender, creeping or climbing shrub. Leaves 3-foliolate, leaflets variable, tendrils branched, leaf-opposed. Flowers greenish-white. Berries black.

Fairly common; climbing on the hedges and walls of houses. Also seen spreading over the wet soil of canals and fields.

Local name : Khatkhatunbo.

Flowers and fruits : Throughout rainy and winter months.

JVJ 104, 373.

## 3. Cissus Linn.

Cissus quadrangularis Linn., Mant. 39, 1767; Saur. 1: 97;

FBI. 1: 645; C. 1: 266; Gam. 1: 167.

Vitis quadrangularis Wall. ex Wt. & Arn., Prodr. 125, 1834;

FBI. 1: 645; C. 1: 266.

A climber with sharp, 4-angled, fleshy, jointed stems; tendrils simple and leaf-opposed. Flowers greenish-white. Berries globose, dark.

Occasionally seen growing along hedge plants. Also planted for fences around some home gardens.

Local name : Haad-Sankal.

Flowers and fruits : September - December.

JVJ 1025, 1239, 1400.

#### 4. Vitis Linn.

Vitis vinifera Linn., Sp. Pl. 202, 1753; FBI. 1: 652; C. 1: 275;

Gam. 1: 163; Bailey, 649; M. 103.

A large climber with bifid tendrils. Leaves 3-5-lobed. Flowers greenish-yellow. Berry green.

Rarely cultivated in a few private gardens.

Local name : Draksh.

English name : Grape.

Uses : Berries are edible.

Flowers and fruits : January - March.

JVJ 968.

### 36. SAPINDACEAE

1. Slender climbing herbs .....1. Cardiospermum

1. Trees .....2. Sapindus



1. Cardiospermum Linn.

Cardiospermum halicacabum Linn., Sp. Pl. 366, 1753; FBI. 1: 670; Wt. Icon. t. 508; C. 1: 280; Gam. 1: 175; Duthie, 166; Saur. 1: 100; M. 103.

A delicate herb; climbing by tendrils. Leaves biternate. Flowers small, white, the lowest pair of pedicels transformed into spiral tendrils. Capsule inflated, winged at the angles.

Common on hedges, along the border of fields, bank of canals and a weed of irrigated fields.

Local name : Kagdoliyo.

Flowers and fruits : August - February.

JVJ 103, 422, 1970.

2. Sapindus Linn.

Sapindus emarginatus Vahl, Symb. Bot. 3: 54, 1794; Gr. 29; D. & G. 35; Saur. 1: 102; Pavagadh, 65.

S. laurifolius var. emarginatus C. 1: 284.

S. trifolius Hiern., in FBI. 1: 682, pro parte (non Linn.).

A medium-sized tree. Leaves 5-7-foliolate, leaflets obroadly ovate, oblong-lanceolate. Flowers greenish-white. Drupes sub-globose, fleshy, wrinkled.

Mostly planted near human habitation, also found along

the border of fields and as a roadsides tree.

Local name : Aritha.                      English name : Soap nut.

Uses : The fruits 'Aritha' are sold in market which contain saponin and are used as substitute for soap for washing woollen clothes and hair.

Flowers and fruits : August - February.

JVJ 255, 615.

### 37. ANACARDIACEAE

1. Leaves simple :

2. Fruit a fleshy drupe ..... 3. Mangifera

2. Fruit a reniform nut ..... 1. Anacardium

1. Leaves compound ..... 2. Lannea

#### 1. Anacardium

Anacardium occidentale Linn., Sp. Pl. 383, 1753; FBI. 2: 20;  
C. 1: 292; Gam. 1: 185; Bailey, 625.

A shrub or small evergreen tree. Leaves obovate or elliptic. Flowers yellowish-green. Nut borne on a fleshy, orange or red thalamus.

Seen in cultivation only at few places.

Local name : Kaju.                      English name : Cashew nut.

Uses : Nuts and fleshy thalamus are edible.

Flowers and fruits : January - April.

JVJ 1734.

## 2. Lannea A. Rich.

Lannea coromandelica (Houtt.) Merrill, in Journ. Arn. Arbor.

19: 353, 1939; Sant. 51; Saur. 1: 103; Pavagadh, 66.

Dialium coromandelicum Houtt, Nat. Hist. Ser. 2, 2: 39,  
t. 5, f. 2, 1774.

Odina woodier Roxb., Fl. Ind. 2: 293, 1832; Wt. Icon. t. 60;

FBI. 2: 29; C. 1: 296; Talb. 1: 353, t. 207; Gam. 1: 187.

A large, deciduous tree. Leaves crowded at the ends of branches, leaflets 7-11, ovate-oblong, glabrous, shining. Flowers greenish-yellow, male and female usually on different branches, appearing when the tree is leafless. Drupe small, kidney-shaped, red when ripe.

Few plants were noted from Rander, Dumas and Variav.

Local name : Mavato.

Flowers and fruits : March - April.

JVJ 1614.

## 3. Mangifera Linn.

Mangifera indica Linn., Sp. Pl. 200, 1753; FBI. 2: 13; C. 1:

291; Gr. 41; D. & G. 51; Talb. 1: 348; Gam. 1: 185;

Saur. 1: 103; M. 105.

A large, evergreen tree. Leaves oblong-lanceolate, simple, coriaceous. Flowers pale-yellow, polygamous, arranged in panicles.

Very common but never wild. Several varieties like Rajapuri, Sardar, Malkubo, Afus, Nilam, Totapuri and Dadmiyo are in cultivation.

Local name : Keri.

English name :Mango.

Uses : Fruits are edible.

Flowers and fruits : March - July.

JVJ 658.

#### . 38. MORINGACEAE

##### Moringa Adans.

1. Leaves 3-pinnate, leaflets elliptic-obovate;

flowers white; pods cylindrical, 9-ribbed....2. M. oleifera

1. Leaves 2-pinnate, leaflets orbicular; flowers

pale-yellow; pods triquetrous .....1. M. concanensis

1. Moringa concanensis Nimmo, in Graham, Cat. Bom. Pl. 43, 1839;

FBI. 2: 45; C. 1: 301; D. & G. 311; Talb. 64; Brandis, 130; Saur. 1: 106.

A soft-wooded small tree. Leaves 2-pinnate. Flowers yellow to pale-yellow. Fruits bitter in taste.

Planted along the border of fields and near human habitation.

Local name : Kadavo-Sargavo.

Uses : Fruits are eaten as vegetable.

Flowers and fruits : January - May.

JVJ 659, 1832.

2. Moringa oleifera Lamk., Encycl. 1: 398, 1785; Blatter, in JBNHS. 31: 907; Bailey, 451; Saur. 1: 105; M. 106.

M. pterigosperma Gaertn., Fruct. 2: 314, 1791; FBI. 2: 45; C. 1: 301; D. & G. 311; Talb. 1: 364, t. 212; N. 70.

A small tree with grey-white trunk. Leaves polypinnate. Flowers pale-white. Pods long, pendulous.

Cultivated throughout the area.

Local name : Mitho sargavo.

Uses : Flowers and fruits are eaten as vegetable.

Flowers and fruits : January - April.

JVJ 65, 1647.

### 39. FABACEAE (PAPILIONACEAE)

(Following is an artificial key which leads directly to the identification of the various species, It is expected that the users of the key will find it easy to identify members of this difficult group).

## 1. Trees :

## 2. Leaves 3-foliolate :

3. Flowers orange-red or salmon-  
coloured; trunk unarmed ..... Butea monosperma

3. Flowers bright-red; trunk  
armed with prickles ..... Erythrina variegata  
var. orientalis

## 2. Leaves with more than 3-foliolate :

4. Flowers more than 5 cm. across.. Sesbania grandiflora

## 4. Flowers less than 5 cm. :

5. Pods 1-seeded, woody ..... Derris indica

## 5. Pods many-seeded, not woody :

## 6. Pods flat :

7. Corolla pale-green; pods  
2-3-seeded, strap-shaped.. Dalbergia sissoo

7. Corolla pink; pods more  
than 5-seeded, not  
strap-shaped ..... Gliricidia sepium

6. Pods cylindrical ..... Sesbania sesban  
var. picta

## 1. Plants other than trees :

8. Plants having a simple leaf or a  
compound leaf with one leaflet :9. Plants armed with hard spines .....Alhagi pseudalhagi

## 9. Plants unarmed :

## 10. Pods 1-2-seeded :

11. Flowers yellow .....Goniogyna hirta

## 11. Flowers other than yellow :

## 12. Erect shrub or undershrub :

13. Leaves simple; flowers  
bluish-purple .....Psoralea corylifolia13. Leaves uni-foliolate;  
flowers pink or rose:14. Pods turgid, not  
jointed, concealed  
by the persistent  
bracts; leaflets  
ovate .....Flemingia bracteata14. Pods jointed,  
muricated; bracts  
nil; leaflets  
obovate or  
orbicular.....Taverniera cuneifolia

12. Diffuse or sub-erect herbs :

15. Leaves linear .....Indigofera linifolia

15. Leaves ovate-cordate....Indigofera cordifolia

10. Pods more than 2-seeded :

16. Pods jointed, separating into  
indehiscent 1-seeded joints :

17. Joints of pods turgid :

18. Pods perfectly or  
imperfectly moniliiform :

19. Pods reticulately veined  
or transversely ribbed :

20. Pods reticulately  
veined .....Alysicarpus longifolius

20. Pods transversely  
ribbed :

21. Pods 2-edged,  
not exserted :

22. Calyx glabrous on  
the back, minutely  
ciliate on the  
margins .....Alysicarpus glumaceus



- 22. Calyx hairy on the back,  
strongly ciliate on the  
margins .....Alysicarpus scariosus
- 21. Pods 4-gonous, exserted.....Alysicarpus  
tetragonolobus
- 19. Pods not veined or ribbed :
  - 23. Leaflets linear-lanceolate..Alysicarpus bupleurifolius
  - 23. Leaflets oblong-rounded ....Alysicarpus monilifer
- 18. Pods not moniliform, veined :
  - 24. Calyx shorter than the first  
joint of the pod .....Alysicarpus procumbens
  - 24. Calyx equalling or slightly  
longer than first joint of  
the pod .....Alysicarpus vaginalis
- 17. Joints of pods flattened :
  - 25. Herbs .....Desmodium parviflorum
  - 25. Undershrubs :
    - 26. Branches angled; joints of  
pods longer than broad .....Desmodium gangeticum
    - 26. Branches terete; joints of  
pods as long as broad .....Desmodium velutinum

16. Pods not jointed :

27. Pods flattened, leaf-like :

28. Pedicels filiform; pods

2-3 mm. broad ..... Tephrosia strigosa

28. Pedicels very short or nil;

Pods 4-5 mm. broad ..... Tephrosia jamnagarensis

27. Pods turgid :

29. Pods glabrous :

30. Racemes short, few-flowered :

31. Corolla exserted; pods

shortly stalked; stem

prostrate ..... Crotalaria filipes  
var. trichophora

31. Corolla not exserted;

Pods sessile; stem

erect ..... Crotalaria albida

30. Racemes lax :

32. Stipules 0; pods ovoid-

oblong; seeds 4-10... Crotalaria linifolia

32. Stipules present; pods

linear-oblong, more than

10-seeded ..... Crotalaria retusa

29. Pods hairy, silky or velvety .....Crotalaria juncea
8. Plants having a leaf with two or more leaflets :
33. Leaflets 2 or 3 :
34. Leaflets 2 .....Zornia gibbosa
34. Leaflets 3 :
35. Twining or prostrate herbs  
or undershrubs :
36. Pods covered with  
irritant bristles .....Mucuna prurita
36. Pods without bristles :
37. Pods 2-seeded :
38. Leaflets 1-2 cm.  
long, obtuse....Rhynchosia minima
38. Leaflets more than  
2 cm long, acute..Rhynchosia minima  
var. laxiflora
37. Pods more than 2-seeded :
39. Leaflets dotted beneath :
40. Pods more than  
10 mm. broad, without  
deep lines between  
the seeds ...Atylosia platycarpa

40. Pods less than 10 mm broad with  
 deep lines between the seeds .... Atylosia scarabaeoides

39. Leaflets not dotted beneath :

41. Stigma oblique :

42. Keel spiral :

43. Leaflets deeply lobed .... Vigna aconitifolia

43. Leaflets slightly lobed or  
 entire :

44. Terminal leaflet 3-lobed.. Vigna trilobata

44. Leaflets entire :

45. Seeds green ..... Vigna radiata

45. Seeds black ..... Vigna mungo

42. Keel not spiral :

46. Pods linear, cylindrical,  
 more than 2 cm. long ..... Vigna unquiculata

46. Pods oblong-turgid less  
 than 2 cm. long ..... Crotalaria orixensis

41. Stigma terminal :

47. Stamens monadelphous :

48. Pods more than 10 cm. long;  
 twining undershrub; all  
 stamens perfect ..... Canavalia gladiata
48. Pods less than 5 cm. long ; twining  
 herb; alternate stamens perfect....Teramnus labialis
47. Stamens diadelphous :
49. Flowers more than 1 cm long;  
 twining undershrub .....Lablab purpurea
49. Flowers less than 1 cm long;
50. Prostrate sub-erect herb;  
 stipules foliaceous, auricled...Desmodium dichotomum
50. Trailing; stipules scarious,  
 not auricled .....Desmodium triflorum
35. Erect herbs or undershrubs or shrubs :
51. Flowers yellow :
52. Leaflets toothed :
53. Pods sub-globose, 5 mm long,  
 1-seeded .....Melilotus indica
53. Pods cylindrical, 5-8 cm. long,  
 more than 1-seeded .....Trigonella foenum-  
graecum

52. Leaflets entire :
54. Pods sub-globose; less than  
1 cm. long; herb .....Crotalaria medicaginea
54. Pods cylindrical; more than 2 cm.  
long; undershrub or shrub .....Cajanus cajan
51. Flowers other than yellow :
55. Flowers purple :
56. Pods 2-3-seeded .....Eleminqia lineata
56. Pods more than 3-seeded :
57. Pods indehiscent, straight :
58. Pods flat, tetragonous...Cyamopsis tetragonoloba
58. Pods jointed, not  
tetragonous .....Desmodium parviflorum
57. Pods dehiscent, spirally  
twisted .....Medicago sativa
55. Flowers white, pink, red or rose :
59. Pods sub-globose or spherical;  
flowers white .....Melilotus alba
59. Pods flat or cylindrical; flowers  
other than white :

60. Pods flat, muricate ..... Taverniera cuneifolia

60. Pods cylindrical, not muricate :

61. Pods slightly winged, 2-seeded. Indigofera glandulosa

61. Pods not winged, more than  
2-seeded :

62. Pods torulose ..... Indigofera oblongifolia

62. Pods straight :

63. Terminal leaflet sessile.. Indigofera trifoliata

63. Terminal leaflet stalked.. Indigofera trita

33. Leaflets more than 3 :

64. Fruits geocarpic ..... Arachis hypogaea

64. Fruits aerial :

65. Climbers, twiners, prostrate or  
sub-erect herbs :

66. Climbers or twiners :

67. Tendril present ..... Pisum sativum

67. Tendril absent :

68. Leaflets 3-7; flowers

blue or white ..... Clitoria ternatea

68. Leaflets more than 7 :

69. Pods winged, flat; flowers pale

pink .....Derris timoriensis

69. Pods not winged, turgid;

flowers pink or pale blue.....Abrus precatorius

66. Prostrate or sub-erect :

70. Pods turgid; leaflets toothed.....Cicer arietinum

70. Pods flat :

71. Pods folded inside the calyx;

flowers yellow .....Smithia conferta

71. Pods not folded; flowers other

than yellow :

72. Pods 2-seeded .....Indigofera linnaei

72. Pods 6-9-seeded .....Tephrosia senticosa

65. Erect herbs or shrubs :

73. Stamens 5 + 5 .....Aeschynomene indica

73. Stamens 9 + 1 :

74. Flowers yellow or yellowish-white :

75. Unarmed; pods twisted .....Sesbania sesban  
var. picta



75. Armed; pods not twisted .....Sesbania bispinosa
74. Flowers other than yellow :
76. Pod-joints folded on one  
another within the calyx .....Uraria picta
76. Pods not as above :
77. Anthers apiculate :
78. Pods tetragonous;  
densely silky hairy.....Indigofera astragalina
78. Pods not tetragonous,  
glabrous .....Indigofera tinctoria
77. Anthers not apiculate :
79. Pods densely villous....Tephrosia hirta
79. Pods glabrescent .....Tephrosia hamiltonii

Abrus Linn.

Abrus precatorius Linn., Syst. 472, 1767; FBI. 2: 175; C. 1: 382; Gam. 1: 247; Saur. 1: 158; M. 126.

A woody climber. Leaflets 10-20 pairs. Flowers pinkish-white. Pods oblong, turgid. Seeds scarlet with a black spot.

Found occasionally in hedges throughout the area.

Local name : Chanothi.

Uses : The dried leaves are chewed with betel leaf. The seeds were formerly used as Jeweller's weight (rati).

Flowers and fruits : August - December.

JVJ 935.

Aeschynomene Linn.

Aeschynomene indica Linn., Sp. Pl. 713, 1753; FBI. 2: 151;

Wt. Icon. t. 299; C. 1: 363; Gam. 1: 234; Saur. 1: 144;

M. 122.

An erect, branched herb. Leaves imparipinnate, leaflets sensitive. Flowers yellow, purple-veined. Pods narrow, 6-10-jointed.

Occurs throughout the area; common in marshy places, along canal banks, near ditches or in water-lodged soil, occasionally as a weed in rice fields.

Uses : Used as fodder in the coastal villages.

Flowers and fruits : July - November.

JVJ 789, 961, 1011, 1198.

Alhagi Adans.

Alhagi pseudalhagi (Bieb.) Desv., in Jour. de Bot. 1: 120,

1813; Saur. 1: 141; M. 122; Pavagadh, 69.

Hedysarum pseudalhagi Bieb., Fl. Taur. Cauc. 2: 174, 1808.

Alhagi camelorum Fisch., Ind. Hort. Gorenk. (ed. 2) 72, 1812;  
C. 1: 355.

A. maurorum Baker, in FBI. 2: 145 (non Desv.); D. & G. 67.

An erect, branched, bushy, perennial under shrub, armed with long thorns. Leaves simple, ovate or elliptic-oblong. Flowers red, on axillary thorns. Pods turgid, irregularly torulose.

Gregarious on a dry sandy river bed near Variav, on the middle-belt of river Tapi near Nana-Varachha, on polluted land and fallow fields near Udhana. Fairly common on the coastal land near Abhava and Hajira.

Uses : Used as fodder.

Flowers and fruits : October - March.

JVJ 299, 1388, 1555, 2099.

Alysicarpus Desv. (nom. cons.)

Alysicarpus bupleurifolius (L.) DC., Prodr. 2: 352, 1825;

FBI. 2: 158; C. 1: 370; Gam. 1: 239; Saur. 1: 148; M. 125.

A sub-erect herb. Leaves 1-foliolate with large persistent stipules. Flowers purple. Pods slightly moniliform.

Fairly common in well-protected premises of the Engineering College and the Medical College; along the boundary of fields, often mixed with Cotton and Cajanus crops.

Flowers and fruits : July - November.

JVJ 126.

Alysicarpus glumaceus (Vahl) DC., Prodr. 2: 353, 1825; J. Leon, in B.J.B.B. 24: 98, f. 18, 1954; Andrews, Fl. Anglo-Egypt. Sudan 2: 175, 1952; Shah, in JBNHS. 60(1): 296, 1963.

Hedysarum violaceum Forsk., Fl. Aegypt.-Arab. 136, 1775 (non Linn. 1753).

H. glumaceum Vahl, Symb. Bot. 2: 106, 1791.

H. rugosus (Willd.) DC., Prodr. 2: 353, 1825; FBI. 2: 159; Gam. 1: 239.

Alysicarpus violaceus (Forsk.) Schindl., in Fedde, Repert. 21: 13, 1925; Saur. 1: 149 (pro parte).

A. rugosum Willd., Sp. Pl. 3(2): 1172, 1803.

A. rugosus (Willd.) DC., loc. cit. 353, 1825; C. 1: 371.

A prostrate or sub-erect herb. Flowers purple in dense, spike-like racemes. Pods moniliform, 2-5-jointed, transversely wrinkled. included in chaffy calyx.

Occasionally along the sides of paths in Medical College campus, in fields along with legumes and vegetable crops, frequently seen on the upper belt of river bank.

Flowers and fruits : August - February.

JVJ 845, 1160, 1236.

Alysicarpus longifolius (Rottb.) Wt. & Arn., Prodr. 233, 1834;

FBI. 2: 159; Wt. Icon. t. 251; C. 1: 370; Gam. 1: 239;

Saur. 1: 148; M. 125.

Hedysarum longifolium Rottb. ex Spreng., Syst. 3: 319, 1826.

An erect, stout, undershrub. Leaflets variable in size. Flowers purple with yellow dots. Pods slightly moniliform, reticulately veined, 4-6-jointed.

Fairly common on open waste lands; forms a close association with grasses; also grows along with Cotton, Sorghum, Maize and legumes.

Uses : Used as fodder.

Flowers and fruits : July - November.

JVJ 127, 1007, 1662.

Alysicarpus monilifer (L.) DC., Prodr. 2: 353, 1825; FBI. 2:

157; C. 1: 368; Gam. 1: 238; Saur. 1: 147; M. 124.

Hedysarum moniliferum Linn., Mant. 1: 102, 1767.

Alysicarpus vaginalis Hochst. & Baker, in FTA. 2 : 170, 1871.

A small, prostrate or sub-erect, branched herb. Leaflets oblong-elliptic. Flowers pinkish-purple to reddish-purple. Pods 4-8-jointed, moniliform, joints turgid.

Frequently seen throughout the area, growing as a weed with Cotton, Sorghum, Maize and Legumes; also noted along the border of fields and near hedges.

Flowers and fruits : August - October.

JVJ 860, 1228.

Alysicarpus procumbens (Roxb.) Schindler, in Fedde, Rep. 21:

11, t. 43, 1925; Saur. 1: 147.

Hedysarum procumbens Roxb., Hort. Beng. 56, 1814, nom. nud.

& Fl. Ind. 3: 345, 1832.

Alysicarpus hamosus Edgew., in JASB. 21: 32 & 171, 1852;

FBI. 2: 157; C. 1: 368.

A prostrate herb. Stems covered with long, spreading hairs. Leaflets orbicular-sub-orbicular. Flowers purple, usually in pairs. Pods compressed, clothed with hooked hairs.

Found on open waste lands, often mixed with grasses.

Flowers and fruits : August - November.

JVJ 123, 450.

Alysicarpus scariosus Grah. ex Thw. Enum. Pl. Zeyl. 88, 1858

(Type Wall. Cat. 5766 C.K.) Ali, in Biol. 12: 32, 1966.

Hedysarum scariosum Rottl. ex Spreng., Syst. Veg. 3:319, 1826.

Alysicarpus styracifolius auct. non DC.; Saur. 1: 150.

A. rugosus var. styracifolius Baker, in FBI. 2: 159;

C. 1: 371; Gam. 1: 239.

A small, diffuse herb. Leaves oblong-lanceolate. Flowers

pinkish-red. Pods included in the calyx, 2-5-jointed and transversely ribbed.

Occasionally grows with grasses along the path; as a weed in a variety of crops; also seen along the border of fields.

Flowers and fruits : August - October.

JVJ 45, 536, 1161, 1925.

Alysicarpus tetragonolobus Edgew., in JASB. 21: 169, 1853;

FBI. 2: 159; C. 1: 372; Saur. 1: 150.

Alysicarpus quadrangularis Edgew. ex Baker, in FBI. 2: 159.

A prostrate or sub-erect herb. Leaflets elliptic-oblong. Flowers pink, in cymes. Pods 4-gonous, exerted, transversely ribbed.

Occasional in the crevices of an embankment on the bank of river Tapi, also seen in moist, waste localities.

Flowers and fruits : October - March.

JVJ 1223, 1562, 2027, 2085.

Alysicarpus vaginalis (L.) DC., Prodr. 2: 353, 1825; FBI. 2:

158; C. 1: 369; Saur. 1: 148; M. 124.

Hedysarum vaginalis Linn. Sp. Pl. 746, 1753.

A prostrate or sub-erect herb with scarious stipules. Leaflets oblong-lanceolate. Flowers pinkish-purple. Pods thin, not moniliform, reticulately veined, joints 4-8.

Fairly common throughout the area, often grows amongst grasses on waste lands; also found on the upper belt of river bank; grows as a weed in a variety of crops.

Flowers and fruits : August - February.

JVJ 124, 1396.

Arachis Linn.

Arachis hypogaea Linn., Sp. Pl. 741, 1753; FBI. 2: 161; C. 1: 435; Gam. 1: 230; Bailey, 554; Saur. 1: 181; M. 125.

A sub-erect, annual, hairy herb. Leaflets 2 pairs, oval-obovate. Flowers yellow. Pods buried underground, 1-4-seeded, indehiscent.

Cultivated at some places.

Local name : Magfali.

Uses : Seeds are eaten. Oil is extracted from the seeds is used in cooking. Oil cake is used as fodder for cattles and as fertilizer.

Flowers and fruits : August - December.

JVJ 1207.

Atylosia Wt. & Arn.

Atylosia platycarpa Benth., Pl. Jungh. 2: 243, 1852; FBI. 2: 216; C. 1: 410; Duthie, 1: 196; Saur. 1: 174.

A. geminiflora Dalz., in Jour. Linn. Soc. 13: 185, 1873;

Talb. 73.



*Stylosia scarabaeoides*  
Benth



0  
1  
2  
3  
4  
5  
6  
Cm



*Stylosia platycarpa* Benth

PLATE - 43

A twining or trailing herb with slender, grey-pubescent branches. Leaves 3-foliolate, leaflets as long as broad. Flowers yellow. Pods 10-12 mm broad, linear-oblong, flattened, mucronate, clothed with long grey hairs.

Rare; trailing on the grasses, in waste lands at Udhana.  
Flowers and fruits : October - December.  
JVJ 466, 1390.

Atylosia scarabaeoides Benth., in Miq. Pl. Jungh. 2: 242, 1852;  
FBI. 2: 215; C. 1: 409; Gam. 1: 261; Duthie, 1: 196;  
Saur. 1: 175.

A slender herbaceous twiner, covered with brownish-yellow hairs. Leaves 3-foliolate, leaflets oblong-elliptic, sub-coriaceous. Flowers yellow. Pods 6-7 mm broad, 4-6-seeded, not mucronate, clothed with fine spreading, brown, silky hairs.

Occasionally found on open grasslands.  
Flowers and fruits : September- February.  
JVJ 480, 1455, 2021.  
Plate 43.

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

Butea monosperma (Lamk.) Taub., in Engl. & Prantl. Pfam.  
3(3): 366, 1894; Stern, in Blatt. & Mill. Some Beaut.  
Ind. Trees (ed. 2) 12, 1955; Saur. 1: 163; M. 130.

Erythrina monosperma Lamk., Encycl. 1: 391, 1783.

Butea frondosa Koenig ex Roxb., in Asiat. Res. 3: 469, 1792;  
Roxb. Fl. Ind. 3: 244, 1832; Baker, in FBI. 2: 194;  
C. 1: 395; Talb. 1: 409, f. 231; Gam. 1: 252.

A small, deciduous tree. Young branches ash-coloured, tomentose or downy. Leaves 3-foliolate, terminal largest, laterals smaller and oblique; glabrous above, silky beneath. Flowers large, red or orange, showy; calyx brownish-black, velvety outside, silky within. Pods long, flat, velvety.

Rare in the area; planted in Cotton Research Farm and the Botanical Garden of P.T.S.C.S.

Local name : Palash or Khakharo.

Uses : The leaves are used for preparation of patal (leafy-dish for taking food) and duna. The dried flowers are used for making colour at the time of Holi. The fruits and gum are used medicinally.

Flowers and fruits : January - April.

JVJ 672, 1813.

Cajanus DC. (nom. cons.)

Cajanus cajan (L.) Millsp., in Field Columb. Mus. Bot. 2: 53, 1900; Bailey, 579; Saur. 1: 181; M. 134.

C. cajan Linn., Sp. Pl. 739, 1753.

C. indicus Spreng, Syst. 3: 249, 1826; FBI. 2: 217;  
C. 1: 435.

An erect, branched shrub. Leaves 3-foliolate; leaflets oblong-lanceolate. Flowers yellow. Pods turgid, 3-4-seeded.

Extensively cultivated throughout the area.

Local name : Tuver.

Uses : The green seeds are used as vegetable. The dried seeds are used as a pulse.

Flowers and fruits : October - April.

JVJ 538, 1492.

Canavalia DC.

Canavalia gladiata (Jacq.) DC., Prodr. 2: 404, 1825; Chatterjee in JIBS. 28: 86, 1949; Saur. 1: 165.

Dolichos gladiatus Jacq. Coll. Bot. 2: 276, 1788.

Canavalia ensiformis Baker, in FBI. 2: 195, 1876 et alior.

auct. (non DC. nec. Dolichos ensiformis L.) Wt. Icon. t. 753; C. 1: 397; Gam. 1: 253.

A large twiner. Leaves 3-foliolate, leaflets large, ovate, acute. Flowers pink or purple. Pods thick, linear-oblong.

Occasionally seen on the hedges throughout the area.

Local name : Abo.

Uses : The tender pods are sold in local market as vegetable.

Flowers and fruits : September - March.

JVJ 73, 1356, 1497.

Cicer Linn.

Cicer arietinum Linn., Sp. Pl. 738, 1753; FBI. 2: 176; C. 1: 453; Saur. 1: 181; M. 126.

A small herb. Leaves pinnate, leaflets ovate-oblong or obovate, toothed. Flowers blue. Pods turgid. Seeds brown.

Cultivated at some places during the cold season.

Local name : Channa.

Uses : The seeds are eaten either parched or boiled. Fresh green seeds are eaten raw and as vegetable. The daal is prepared from the dried seeds.

Flowers and fruits : January - March.

JVJ 1118.

Clitoria Linn.

Clitoria ternatea Linn., Sp. Pl. 753, 1753; FBI. 2: 208; C. 1: 405; D. & G. 68; Gam. 1: 258; Saur. 1: 171; M. 131.

A twining herb. Leaflets 5-7. Flowers large, showy, bright-blue or white, solitary. Pods flat, hairy.

Common throughout the area; seen on roadside hedges, on low grasses, along the bank of canals, also grown in gardens.

Local name : Gay or Bibari.

Flowers and fruits : August - April.

JVJ 441, 2073.

Crotalaria Linn.

Crotalaria albida Heyne ex Roth., Nov. Pl. Sp. 333, 1821;

FBI. 2: 71; C. 1: 315; Gam. 1: 208; Duthie, 189.

A branched, erect or sub-erect herb or undershrub. Leaves linear-oblong, silky-pubescent, gland-dotted. Flowers yellow in terminal racemes. Pods glabrous, 6-10-seeded.

Occurs along the bank of canals often hidden in grasses. Fairly common in highly polluted industrial areas near Navine Flourine Udhana; also noted as a weed in Cotton, Sorghum and Maize crops.

Flowers and fruits : October - March.

JVJ 473, 1478, 1582, 1653.

Crotalaria filipes Benth. var. trichophora Benth. ex Baker, in

FBI. 2: 67; D. & G. 56; C. 1: 312; Gam. 1: 206.

A prostrate, slender herb, clothed with spreading, deciduous, silky hairs. Leaves ovate-oblong. Flowers yellow, in leaf-opposed or extra-axillary, 1-3-flowered racemes. Pods glabrous, 8-10-seeded.

Rare; collected once only from the river banks of Tapi near Nana Varachha Municipal water works.

Flowers and fruits : September - October.

JVJ 409.

Crotalaria juncea Linn., Sp. Pl. 714, 1753; FBI. 2: 79; C. 1:

320; Gam. 1: 210; Saur. 1: 118; M. 113; Pavagadh, 84.

Crotalaria Linn.

Crotalaria albida Heyne ex Roth., Nov. Pl. Sp. 333, 1821;

FBI. 2: 71; C. 1: 315; Gam. 1: 208; Duthie, 189.

A branched, erect or sub-erect herb or undershrub. Leaves linear-oblong, silky-pubescent, gland-dotted. Flowers yellow in terminal racemes. Pods glabrous, 6-10-seeded.

Occurs along the bank of canals often hidden in grasses. Fairly common in highly polluted industrial areas near Navine Flourine Udhana; also noted as a weed in Cotton, Sorghum and Maize crops.

Flowers and fruits : October - March.

JVJ 473, 1478, 1582, 1653.

Crotalaria filipes Benth. var. trichophora Benth. ex Baker, in

FBI. 2: 67; D. & G. 56; C. 1: 312; Gam. 1: 206.

A prostrate, slender herb, clothed with spreading, deciduous, silky hairs. Leaves ovate-oblong. Flowers yellow, in leaf-opposed or extra-axillary, 1-3-flowered racemes. Pods glabrous, 8-10-seeded.

Rare; collected once only from the river banks of Tapi near Nana Varachha Municipal water works.

Flowers and fruits : September - October.

JVJ 409.

Crotalaria juncea Linn., Sp. Pl. 714, 1753; FBI. 2: 79; C. 1:

320; Gam. 1: 210; Saur. 1: 118; M. 113; Pavagadh, 84.

A tall, annual herb or undershrub; young parts silky. Leaves linear, apiculate, clothed with appressed silky hairs. Flowers yellow, showy. Pods hairy, 8-12-seeded.

Found as an escape from cultivation, often mixed with grasses and crops like Sorghum, Maize and Cotton.

Local name : Shan.

Flowers and fruits : October - April.

JVJ 411, 2084.

Crotalaria linifolia Linn. f. Suppl. 322, 1781; FBI. 2: 72;

C. 1: 317; Gam. 1: 208; Saur. 1: 114; Pavagadh, 83.

An erect or sub-erect herb. Stems clothed with appressed, silky hairs. Leaves oblong-lanceolate. Flowers yellow. Pods glabrous, obliquely truncate at apex, 4-8-seeded.

Frequently seen growing along with grasses on the bank of canals and on wet soils of fallow fields.

Flowers and fruits : August - December.

JVJ 352, 1150.

Crotalaria medicaginea Lamk., Encycl. Method 2: 201; 1786;

FBI. 2: 81; C. 1: 322; Gam. 1: 211; Saur. 1: 119; M. 112.

An erect herb or undershrub. Leaves 3-foliolate. Flowers small, yellow in racemes. Pods sub-globose, 2-seeded.

Fairly common on sandy-wet soil along the roadsides at Dumas, Bhimpur and Hajira, elsewhere occasionally seen under



the shade of trees. Associated with Cassia tora L., and Ocimum canum Sim..

Flowers and fruits : July - November (even upto March - April if the conditions are favourable).

JVJ 74, 485, 1229.

Crotalaria orixensis Willd., in Ges. Naturf. Fr. Neue Schr.

4: 217, 1803; FBI. 2: 83; C. 1: 323; D. & G. 57; Gam. 1: 212; Saur. 1: 120.

A slender, branched, diffuse herb; branches covered with brownish spreading hairs. Leaves 3-foliolate; stipules persistent, foliaceous. Flowers small, in lax, lateral or terminal racemes. Pods glabrous, 8-10-seeded.

Occurs only at few places especially well protected premises, often associated with Tephrosia hamiltonii Drumm., Indigofera linnaei Ali and Indigofera linifolia (L. f.) Retz..

Flowers and fruits : August - December.

JVJ 120, 1458.

Plate : 44.

Crotalaria retusa Linn., Sp. Pl. 715, 1753; FBI. 2: 75; C. 1:

318; Gam. 1: 207; Saur. 1: 115.

An erect, branched, sturdy undershrub. Stems glabrous, angled, striate. Leaves oblanceolate-oblong, glabrous above,



PLATE - 44

silky-pubescent beneath. Flowers yellow with purple tinge, showy. Pods turgid, glabrous, 12-18-seeded.

Occurs along the borders of fields at few places.

Local name : Ghughara.

Flowers and fruits : August - January.

JVJ 9, 410, 1656.

Cyamopsis DC.

Cyamopsis tetragonoloba (L.) Taub., in Engl. & Prantl. Pfam.

3(3): 259, 1894; Saur. 1: 122; M. 116.

Psoralea tetragonoloba Linn., Mant. 104, 1767.

Cyamopsis psoralioides DC., Prodr. 2: 216, 1825; FBI. 2: 92;

Wt. Icon. t. 248; C. 1: 328; Gam. 1: 215.

An erect, annual undershrub. Leaves 3-foliolate. Flowers pinkish-purple, in axillary racemes. Pods flat, apiculate, 5-8-seeded.

Cultivated throughout the area; also found as an escape from cultivation along the bank of canals and railway track near Udhana.

Local name : Guwar.

Uses : Fresh pods are eaten as vegetable and for feeding cattle.

Flowers and fruits : August - March.

JVJ 133, 505, 1378.

Dalbergia Linn. f. (nom. cons.)

Dalbergia sissoo Roxb. Fl. Ind. 3: 223, 1832; FBI. 2: 231;

Talbot. 422; C. 1: 421; Saur. 1: 179; M. 135.

A medium-sized tree with spreading branches, Leaves imparipinnate, leaflets 3-5, ovate, acuminate. Flowers yellowish-green. Pods thin, strap-shaped, 1-3-seeded.

Planted along roadsides at Dumas.

Local name : Sisam.

Uses : The tree yields valuable timber.

Flowers and fruits : August - March.

JVJ 683.

Derris Lour.

Derris indica (Lamk.) Bennet, in JBNHS. 68(1): 302-304, 1971;

Thothathri, in Bull. Bot. Surv. Ind. 12: 1-4, 104-107, 1970 (published in 1971).

Galedupa indica Lamk., Encycl. 2: 594, 1788-89.

Cytisus pinnatus Linn., Sp. Pl. 1: 741, 1753 (non Derris pinnata Lour. 1790).

Pongamia glabra Vent. Jard. Malm. t. 28, 1803; Gr. 55; D. & G. 77; Wt. Icon. t. 59; FBI. 2: 240; C. 1: 402; Gam. 1: 272.

P. pinnata (L.) Pierre, Fl. Cochinch. sub. t. 385, 1899; Saur. 1: 180; M. 135.

A medium-sized tree. Leaflets ovate, acute. Flowers whitish-rosy. Pods thick, oblong, hard, 1-seeded.

Planted as a roadside tree; also grown in gardens.

Local name : Kanejaro.

Flowers and fruits : January - July.

JVJ 582.

Derris timoriensis (DC.) Pittier, in Contrib. U.S. Nat. Herb.

20: 41, 1947; Thothathri, loc. cit. 1971.

Dalbergia timoriensis DC. Prodr. 2: 417, 1825.

D. scandens Roxb., Pl. Corom. 2: 29, t. 192, 1805; Wt. Icon. t. 275; Gr. 55.

Derris scandens (Roxb.) Benth., in Journ. Linn. Soc. 4 (suppl.):

103, 1860; Baker, in FBI. 1: 240; C. 1: 430; Gam. 1: 273.

A large, woody twiner. Leaflets 9-13, elliptic-oblong, shortly acuminate, glabrous, shining above and more or less pubescent beneath. Flowers rosy-white to pinkish-white. Pods thin, flat, 1-4-seeded.

Rare; seen in hedges perhaps as an escape from cultivation near Nana Bahucharaji on the way to Ved.

Flowers and fruits : August - December.

JVJ 931.

File :

Desmodium Desv. (nom. cons.) Plate 45.

Desmodium dichotomum (Willd.) DC. Prodr. 2: 336, 1825; Meeuwen,  
in Reinwardtia 6(3): 248, 1962.

Hedysarum dichotomum Willd. Sp. Pl. 2: 1180, 1803.

Desmodium diffusum (Willd.) DC. Prodr. 2: 336, 1825; FBI. 2:  
169; Wt. Icon. t. 298; C. 1: 377; Saur. 1: 154.

Hedysarum diffusum Willd. Sp. Pl. 2: 1180, 1803.

An erect, annual herb. Stems grooved. Leaves 3-foliolate,  
leaflets ovate-oblong, stiff; more or less hairy on both sides.  
Flowers pinkish-purple. Pods 3-6-jointed, joints rounded,  
hairy with small hooked hairs.

Occasionally seen along the margins of canal, on wet-fallow  
land, often hidden amongst grasses.

Flowers and fruits : August - October.

JVJ 129, 933, 1149.

Desmodium gangeticum (L.) DC. Prodr. 2: 327, 1825; FBI. 2: 168;  
Wt. Icon. t. 271; D. & G. 66; C. 1: 379; Saur. 1: 156;  
M. 123.

An erect, stout undershrub; branches angled. Leaves  
1-foliolate, leaflets ovate-oblong or broadly ovate. Flowers  
purplish-violet. Pods 6-8-jointed, joints longer than broad.

Occasionally observed as an undergrowth of hedges and  
in wet-shaded places.

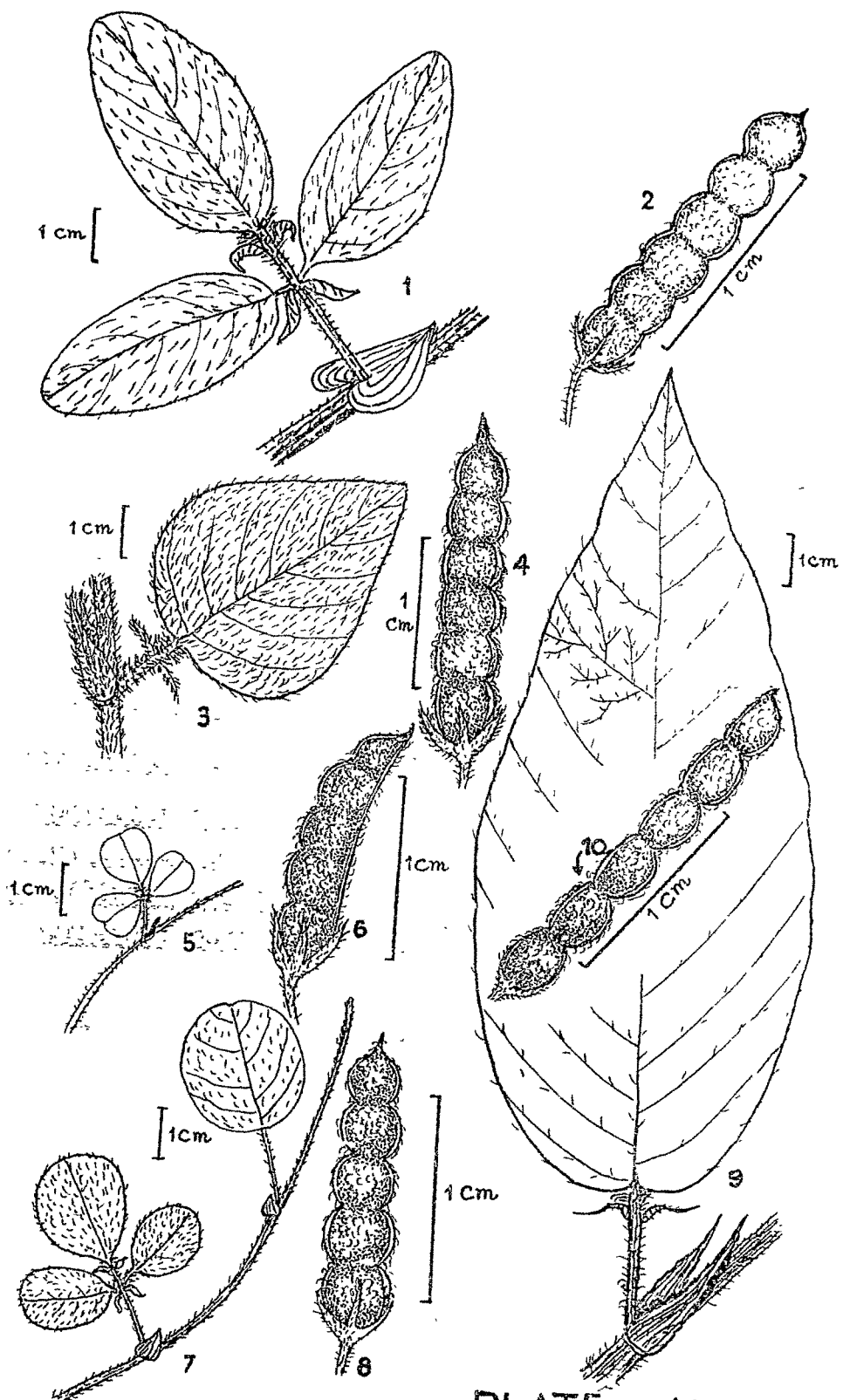


PLATE - 45

Flowers and fruits : August - February.

JVJ 131, 1038, 1358.

Desmodium parviflorum DC. Prodr. 2: 334, 1825; Baker, in  
FBI. 2: 172, Woodr., in JBNHS. 11: 423, 1897; C. 1: 381;  
Duthie, 263.

An erect, branched, weak herb, clothed with spreading,  
fulvous hairs. Leaves 1- and 3-foliolate intermixed; leaflets  
elliptic-oblong. Flowers violet in lax, terminal racemes. Pods  
4-6-jointed, reticulately veined.

Rare in the area; found in wet fields, along Udhana-  
Maghalla road.

Flowers and fruits : December - February.

JVJ 1924.

Desmodium triflorum (L.) DC. Prodr. 2: 334, 1825; FBI. 2: 173;  
Wt. Icon. t. 392; Gr. 49; D. & G. 67; C. 1: 378; Saur. 1:  
155; M. 123.

Hedysarum triflorum Linn., Sp. Pl. 749, 1753.

A tiny, prostrate, branched herb. Leaves 3-foliolate;  
leaflets obovate, emarginate. Flowers bluish-purple. Pods  
3-5-jointed, falcate, indented on lower suture.

Common among grasses along the roadsides, canal banks,  
slopes of river banks and on open ground during monsoon.



Flowers and fruits : August - February.

JVJ 130, 375, 455, 793.

Desmodium velutinum (Willd.) DC. Prodr. 2: 328, 1825; Schind.,  
in Fedde Rep. Beih. 49: 307; Saur. 1: 157.

D. latifolium DC. Prodr. 2: 327, 1825; Gr. 49; D. & G.  
66; FBI. 2: 168 (excl. syn. D. virgatum Zoll.); C.1: 380.

An erect, branched herb or undershrub. Leaves 1-foliolate,  
leaflets sub-orbicular, obtuse or sub-acute, hairy beneath.  
Flowers purple, in long axillary and terminal racemes. Pods  
with 4-6 joints, straight, slightly indented above.

Rare; collected once from a fallow field on the upper  
belt of river Tapi near Nana Varachha Municipal water works.

Flowers and fruits : September - October.

JVJ 459.

### Erythrina Linn.

Erythrina variegata L. var. orientalis (L.) Merr. Interpret.

Herb. Amb. 276, 1917; Saur. 1: 162; M. 129.

E. corallodendron L. var. orientalis Linn., Sp. Pl. 706, 1753.

E. indica Lamk., Encycl. 2: 391, 1786; Wt. Icon. t. 58;

FBI. 2: 188; Talbot, 71; C. 1: 391.

A medium-sized tree, trunk armed with numerous prickles,  
bark whitish-green. Leaves 3-foliolate. Flowers scarlet, showy,

appear on leafless branches. Pods sub-cylindric, distinctly torulose, 4-8-seeded.

Planted in gardens and along the boundary of fields, also along the roadside and near human habitation.

Local name : Panarvo.

Flowers and fruits : March - May. (fruits persist till next flowering).

JVJ 671.

Flemingia Roxb. ex W.T.Aiton (nom. cons. recom.)

Flemingia bracteata Wight, Icon. t. 268: 1840; Prain, in Journ. Asia. Soc. Beng. 66: 437, 1898; C. 1: 416.

F. strobilifera var. bracteata Baker, in FBI. 2:227, 1876.

Hedysarum bracteatum Roxb., Fl. Ind. 3: 351, 1832.

An erect undershrub with more or less angular branches. Leaves 1-foliolate; leaflets ovate, acute. Flowers rosy-purple, hidden within the folded bracts. Pods 1-2-seeded, turgid, entirely enclosed by the persistent bracts.

A rare plant, collected once along the margins of canal near Nana Varachha.

Flowers and fruits : October - November.

JVJ 470.

Flemingia lineata Aiton, Hort. Kew ed. 2, 4: 350; 1812;

FBI. 2: 228; Wt. Icon. t. 327; C. 1: 417.

A small, erect undershrub. Leaves 3-foliolate, lateral leaflets smaller than the terminal. Flowers purple. Pods oblong, 2-seeded.

Rare; collected from the wet soil near canal on the way to Variav.

Flowers and fruits : September - February.

JVJ 291, 1863.

Notes :

Gliricidia H. B. K.

Gliricidia sepium (Jacq.) Walpers, Repert. 1: 679, 1842;

Stearn, in Blatt. & Mill. Some Beaut. Ind. Tr. ed. 2: 87, t. 16, 1954; Bailey, 561; Sant. 289.

G. maculata H. B. & K. Nov. Gen. et Sp. Vi. 393, 1823.

Rabinia sepium Jacq., Enum. Pl. Carib. 28, 1760.

A small, handsome tree with pale whitish-grey, smooth bark. Leaves imparipinnate; leaflets oblong-ovate. Flowers pink, fading to white on leafless branches.

Occasionally planted for the beautiful flowers in gardens and many private premises.

Flowers : December - March.

JVJ 165, 1948.

Goniogyna DC.

Goniogyna hirta (Willd.) Ali, in Taxon 16: 463, 1967; Rao,

in Bull. Bot. Surv. India 10 (Suppl. 2) addenda no. 3, 1969.

Hallia hirta Willd., Sp. Pl. 1169, 1800.

Heylandia latebrosa DC. Mem. Leg. 201, 1825; FBI. 2: 65;  
C. 1: 310; Saur. 1: 111.

A prostrate spreading, apparently dichotomously branched, hairy herb. Leaves simple, ovate. Flowers bright yellow. Pods flat; 1-2-seeded.

Fairly common throughout the area, along the roadsides, in fallow fields, on open lands, along the canals, river bank and railway track. Often mixed with grasses.

Flowers and fruits : August - March.

JVJ 789, 932, 1148.

#### Indigofera Linn.

Indigofera astragalina DC. Prodr. 2: 228, 1825; Gillett, in Kew Bull. (Add. ser. I) 110, 1958 & in Kew Bull. 14(2): 290-95, 1960. Chavan & Oza, in Ind. For. 87: 763-64, 1961; M. 118; Pavagadh, 78.

I. hirsuta sensu Baker, FBI. 2: 98, 1879, p.p. (non Linn.);  
C. 1: 339; Saur. 1: 132.

An erect, undershrub. Stems and tender branches reddish-pink, densely clothed with long, spreading, white hairs.

Leaflets 9-11, elliptic or obovate, apiculate at apex, somewhat rounded at base. Flowers pink, in dense axillary racemes. Pods tetragonous, deflexed, densely hairy.

Occasional; mixed with grasses near the canal at Varachha and Variav; also seen along the railway track between Surat and Bhestan.

Flowers and fruits : August - November.

JVJ 472, 1206, 1380.

Indigofera hirsuta Linn. and I. astragalina DC. are often confused in the field, but Gillett, loc. cit. has differentiated these two species on basis of a number of characters. According to him, I. hirsuta Linn. occurs in South India and the commoner species occurring in Bombay Presidency is I. astragalina DC.. For further discussion, see Chavan & Oza, loc. cit.

Indigofera cordifolia Heyne ex Roth, Nov. Pl. Sp. 357, 1821; FBI. 2: 93; C. 1: 331; Gam. 1: 218; Gillett, loc. cit. 35; Saur. 1: 125; M. 117.

A prostrate, sub-erect or erect herb, clothed with white hairs. Leaves simple, broadly ovate-cordate, densely hairy. Flowers red. Pods globose-oblong, 2-seeded.

Fairly common throughout the area, on the slope of river banks; along canals and sides of paths and roads.

Flowers and fruits : August - November.

JVJ 472, 847, 1381.

Indigofera glandulosa Roxb. ex Willd. Sp. Pl. 3: 1227, 1800;  
FBI. 2: 94; Wt. Icon. t. 330; C. 1: 332; Gam. 1: 218;  
Saur. 1: 125.

An erect herb. Leaves 3-foliolate; leaflets oblanceolate, glabrous above, punctate beneath. Flowers red. Pods angled with fimbriate, toothed wings.

Occasionally found among grasses near ditches, along the bank of canals; also met with in roadside depressions and along the sides of railway track.

Flowers and fruits : August - November.

JVJ 115, 495, 792, 1483.

Indigofera linifolia (Linn. f.) Retz., Obs. Bot. 4: 29, 1786  
& 6: 33, t. 2, 1791; Wt. Icon. t. 313, 1840; FBI. 2:  
92; C. 1: 330; Gam. 1: 218; Gillett, in Kew Bull.  
(Add. Ser. I) 35, 1958; Saur. 1: 124; M. 117.

Hedysarum linifolium Linn., f. Suppl. 331, 1781.

A prostrate or diffuse herb, branching from the base; branches wiry, spreading. Leaves simple, linear. Flowers red. Pods globose-sub-globose, 1-seeded.

Occasionally on moist slope of river bank, noted as a weed, often hidden amongst grasses in association with

Zornia gibbosa.

Flowers and fruits : August - October.

JVJ 116, 848, 997.

Indigofera linnaei Ali, in Bot. Notis. 111: 549, 1958;

Saur. 1: 126.

I. enneaphylla Linn., Mant. 2: 272, 1771, Append. 571, 1771

(nom. illegit); Roxb. Fl. Ind. 3: 376, 1832; Wt. Icon.

t. 403; FBI. 2: 94; Gillett, loc. cit. 35; M. 117.

A prostrate herb. Leaves pinnate; leaflets 7-9, alternate, rounded or emarginate at the apex, densely covered with white, appressed hairs. Flowers red. Pods pale white, 2-seeded.

Seen throughout the area, on wet, muddy soils near ditches, often amongst grasses along the borders of fields and in open, waste places.

Flowers and fruits : August - November.

JVJ 78, 1485.

Indigofera oblongifolia Forsk., Fl. Aegypt.-Arab. 137, 1775;

Gam. 1: 219; Saur. 1: 127; M. 117.

I. paucifolia Delile, Fl. Egypte 251, 1813; FBI. 2: 97;

Wt. Icon. t. 331; C. 1: 334.

An erect, bushy undershrub. Branches slender, many, dark purplish, silvery-canescant. Leaves compound; leaflets

elliptic-oblong, hairy above, silvery-hairy beneath. Flowers red, in axillary, many-flowered racemes. Pods torulose, deflexed, 6-8-seeded.

Not common; among grasses along the paths, sporadic in open dry, protected campus of S.V.P.R. Eng. College; also along the bank of canal and borders of fields.

Local name : Jhil (Vajradanti).

Uses : Tender branches and leaves are eaten by goats and sheep, used for tooth brushes by rural-coastal communities.

Flowers and fruits : August - February.

JVJ 514, 791, 1017, 1384.

Indigofera tinctoria Linn., Sp. Pl. 751, 1753; FBI. 2: 99;

C. 1: 339; Gam. 1: 220; Gillett, loc. cit. 106-107;

Ali, loc. cit. 567; Saur. 1: 131; M. 118.

A much-branched undershrub, covered with fine, appressed hairs. Leaflets 9-13, oblong or oblanceolate. Flowers many in lax, axillary racemes, reddish-pink. Pods glabrous, linear, straight or slightly curved, seeds 8-12.

Occasionally observed on the upper part of river bank, on open grounds, along roadsides.

Local name : Gali.

Flowers and fruits : August - December.

Uses : It was formerly cultivated throughout the tropics for the dye 'Indigo'.



JVJ 53, 790, 1638.

Indigofera trifoliata Linn., in Torner, Cent. II Pl. 29,  
1756; Wt. Icon. t. 314; FBI. 2: 96; C. 1: 335; Gam. 1:  
219; Saur. 1: 128.

An erect herb or undershrub. Leaves 3-foliolate,  
terminal leaflet sessile. Flowers dark reddish-pink. Pods  
straight, deflexed; 6-8-seeded.

Frequently seen on the bank of canals and on wet soils  
near hedges.

Flowers and fruits : August - November.

JVJ 471, 1487.

Indigofera trita Linn. f., Suppl. 335, 1781; Wt. Icon. tt.  
315, 386; FBI. 2: 96; C. 1: 335; Gam. 1: 219; Gillett,  
loc. cit. 101; Saur. 1: 128; M. 118.

A tall, erect, stiff undershrub, clothed with appressed  
tomentum. Leaves 3-foliolate, terminal leaflet stalked.  
Flowers red or pink. Pods tetragonous, hard-pointed, appressed  
hairy.

Common throughout the area, seen along the railway track,  
canals, roadsides and in open waste places.

Flowers and fruits : August - February.

JVJ 24, 1000, 1926.

Lablab Adans.

Lablab purpureus (L.) Sweet, Hort. Brit. ed. I, 481, 1827;  
Verdcourt, in Kew Bull. 24(3): 410, 1970.

Dolichos purpureus Linn., Sp. Pl. (ed. 2) 1021, 1762.

Lablab niger Medik., in Vorles. Churf. Phys. Ges. 2: 254,  
1787; Hutchinson and Dalziel, in Fl. West Tropical  
Africa 1(1): 571, 1954.

Dolichos lablab Linn., Sp. Pl. 725, 1753; FBI. 2: 209;  
C. 1: 406; Saur. 1: 173; M. 131.

A twiner. Leaves 3-foliolate. Flowers whitish-rosy to  
pure white. Pods 3-4-seeded, flat.

Extensively cultivated during winter. The two well-  
known varieties locally known as 'Katargam-papadi' and  
'Gorat-papadi' are famous in Gujarat.

Local name : Papadi.

Uses : Used as vegetable.

Flowers and fruits : August - March.

JVJ 561.

Medicago Linn.

Medicago sativa Linn., Sp. Pl. 778, 1753; FBI. 2: 90;

C. 1: 327; Bailey, 582; Saur. 1: 121; M. 114.

An erect herb. Leaves 3-foliolate; leaflets obovate,

denticulate at the apex. Flowers purplish-blue. Pods forming double spiral.

Cultivated throughout the area, also seen as an escape along the margins of fields.

Local name : Ghoda-ghaas.

Uses : The plant is used as fodder.

Flowers and fruits : January - July.

JVJ 594.

Melilotus Juss.

Melilotus alba Desr., in Lamk. Encycl. 4: 63, 1789; FBI. 2: 89; Gam. 1: 215; Saur. 1: 121; M. 115.

An erect, sturdy, glabrous annual herb. Leaves 3-foliolate, leaflets obovate-oblong, entire or upper part distantly serrulate. Flowers white, in axillary and terminal racemes. Pods oblong, 2-seeded.

- Fairly common on river beds near Variav and Nana Varachha; also noted as a winter weed in irrigated wheat fields.

Flowers and fruits : October - April.

JVJ 269, 1881, 2082, 2100.

Not enlisted in the Cooke's flora of the Presidency of Bombay.

Melilotus indica All., Fl. Pedem. 1: 308, 1785; C. 1: 325;

Gam. 1: 215; Saur. 1: 121; M. 116.

M. parviflora Desf., Fl. Atlant. 2: 192, 1800; FBI. 2:

89; D. & G. Suppl. 21.

An erect, glabrous herb. Leaves 3-foliolate; leaflets oblanceolate, retuse at the apex. Flowers yellow in close racemes. Pods ellipsoid, glabrous, 1-seeded.

Occasionally associated with Melilotus alba on the wet river-bed, frequently found as a winter weed of irrigated fields.

Flowers and fruits : August - March.

JVJ 199, 290, 1860, 1938.

Mucuna Adans. (nom. cons.)

Mucuna prurita Hook., Bot. Misc. 2: 348, 1831; Gr. 53;

D. & G. 70; Gam. 1: 251; Saur. 1: 160; M. 129.

M. pruriens Baker, in FBI. 2: 187, 1876; C. 1: 389

(non DC. 1825).

An extensive twiner. Leaves 3-foliolate; leaflets ovate-rhomboid. Flowers dark-purple, showy. Pods curved at both ends, densely covered with brownish- stinging bristles.

Mostly found in hedges, throughout the area. The stinging bristles cause intense irritation to the skin.

Local name : Kavach.

Flowers : September - January; fruits : January - March.

(Fruits mature when the plants are leafless).

JVJ 1357.

/ Pisum Linn.

Pisum sativum Linn., Sp. Pl. 727, 1753; FBI. 2: 181; C. 1: 436; Bailey, 553; M. 128.

A sub-erect or climbing annual. Leaves imparipinnate compound; rachis ending into branched tendrils; stipules foliaceous. Flowers purplish-white to variously coloured. Pods broad, seeds round.

Cultivated only at some places during winter.

Local name : Lila vatana.

Uses : Green seeds are used as vegetable, dried seeds used as pulses.

Flowers and fruits : October - February.

JVJ 1425.

Psoralea Linn.

Psoralea corylifolia Linn., Sp. Pl. 764, 1753; FBI. 2: 103; C. 1: 341; Gam. 1: 222; Saur. 1: 144; M. 119.

An erect herb. Stems and branches marked with glands.

Leaves simple, ovate-rounded, serrate or dentate, gland-dotted. Flowers purplish-blue. Pods ovoid-oblong, black, 1-seeded.

Fairly common along the bank of canals; often mixed with grasses, on the wet soil near to ditches, also noted as a weed in the fields along Udhana-Magdalla road.

Local name : Bavachi.

Uses : Used as fodder.

Flowers and fruits : August - April.

JVJ 134, 1019, 1503, 2083.

Rhynchosia Lour. (nom. cons.)

Rhynchosia minima (L.) DC., Prodr. 2: 385, 1825; FBI. 2: 223;

C. 1: 414; Gam. 1: 264; Saur. 1: 176; M. 133.

Dolichos minimus Linn., Sp. Pl. 1020, 1753.

Rhynchosia medicaginea DC., Prodr. 2: 386, 1825; D.& G. 74.

A slender, twining, spreading annual. Leaves 3-foliolate; leaflets obtuse, deltoid at the base, minutely gland-dotted beneath. Flowers yellow. Pods thin, compressed, 2-3-seeded.

Fairly common all along the hedges, along the bank of canals; also observed as a weed.

Flowers and fruits : July - March.

JVJ 38, 209, 1971.

Rhynchosia minima var. laxiflora Baker, in FBI. 2: 223;

C. 1: 414; Gam. 1: 264; Saur. 1: 177.

Similar to the preceding species but the leaflets are more acute, plant is less hairy and most of its parts larger than R. minima Proper.

Seen throughout the area but less common than preceding species.

Flowers and fruits : August - December.

JVJ 379, 1004.

Sesbania Scop. (nom. cons.)

Sesbania bispinosa (Jacq.) Fawc. & Rendle, Fl. Jam. 4: 24,

1920; Saur. 1: 140; M. 119; Gillett, in Kew Bull. 17:

129, 1963; Raizada, in Ind. For. 92(5): 323, 1966;

Baquar, in Pak. Journ. Bot. 1(1-2): 137, 1969.

Aeschynomene bispinosa Jacq. Icon. 3: 13, t. 564, 1793.

Sesbania aculeata Pers. Syn. Pl. 2: 316, 1807; FBI. 2:

114; C. 1: 350.

An erect, weak-stemmed herb or undershrub; branches and leaf rachis prickly. Leaflets 20-50 pairs, linear-oblong. Flowers yellow. Pods cylindrical.

Fairly common along the bank of canals and in moist places.

Flowers and fruits : August - December.

JVJ 2 3, 1014.

Sesbania grandiflora Pers., Syn. Pl. 2: 316, 1807; FBI. 2: 115; C. 1: 350; Gam. 1: 228; Saur. 1: 139.

A medium-sized, soft-wooded tree. Leaves paripinnate. Flowers creamy-white, large, showy. Pods cylindrical, 4-angled.

Planted along the roadsides near Govt. Circuit house and near habitation in villages.

Local name : Agathio.

Uses : Tender leaves, flowers, young pods are used as vegetable.

Flowers and fruits : September - February.

JVJ 1533.

Sesbania sesban (L.) Merr. var. picta (Prain.) Sant., Pl. Saur. 263, 1953; Saur. 1: 139; M. 120.

S. aegyptiaca Pers. var. picta Prain., in JASB. 66: 367, 1898; C. 1: 349; Gam. 1: 228.

A small, soft-wooded, unarmed shrub. Flowers yellow with a purple spot on the standard. Pod long, twisted, torulose.

Grown along the canal banks and planted on the fallow land near Variav.

Uses : Twigs are used as fodder.



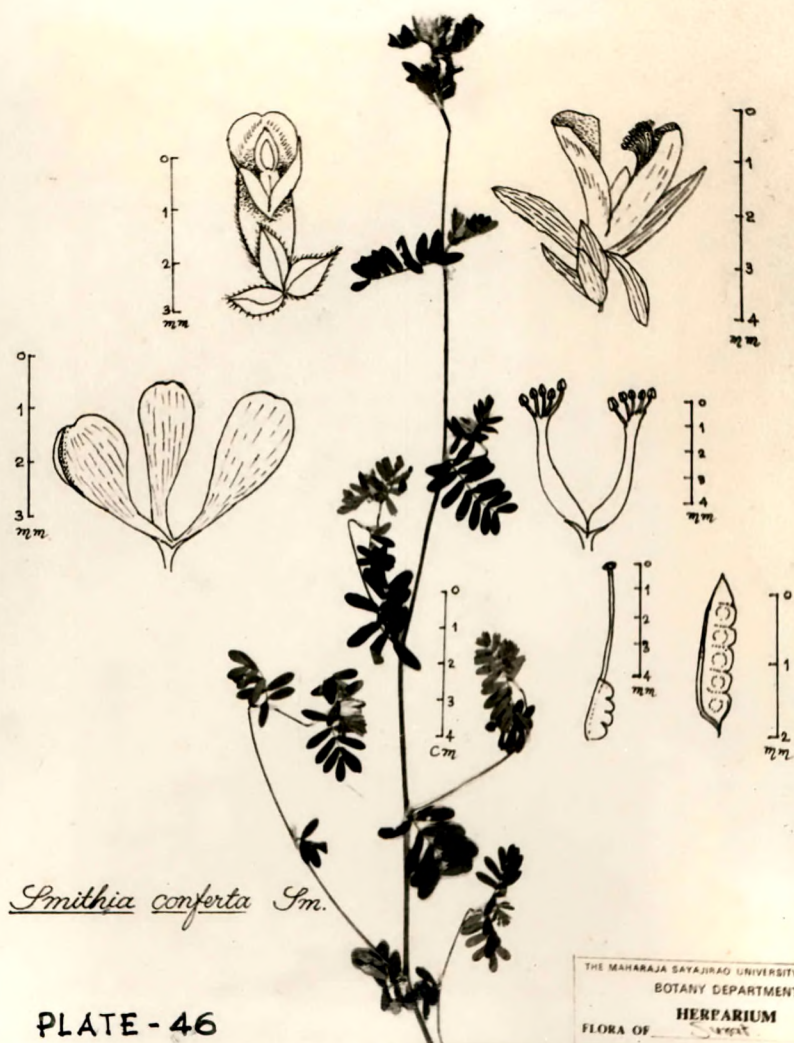


PLATE - 46

THE MAHARAJA SAYAJIRAO UNIVERSITY  
BOTANY DEPARTMENT  
HERBARIUM  
FLORA OF MUMBAI

Flowers and fruits : August - December.

JVJ 252, 286, 784, 1015.

Smithia Ait.

Smithia conferta Sm., in Rees, Cycl. 33: no. 2, 1819;

C. 1: 358; Gam. 1: 232; Sant. 58.

S. geminiflora Roth., Nov. Pl. Sp. 352, 1821.

S. geminiflora var. conferta Baker, in FBI. 2: 149.

A prostrate or sub-erect, annual herb. with long, straggling branches. Leaflets 2-6 pairs, sensitive, linear-oblong, bristly on the margins; stipules scarious. Flowers yellow. Pods small, turgid.

Rare; few plants can be seen along the railway track between Surat and Bhestan; also growing in open grasslands.

Flowers and fruits : August - September.

JVJ 137, 350, 1084.

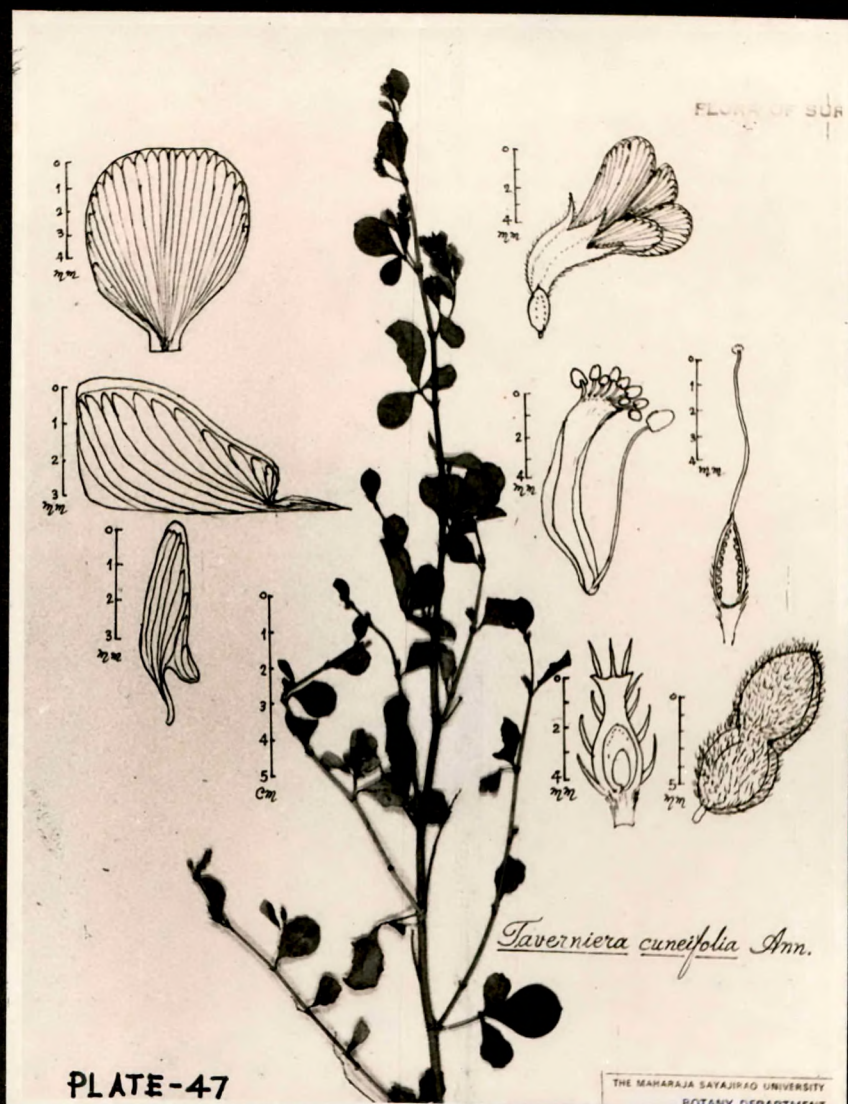
Plate 46.

Taverniera DC.

Taverniera cuneifolia Ann., in Wt. Icon. t. 1055, 1846; Gam. 1: 231; Saur. 1: 41.

T. nummularia (DC.) Baker, in FBI. 2: 140 (non DC. 1825);

C. 1: 353.



A much-branched undershrub. Leaves 1-3-foliolate, obovate-sub-orbicular, mucronate, glabrous. Flowers pinkish-red to rosy-white. Pods with 1-3-seeded joints; joints ovoid, sub-reticulately rugose and echinate.

Cooke (loc. cit.) mentioned the leaves as 1-foliolate; however in all our collections, 3-foliolate and 1-foliolate leaves are noted on the same plant. Other observations, such as the presence of stipels, pinkish-red to rosy-white flowers, persistent corolla and diadelphous (9+1) stamens need to be added to correct Cooke's description of the taxon.

Rare; found on wastelands, opposite the railway track at Udhana.

The attractive flowers of this plant, make it worthy of introduction in gardens.

Flowers and fruits : September - February.

JVJ 1389, 1456.

Plate : 47.

Tephrosia Pers. (nom. cons.)

Tephrosia hamiltonii J. R. Drum., in Gam. Fl. Madras Presid.

320, 1918 and (Rep. ed.) 1: 226; Parker, 131; Saur.1:138.

T. purpurea (Pers.) Baker, in FBI. 2: 112, in part;

C. 1: 346, p. p.; M. 21.

A much-branched, minutely hairy, undershrub. Leaves

imparipinnate. Flowers purplish-pink. Pods 3-6 cm long, glabrescent, 5-7-seeded.

Gregarious on sandy soils along the roadsides at Dumas and Hajira; often seen in association with Crotalaria medicaginea, Cassia tora, C. occidentalis and Xanthium strumarium.

Flowers and fruits : July - March.

JVJ 39, 958, 1001.

Tephrosia hirta Ham., in Trans. Linn. Soc. 13: 546, 1822;

Gam. 1: 225; Saur. 1: 135; Pavagadh, 81.

T. villosa Wt. & Arn. Prodr. 212, 1834; FBI. 2: 113 (excl. some synonyms); C. 1: 347; M. 121.

An erect or sub-erect undershrub. Stems clothed with white, silvery hairs. Leaves imparipinnate. Flowers dark pink to violet; calyx villous. Pods deflexed, covered with velvety, villous tomentum.

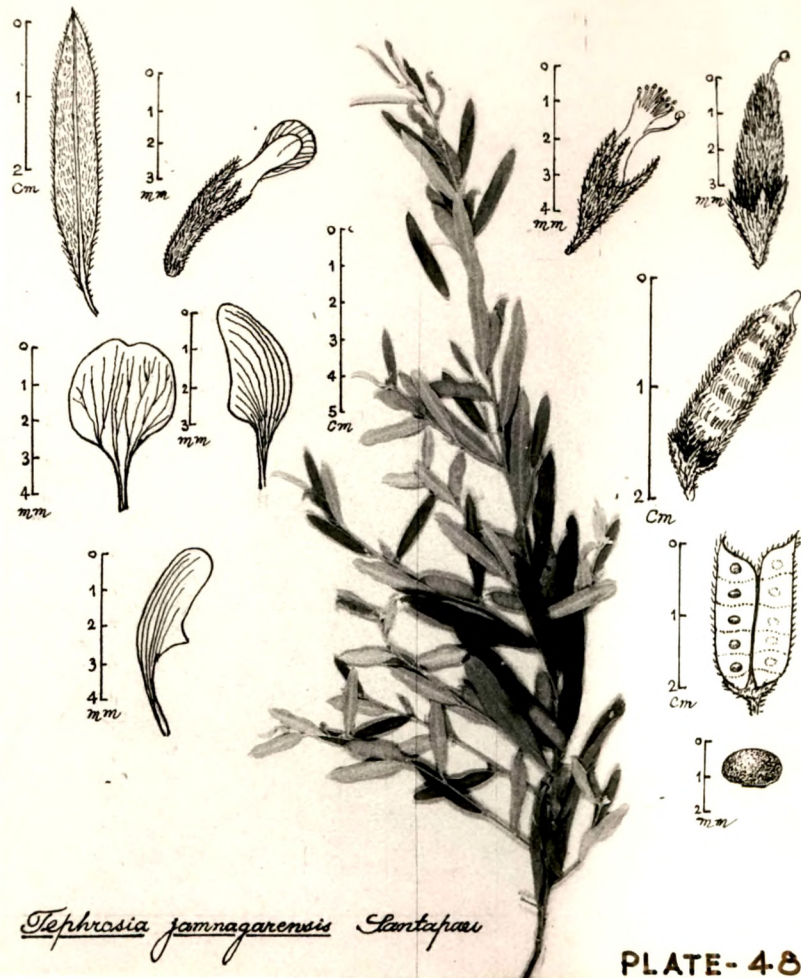
Occasionally seen on the railway track and along the canal bank.

Flowers and fruits : August - December.

JVJ 121, 1392.

Tephrosia jamnagarensis Santapau, in Proc. Nat. Inst. Sci.

India 24B : 133, t. 1, 1958; Saur. 1: 134.



*Tephrosia jamnagarensis* Santapau

An erect, robust, annual herb. Leaves simple, linear, oblong, glabrous above, hairy with silvery, appressed hairs beneath. Flowers purple single or in pairs from the axils of the leaves. Pods compressed, densely hairy, 4-6-seeded.

A rare plant noted among grasses on wastelands near the BRC, Udhana; also as a weed in some crops in the same locality.

Flowers and fruits : October - November.

JVJ 1374.

Plate : 48.

Tephrosia senticosa Pers., Syn. Pl. 2: 330, 1807; FBI. 2: 112; Gam. 1: 225; Saur. 1: 137.

T. pauciflora Grah. (in Wall. Cat. No. 5635, 1828 nom. nud.) ex Baker, in FBI. 2: 114; C. 1: 348.

A small, prostrate herb, clothed with short, appressed hairs. Leaves pinnately compound; leaflets 5-11, oblanceolate. Flowers purplish-pink. Pods hairy.

Occasionally seen on open wasteland among grasses.

Flowers and fruits : August - December.

JVJ 60, 937, 1476.

Tephrosia strigosa (Dalz.) Santapau & Maheshwari, in JBNHS. 54: 804, 1957; Saur. 1: 134; M. 121; Fl. Raj. 48; Bhopal, 136.





PLATE - 49



Macronyx strigosus Dalz., in Hook. Kew Journ. 2: 35, 1850.

Tephrosia tenuis Wall. ex Dalz. & Gibs. Bombay Fl. 61,  
1861; FBI. 2: 111; C. 1: 344.

An erect or sub-erect, much-branched, slender herb. Leaves simple. Flowers violet, solitary, axillary on slender pedicels. Pods linear, flat, 6-10-seeded.

Often gregarious on protected lands, in association with Indigofera cordifolia along the sides of paths.

Flowers and fruits : August - December.

JVJ 122, 1016, 1157.

Plate : 49.

#### Teramnus Sw.

Teramnus labialis (L. f.) Spreng., Syst. 3: 235, 1826; FBI.

2: 184; C. 1: 387; Gam. 1: 249; Saur. 1: 159; M. 128.

Glycine labialis Linn. f. Suppl. 325, 1781; Wt. Icon. t. 168.

A small, hairy, herbaceous twiner, clothed with deflexed hairs. Leaves 3-foliolate. Flowers purplish-blue. Pods cylindrical, hairy with a curved beak.

Seen on the hedges throughout the area.

Flowers and fruits : August - March.

JVJ 132, 349, 2074.

#### Trigonella Linn.

Trigonella foenum-graecum Linn., Sp. Pl. 777, 1753; Roxb.,

Fl. Ind. 3: 389, 1832; FBI. 2: 87; Saur. 1: 182; M. 115.

An erect annual. Leaves 3-foliolate; leaflets oblong-oblongeolate, toothed. Flowers yellowish-white. Pods long, cylindrical, 10-20-seeded.

Cultivated throughout the year but on a large scale during winter.

Local name : Methi.

Uses : The delicate plants with tender leaves at seedling stage are used as vegetable. This kind of Bhaji is speciality of Surat and is available throughout the year but the mature plants - locally known as 'metho' are sold during winter only.

Flowers and fruits : December - February.

JVJ 1845, 1946.

### Uraria Desv.

Uraria picta Desv. in Journ. Bot. 1: 123, t. 5, f. 19, 1813;

FBI. 2: 155; C. 1: 367; Gam. 1: 237; Saur. 1: 145.

An erect undershrub. Stems and branches with hooked hairs. Leaves 3-9-foliolate; leaflets linear-oblong, the mid-rib and neighbouring parts white or pale-yellowish on the upper side. Flowers purple. Pods 3-6-jointed, the joints folded on one another.

A rare plant, collected once in a wild condition from Udhana-Magadalla road. Recently it has been introduced in

cultivation at Hari Nursery.

Flowers and fruits : August - onwards.

JVJ 136.

Vigna Savi

Vigna aconitifolia (Jacq.) Marech. in Bull. Jard. Bot. Nat.

Belge 39: 160, 1969; Verdcourt, Kew Bull. 24: 507-569, 1970; Bhandari, 138.

Phaseolus aconitifolius Jacq. Obs. Bot. 3(2): t. 52, 1768;

FBI. 2: 201; C. 1: 403; Gam. 1: 256; Saur. 1: 167;

M. 132.

A prostrate or twining hairy annual. Leaves 3-foliolate; leaflets irregularly lobed, lobes acute. Flowers yellow, in short capitate, long-peduncled racemes. Pods clothed with brownish hairs.

Occasionally seen along the railway track as an escape from cultivation.

Local name : Math.

Uses : Seeds are used as pulses and leaves and stems as fodder. Green pods are eaten as such.

JVJ 895, 1070.

Vigna mungo (L.) Hepper, in Kew Bull. 11: 128, 1956.

Phaseolus mungo Linn., Mant. 101, 1767; C. 1: 403.

P. mungo var. radiatus Baker, in FBI. 2: 203.

A trailing, annual herb, clothed with grey hairs. Leaves 3-foliolate, Flowers yellow. Pods hairy.

Occasionally cultivated along with the maize crop; also noted as an escape.

Local name : Adad.

Flowers and fruits : August - October.

JVJ 102, 928.

Vigna radiata Linn., Wilczek, in Fl. Congo, Belg. 6: 386,

1954; Verdcourt, loc. cit. 1970; Hassan, 267;

Bhandari, 138.

Phaseolus radiatus Linn., Sp. Pl. 725, 1753; Sant. 69;

Saur. 1: 169.

P. sublobatus Roxb. Fl. Ind. 3: 288, 1832.

P. trinervis Heyne, in Wall. Cat. 5603, 1831-32;

FBI. 2: 203.

An erect, sub-erect or straggling herb. Leaves 3-foliolate; leaflets ovate, entire. Flowers yellow. Pods densely clothed with brownish hairs.

Occasional on wet soil, along with grasses in hedges, along railway track and near the bank of canals.

Local name : Mung.

Uses : The grains are eaten as Dal.

Flowers and fruits : September - November.

JVJ 458, 1003.

Vigna trilobata (L.) Verdcourt, in Taxon 17: 172, 1968;

Kew Bull. 24: 560, 1970; Hassan, 267; Bhandari, 138.

Phaseolus trilobus Ait., Hort. Kew 3: 30, 1789; FBI. 2:

201; C. 1: 401; Gam. 1: 256; Saur. 1: 168; M. 132.

A trailing or prostrate, glabrous or more or less hairy annual herb. Leaves 3-foliolate, terminal leaflets lobed.

Flowers yellow. Pods straight, sub-cylindric, hairy or glabrous.

Fairly common throughout the area; along roadside, canal, open moist places, along the river bank, railway track and also noted as a weed in crop fields.

Local name : Vagadav Math.

Flowers and fruits : July - November.

JVJ 8, 1002.

Vigna unguiculata (L.) Walp. Repert. 1: 779, 1842; Andrews,

Fl. Pl. Angl. Egypt. Sudan 2: 246, 1952; Verdcourt,

loc. cit. 1970.

Dolichos unguiculata Linn., Sp. Pl. 725, 1753.

Vigna catgang Walp., in Linnaea 13: 533, 1839; FBI. 2: 205.

Vigna sinensis (L.) Savi ex Hassak. Cat. Hort. Bogor. 279,

1844; M. 133.

A twiner or sub-erect annual. Leaflets 3. Flowers pinkish-violet. Pods linear.

Local name : Choli.

Uses : Green fruits are used as vegetable.

Flowers and fruits : October - onwards.

JVJ 1329.

Zornia Gmel.

Zornia gibbosa Span., in Linnaea 15: 192, 1841; Mohlenbrock, in Webbia 16(1): 112, ff. 44 & 76, 1961; Wagh, in JBNHS. 61: 214, 1964; Raizada, in Ind. For. 92(5): 326, 1966.

Z. diphylla auct. Pl. (non Pers., 1807); FBI. 2: 147; C. 1: 355; Gam. 1: 229.

A prostrate to sub-erect herb with zig-zag branches. Leaves 2-foliolate, leaflets lanceolate with black glands beneath. Flowers yellow. Pods jointed, covered with soft spines.

Fairly common throughout the area, often mixed with grasses, Indigofera and Tephrosia spp., seen along the railway track.

Flowers and fruits : August - December.

JVJ 135, 846, 996.

## 40. CAESALPINIACEAE

## 1. Flowers apetalous :

2. Calyx large, petaloid; leaflets 8-12 ...8. Saraca2. Calyx small, non-petaloid; leaflets 2 ...5. Hardwickia

## 1. Flowers with petals :

3. Leaves 2-lobed .....1. Bauhinia

## 3. Leaves compound :

## 4. Leaves simply pinnate :

5. Petals 5 .....3. Cassia5. Petals 3 perfect, 2 scaly .....9. Tamarindus

## 4. Leaves bipinnate :

6. Leaf rachis ending in a spine,  
 rachilla flat bearing numerous  
 leaflets .....6. Parkinsonia

## 6. Leaf rachis not as above :

7. Pods more or less broadly  
 winged .....7. Peltaphorum

## 7. Pods not winged :

8. Sepals imbricate .....2. Caesalpinia8. Sepals valvate .....4. Delonix

1. Bauhinia Linn.

1. Fertile stamens 10 :

2. Leaves more than 5 cm in length; lobes  
acute or sub-obtuse; flowers creamy-white, showy; pod dehiscent ..... 1. B. acuminata2. Leaves less than 5 cm in length; lobes  
rounded; flowers greenish-white, notshowy; pod indehiscent ..... 3. B. racemosa1. Fertile stamens 3-5 ..... 2. B. purpurea1. Bauhinia acuminata Linn., Sp. Pl. 375, 1753; FBI. 2: 276;  
C. 1: 462.

An erect, handsome shrub. Flowers large, showy, fragrant.

Grown in the gardens of Hari Nursery and B.R.C., Udhana.

Flowers and fruits : December - onwards.

JVJ 384.

2. Bauhinia purpurea Linn., Sp. Pl. 375, 1753; FBI. 2: 284;C. 1: 461; Gam. 1: 288; Blatter & Millard, Tr. 80 &  
t. opp. 80; Benthall, 202-203; Saur. 1: 198; Sant.  
81; M. 138.A small tree. Leaves glabrous, shallowly cordate, lobes  
obtuse. Flowers purple, large, showy. Pods woody, late in  
dehiscing.



Occasionally cultivated in gardens.

Local name : Dev Kanchan.

Flowers and fruits : October - February.

JVJ 667.

3. Bauhinia racemosa Lamk., Encycl. 1: 390, 1783; FBI. 2: 276;

Gam. 1: 288; C. 1: 459; Saur. 1: 197; Sant. 80.

Small tree with crooked branches. Leaves not deeply bilobed, broader than long, cordate. Flowers pale-yellow, not showy. Pods stalked, falcate.

Not common in all localities. It is seen at Rander, Ved (along the border of fields), Dumas. Planted in Cotton Research farm.

Local name : Asatro.

Uses : The leaves are used in the preparation of Bidis.

Flowers and fruits : September - May.

JVJ 614.

## 2. Caesalpinia Linn.

1. Pods covered with flexible, wiry prickles...1. C. crista

1. Pods smooth :

2. Armed shrub .....2. C. decapetala

2. Unarmed shrub or tree .....3. C. pulcherrima

1. Caesalpinia crista Linn., Sp. Pl. 380, 1753 (pro major parte, excl. Fl. Zeyl. 157); Saur. 1: 182; M. 144; Pavagadh, 94.

Guilandia bonducella Linn., Sp. Pl. (ed. 2) 545, 1762.

Caesalpinia bonducella (Linn.) Fleming, in Asiat. Res. 11: 159, 1810; FBI. 2: 254; C. 1: 437; Duthie, 278.

A large climbing armed shrub; prickles hooked and straight. Leaflets elliptic-oblong. Flowers yellow, in dense racemes. Pods oblong-broad, 1-2-seeded.

Cultivated as a hedge plant in many places.

Local name : Kanchaka.

Uses : In villages, the seeds are used in medicine for fever and in colic.

Flowers and fruits : August - February.

JVJ 922, 975.

2. Caesalpinia decapetala (Roth) Alston, in Trim. Hand. Fl. Ceyl. 6(Suppl.) 89, 1931.

Reichardia decapetala Roth, Nov. Pl. Sp. 212, 1821.

Caesalpinia sepiaria Roxb., Fl. Ind. 2: 360, 1832; Wt. Icon. t. 37; FBI. 2: 256; C. 1: 439; Talbot, 141; Gam. 1: 279; Duthie, 279.

A large, prickly, scandent shrub; prickles strong, recurved, pale-brown. Leaflets 8-10 pairs, oblong, obtuse.

Flowers yellow. Pods narrowly winged, linear-oblong.

Rare; not seen anywhere except in the gardens of P. T. Science College.

Flowers and fruits : October - December.

JVJ 1453.

3. Caesalpinia pulcherrima (Linn.) Swartz., Obs. Bot. 166, 1791; FBI. 2: 225; C. 1: 440; Saur. 1: 183; Pavagadh, 94.

Poinciana pulcherrima Linn., Sp. Pl. 380, 1753; Bailey, 589; M. 144.

A large shrub. Flowers yellow-orange or scarlet. Pods flat, oblong.

Planted in gardens and along the roadsides.

Local name : Galtoro                      English name : Peacock flower.

Flowers and fruits : Throughout the year.

JVJ 507.

### 3. Cassia Linn.

1. Trees :

2. Bracts conspicuous, persistent, three  
anther filaments with a globose swelling :

3. Leaflets 6-14 pairs; racemes lateral..6. C. javanica

- 3. Leaflets 8-20 pairs, racemes  
from the scars of fallen leaves....11. C. renigera
- 2. Bracts small, deciduous, anther  
filaments without globose swellings:
- 4. Fertile stamens 10 :
  - 5. Stamens unequal; pods  
terete, indehiscent .....4. C. fistula
  - 5. Stamens equal in length; pods  
flat, dehiscent .....15. C. surattensis
- 4. Fertile stamens 6-7.....13. C. siamea
- 1. Herbs, undershrubs or shrubs :
  - 6. Leaflets 4 ( 2 pairs) .....1. C. absus
  - 6. Leaflets more than 4 :
    - 7. Leaf rachis without gland :
      - 8. Pods winged, membranous .....2. C. alata
      - 8. Pods not as above :
        - 9. Pods slightly curved with a  
prominent crest down the  
middle of the faces ..... 5. C. italica
        - 9. Pods straight, without crest.12. C. senna

## 7. Leaf rachis with glands :

10. Glands on the petiole always present  
(glands between the leaflets may or  
may not be present) :

11. Glands distinctly stalked.....10. C. pumila

## 11. Glands sessile :

12. Leaflets 30-60 pairs, stamens  
10, all fertile; prostrate  
herb ..... 7. C. mimosoides

12. Leaflets less than 15 pairs;  
fertile stamens 7, three  
reduced to staminodes;  
erect undershrubs :

13. Leaflets 3-5 pairs, ovate-  
lanceolate, bracts very  
acute; pods less turgid..9.C. occidentalis

13. Leaflets 8-12 pairs,  
lanceolate, bracts obtuse,  
pods turgid .....14.C. sophora

10. Glands always between the pairs of leaflets  
(no glands on the petiole) :

## 14. Leaflets 3 pairs :

15. Glands between the two lowest

pairs of leaflets; plant foetid...16. C. tora

15. Gland between the lowest pair of

leaflets; plant not foetid ..... 8. C. obtusifolia

14. Leaflets 8-12 pairs; glands between

each pair of leaflets ..... 3. C. auriculata

1. Cassia absus Linn., Sp. Pl. 376, 1753; FBI. 2: 265;

C. 1: 451; Saur. 1: 192; Shah, in Ind. For. 89(4):

289, 1963; V. Singh, BBSI. 18: 85-101, 1976.

An erect herb. Stems and branches clothed with glandular hairs; glands between both the pairs. of leaflets. Flowers whitish-yellow. Pods thin, compressed.

Rare; collected from Medical College campus and Udhana along the roadsides; often seen growing with Cassia tora L.

Flowers and fruits : August - November.

JVJ 111, 363.

2. Cassia alata Linn., Sp. Pl. 378, 1753; FBI. 2: 264;

Wt. Icon. t. 253; Gam. 1: 286; Bailey, 586; de Wit.

in Webbia 11: 231, 1955; V. Singh, loc. cit. 1976.

Senna alata Roxb., Fl. Ind. 2: 349, 1832.

A handsome undershrub. Leaves not gland-dotted; leaflets 5-12 pairs, oblong-elliptic, retuse apiculate. Flowers golden yellow; bracts broad orange-coloured. Pods with 4 broad crenulate wings.

Occasionally planted in the gardens for ornamental purposes. A native of W. Indies.

Flowers and fruits : October - January.

JVJ 1426.

3. Cassia auriculata Linn., Sp. Pl. 379, 1753; FBI. 2: 263; C. 1: 448; Gam. 1: 284; Saur. 1: 190; M. 141. V. Singh, loc. cit. 92, 1976.

An erect undershrub or shrub with reddish-brown, smooth bark. Leaves pinnate; leaflets 8-14 pairs with linear, needle-like glands between each pair of leaflets; stipules foliaceous, reniform. Flowers golden-yellow. Pods flat, brown.

Fairly common on sandy, dry, waste soils near sea-shores of Dumas, Hajira and Abhava.

Local name : Aval.

Flowers and fruits : August - April.

JVJ 97, 2007.

4. Cassia fistula Linn., Sp. Pl. 377, 1753; FBI. 2: 261; C. 1: 444; Gam. 1: 283; Blatt. & Mill. Beaut. Ind. Tr. 20 & t. opp. p. 20; Benthall, 188-189; Saur. 1: 187; M. 142; V. Singh, loc. cit. 97, 1976.

A medium-sized tree. Leaflets 4-8 pairs, large, ovate, coriaceous. Flowers bright-yellow, in long, pendulous, lax

racemes. Pods cylindrical, dark brown, indehiscent.

Mostly planted throughout the area in gardens and along roadsides for shade and showy flowers.

Local name : Garmalo.

Flowers : March - April (when the plant is leafless).

Fruits : Till the next flowering season.

JVJ 878, 1720.

5. Cassia italica (Mill.) Lamk. ex Andrews, Fl. Pl. Anglo-Egypt. Sudan 2: 117, 1952; Saur. 1: 191; Bhandari, 142; V. Singh, loc. cit. 95, 1976 & JBNHS. 75(2): 434-443, 1978.

Senna italica Mill., Gard. Dict. ed. 8, no. 2, 1758.

Cassia obtusa Roxb., Hort. Beng. 1814 (nom. illegit)  
ex Wt. & Arn. Prodr. 228, 1834 (non clos.); Wt.  
Icon. t. 757; FBI. 2: 264; C. 1: 448; Gam. 1: 285.

C. obovata Colland., Hist. Cass. 92, t. 15A, 1816;  
Baker, in FBI. 2: 344 (nom. illegit.)

A sub-erect herb. Stems angular, striate Leaflets 4-6 pairs, without glands, broadly-oblong or obovate. Flowers yellow with dark veins. Pods thin, flat, glabrous, longitudinal crests down the middle of faces of pods.

A very rare plant, collected once from dry, sandy soils of sea-shore near Bhimpor.



Flowers and fruits : August - September.

JVJ 59.

6. Cassia javanica Linn., Sp. Pl. 1: 379, 1753; FBI. 2: 267;  
Blatt. & Mill., loc. cit. 27, t. 4; Benthall, 192-193;  
M. 142.

A small or medium-sized tree. Flowers pink, fading to white.

Planted in private and public gardens, also along the roads for ornamental flowers.

Flowers and fruits : September - January.

JVJ 903, 1779.

7. Cassia mimosoides Linn., Sp. Pl. 1: 379, 1753; FBI. 2:  
266; C. 1: 453; Gam. 1: 285; V. Singh, loc. cit.  
88, 1976.

A diffuse or sub-erect herb. Stems and branches more or less hairy. Leaflets many, linear, sub-acute, obliquely mucronate, over lapping. Flowers yellow. Pods linear, straight, flat.

Occasionally found on wet soils of rice fields, mixed with grasses; on the margins of ditches; also seen along the wet bank of canals.

Flowers and fruits : August - December.

JVJ 112, 1163.

8. Cassia obtusifolia Linn., Sp. Pl. 1: 377, 1753; C. 1: 447; Duthie, 1: 270; M. 141; V. Singh, loc. cit. 94, 1976.

C. tora Baker, in FBI. 2: 263 (partum non Linn.).

Senna toroides Roxb., Fl. Ind. 2: 341, 1832.

An annual undershrub, very similar to C. tora but it differs by the characters like a single gland between lowest pair of leaflets, plant is not foetid, flowers bright yellow. Pods subterete.

Not so common as Cassia tora, found with C. tora on waste, open land.

Flowers and fruits : August - December.

JVJ 125.

9. Cassia occidentalis Linn., Sp. Pl. 1: 377, 1753; FBI. 2: 262; C. 1: 445; Gam. 1: 284; Saur. 1: 188; M. 141.

A shrubby herb. Leaves with a single, sessile gland at the base of the petiole; leaflets 3-5 pairs. Flowers yellow. Pods compressed, glabrous, pale brown at centre, pale yellow along the margin.

Occasionally seen on fallow-waste land, along the roadsides and near habitation. Often associated with Cassia tora and Crotalaria medicaginea and seedlings of Prosopis juliflora on sandy-wet soil near Dumas and Bhimpor.

Local name : Mota Kuvadia.

Flowers and fruits : August - December.

JVJ 75, 117.

10. Cassia pumila Lamk., Encycl. 1: 651, 1784; FBI. 2: 266;

C. 1: 452; Gam. 1: 285; Saur. 1: 193; M. 141;

V. Singh, loc. cit. 87, 1976.

C. prostrata Roxb., Hort. Beng. 32, 1814 (nom. nud.)

Senna prostrata Roxb., Fl. Ind. 2: 352, 1832.

A prostrate herb. Branches spreading. Leaflets upto 30 pairs, glands of the petioles persistent. Flowers yellow. Pods linear, straight or slightly curved.

Found on open, wet, grassy soil; occasionally along the sides of path and railway track; along the border of fields.

Flowers and fruits : August - November.

JVJ 113, 493.

11. Cassia renigera Wall. ex Benth., in TLS. 27: 578, 1871;

FBI. 2: 262; Blatt. & Mill., Beaut. Ind. Tr. 35,

t. 5; Benthall, 193-194; M. 142.

A medium-sized tree. Flowers pink, fading to white. Pods smooth.

Planted in gardens of B.R.C. Udhana, for its ornamental flowers.

Flowers and fruits : April - September.

JVJ 995.

12. Cassia senna Linn., Sp. Pl. 1: 377, 1753; Brenan, in Fl. Trop. East Afri. (Legum.) 2: 65-66, 1967; Ali, in Fl.W. Pak. 54: 12, 1973; V. Singh, loc.cit. 98, 1976.

C. angustifolia Vahl, Symb. Bot. 1: 28, 1790; FBI. 2: 264; C. 1: 450.

An erect, glabrous herb. Leaflets 4-8 pairs, lanceolate, acute. Flowers bright yellow. Pods thin, straight, smooth, not crested.

Very rare plant; collected once from the wet, sandy soil at Dumas.

Flowers and fruits : August - October.

JVJ 819.

13. Cassia siamea Lamk., Encycl. Meth. Bot. 1: 648, 1785; FBI. 2: 264; C. 1: 454; Bailey, 586; Benthall, 198-199; Saur. 1: 194; M. 143.

A medium-sized tree. Leaves without glands; leaflets 12-24 pairs. Flowers yellow. Pods flat.

Planted in public and private gardens and along the roads for its shade and beautiful flowers.

Flowers and fruits : September - April.

JVJ 953, 1718.

14. Cassia sophera Linn., Sp. Pl. 1: 379, 1753; FBI. 2: 262-

63; C. 1: 419; Gam. 1: 284; Saur. 1: 188; V. Singh,  
loc. cit. 89.

An erect, perennial undershrub. Leaflets 4-10 pairs with a solitary gland near the base of the petiole. Flowers yellow. Pods linear-oblong, turgid.

Rare; found as a garden weed from Gandhi Baag and P. T. Science, College, Garden; not seen elsewhere.

Flowers and fruits : October - February.

JVJ 1427, 1748.

It is very much similar to Cassia occidentalis Linn.

15. Cassia surattensis Burm. f., Fl. Ind. 97, 1768; Ali, in Fl. W. Pak. 54: 29, 1973; V. Singh, loc. cit. 90.

C. glauca Lamk., Encycl. 1: 647, 1785; FBI. 2: 265;

C. 1: 425; G. 1: 285; Benthall, 199-200; Saur. 1:193.

A small, handsome tree. Leaflets 4-8 pairs, glands clavate, between the 2-3 lowest pairs of leaflets. Flowers yellow. Pods flat.

Occasionally planted in the gardens.

Flowers and fruits : November - March.

JVJ 642.

16. Cassia tora Linn., Sp. Pl. 1: 376, 1753; FBI. 2: 263

in part; C. 1: 447; Gam. 1: 284; Saur. 1: 189;

M. 141; V. Singh, 94.

An erect, foetid, herb or undershrub. Leaflets 3 pairs; glands between the two lowest pairs of leaflets. Flowers yellow. Pods sub-cylindric, slender, obliquely septate.

Fairly common throughout the area, seen on waysides, waste places near habitation, fallow lands, along the canals and upper belt of river bank. Usually seen in association with Cassia occidentalis, Tephrosia hamiltonii, Cassia obtusifolia, and Xanthium strumarium.

Local name : Kumadiya.

Uses : Tender leaves are used as a vegetable by rural people.

Flowers and fruits : July - February.

JVJ 114, 516, 777.

#### 4. Delonix Raf.

Flowers large, bright red ..... 2. D. regia

Flowers small, white or pale yellow ..... 1. D. elata

1. Delonix elata (L.) Gam., Fl. Pres. Madras, 396, 1919

and 1: 280; Sant. 78; Saur. 1: 185.

Poinciana elata Linn., Cent. Pl. 2: 16, 1756; FBI. 2:

260; C. 1: 441.

A small, deciduous tree with erect branches. Leaves bi-pinnate; leaflets 10-20 pairs. Flowers whitish-yellow.

Planted near habitation; along the hedges throughout the area.

Local name : Sandesaro.

Flowers and fruits : July - January.

JVJ 568, 1943.

2. Delonix regia (Boj.) Raf. Fl. Tell. 2: 92, 1836; Benthall, Trees Calc. 170; McCann, Trees of Ind. 70; Gam. 1: 280; Benthall, 170-171; Saur. 1: 184; M. 143.

Poinciana regia Boj. ex Hook. in Bot. Mag. t. 2884, 1829; FBI. 2: 260; C. 1: 442.

A medium-sized tree with umbrella-shaped crown. Leaflets many. Flowers bright-red. Pods thick.

Grown in gardens and along roadside for its ornamental flowers.

Local name : Gulmohur.

Flowers and fruits : March - July.

JVJ 33, 753.

#### 5. Hardwickia Roxb.

Hardwickia binata Roxb., Pl. Cor. 3: 6, t. 209; 1811; FBI. 2: 270; C. 1: 476; Gam. 1: 292; Saur. 1: 195; M. 156; Meher-Homji, in JBNHS. 67(1): 81-86, 1970; Thaker & Sabnis, in JMSUB. 19 & 20(3 & 4): 38, 1970 & 1971.

A medium-sized deciduous tree. Leaves paripinnate, leaflets

1 pair, much longer than broad, oblique, emarginate, coriaceous, glabrous. Flowers white. Pods strap-shaped.

A very rare plant; a single tree planted in the Nursery of Cotton Research Farm.

Flowers and fruits : September - January.

JVJ 1829.

1829

#### 6. Parkinsonia Linn.

Parkinsonia aculeata Linn., Sp. Pl. 375, 1753; FBI. 2: 261;

C. 1: 442; Gam. 1: 281; Benthall, 175-176; Saur. 1:

186; M. 138.

A small tree, armed with sharp woody spines. Leaves bipinnate, main rachis ending in a spine; rachilla long, winged, bearing numerous, small leaflets. Flowers yellow. Pods moniliform.

Cultivated in gardens and near habitation; rare in the area.

Local name : Rambaval.

Uses : The green seeds are edible.

Flowers and fruits : October - February.

JVJ 396.



7. Peltophorum Vogel.

Peltophorum inerme (Roxb.) Naves, in Blanco, Fl. Filip. (ed.

3) t. 335; Merrill, in Philip. J. Sci. 5: 57, 1910;

Benthall, 167-168; Alian Liogier, in Rhodora 67: 315-

361, 1965; Vartak, in Journ. Univ. Poona 30: 24, 1966.

Caesalpinia inermis Roxb., Fl. Ind. 2: 367, 1832.

Peltophorum ferrugineum (Decne) Benth, in Fl. Austr. 2:

279, 1864; FBI. 2: 257.

Peltophorum pterocarpum (DC.) Backer, ex K. Heyne, Nutt.

Pl. Ned. Ind. (ed. 2) 2: 755, 1927; Sant. 289 (appendix);

Saur. 1: 174.

A handsome large tree. Leaves bipinnate. Flowers golden yellow, in terminal panicles; Pods oblong, flat, thin, more or less winged.

Planted as an avenue tree, along the roads and in gardens for shade and ornamental purposes.

Local name : Pilo gulmohar.

Flowers and fruits : October - May.

JVJ 569.

8. Saraca Linn.

Saraca indica Linn., Mant. 98, 1767; FBI. 2: 271; C. 1: 456;

Gam. 1: 289; Benthall, 178-179; M. 139.

A small tree. Leaflets large, oblong-lanceolate.  
Flowers orange-red in clusters; calyx petaloid, petals 0.

Frequently planted in gardens.

Local name : Ashok.

Flowers : February - April.

Fruits : not seen.

JVJ 178.

#### 9. Tamarindus Linn.

Tamarindus indica Linn., Sp. Pl. 34, 1753; FBI. 2: 273;

Talb. 1: 459, f. 260; C. 1: 457; Gam. 1: 290; Benthall,  
183-184; Saur. 1: 196; M. 139.

A large tree with spreading branches. Leaflets many pairs, oblong, caducous. Flowers yellowish, striped with red. Pods falcate, indehiscent, pulpy inside; seeds dark brown, shining.

Often planted near habitation, along the roadsides and borders of fields.

Local name : Amali.

Uses : The pulp is added in to Dal. Roasted seeds are eaten like betel-nut.

Flowers and fruits : August - December.

JVJ 94, 754.

## 41. MIMOSACEAE

1. Stamens many (more than 10) :

2. Stamens free ..... 1. Acacia

2. Stamens monadelphous :

3. Pods straight, flat :

4. Shrub; pods dehiscent ..... 4. Calliandra

4. Tree; pods indehiscent ..... 3. Albizia

3. Pods twisted or curved, thick ..... 8. Pithecellobium

1. Stamens few (10 or less than 10) :

5. Flowers in globose heads :

6. Anthers gland-crested, at least in  
an early stage; flowers yellow ..... 7. Neptunia

6. Anthers not gland-crested;  
flowers not yellow :

7. Small trees; pods straight ..... 5. Leucaena

7. Undershrubs; pods curved ..... 6. Mimosa

5. Flowers in spikes :

8. Unarmed; seeds scarlet ..... 2. Adenanthera

8. Armed; seeds brown ..... 9. Prosopis

1. Acacia Mill.

## 1. Flowers in spikes :

2. Leaves reduced to phyllodes .....1. A. auriculiformis2. Leaves bi-pinnate .....4. A. suma

## 1. Flowers in heads :

3. Pods moniliform .....3. A. nilotica  
ssp. indica3. Pods cylindric, turgid,  
not moniliform .....2. A. farnesiana1. Acacia auriculiformis A. Cunn., in Hook. Journ. Bot. Lond.  
1: 377, 1842; M. 149.

A medium-sized, handsome tree with drooping branches.  
Phyllodes curved, glabrous, shining, parallel veined. Flowers  
yellow. Pods beaded.

Planted in private gardens and near habitation.

Local name : Australian Baval.

English name : Australian Acacia.

Flowers and fruits : August - onwards.

JVJ 1429.

2. Acacia farnesiana (L.) Willd., Sp. Pl. 4: 1083, 1806;

FBI. 2: 292; C. 1: 473; Talb. 1: 151; Gam. 1: 301;  
saur. 1: 206.

Mimosa farnesiana Linn., Sp. Pl. 521, 1753.

Vachellia farnesiana (L.) Wight & Arn., Prodr. 272, 1834;

Wt. Icon. t. 300.

A thorny shrub with straight stipular spines. Flowers deep-yellow, scented. Pods cylindric turgid, obtuse at apex, slightly curved, faintly striate, 4-6-seeded.

Not common in all localities, occasional on waste-wet ground near canals along Udhana-Magdalla Road.

Local name : Telio Baval.

Flowers and fruits : December - March.

JVJ 1824, 1916, 2025.

3. Acacia nilotica (L.) Del. ssp. indica (Benth.) Brenan, in Kew Bull. 1: 84, 1957; Sant. 83.

Mimosa nilotica Linn., Sp. Pl. 521, 1753.

Acacia arabica (Lamk.) Willd. var. indica Benth., in

Hook. Ind. Journ. Bot. 1: 500, 1842.

A. nilotica (L.) Del. Fl. Eg. Ill. 79, 1813; Saur. 1:204.

A. arabica auct. Ind. non Willd., FBI. 2: 293; C. 1: 472; Gam. 1: 301.

A medium-sized tree, armed with straight, white, stipular spines. Flowers yellow. Pods moniliform.

Seen in all stages of development throughout the area;

on waste lands and in hedges; abundant near Hajira.

Local name : Baval.

Uses : Young branches are used as tooth brushes and are sold in the market as 'Datan'. Plant yields a useful gum.

Flowers and fruits : August - April.

JVJ 22, 1360.

4. Acacia suma Buch.-Ham., in Wall. Cat. 5227C, 1828; FBI. 2: 294; Talb. 1: 152; C. 1: 476; Gam. 1: 302.

A medium-sized tree. Leaves bi-pinnate, pinnae 10-30 pairs, leaflets 30-50 pairs; stipular spines short. Flowers whitish-yellow. Pods flat.

Rare in occurrence; planted near the hedges of fields at Rander.

Flowers and fruits : December - June.

JVJ 613.

## 2. Adenanthera Linn.

- Adenanthera pavonina Linn., Sp. Pl. 384, 1753; FBI. 2: 287; Talb. 1: 149; C. 1: 466; Gam. 1: 296; Saur. 1: 200.

A handsome, deciduous tree. Leaflets many, ovate-oblong. Flowers pale-yellow in slender, spiciform racemes. Stamens 10, free. Pods flat, strap-shaped. Seeds brilliant scarlet.

Rare; two trees planted in Gandhi Baag.

Flowers and fruits : December - February.

JVJ 1765.

### 3. Albizia Durazz.

Albizia lebbeck (L.) Benth., in Hook. Journ. Bot. Lond. 3:

87, 1844; FBI. 2: 298; C. 1: 481; Gam. 1: 306; Saur. 1: 210; M. 151.

Mimosa lebbeck Linn., Sp. Pl. 516, 1753.

A large, deciduous tree. Leaflets oblong, obtuse, subcoriaceous. Flowers white. Pods flat, thin.

Planted in private and public gardens, also as an avenue tree along roadsides.

Local name : Shirish.

Flowers and fruits : April onwards.

JVJ 1723.

### 4. Calliandra Benth.

Calliandra tweedii Benth., in Hook. Journ. Bot. III 98, 1844;

Bailey, 592.

A handsome, unarmed shrub. Leaflets 20-30 pairs, linear-oblong. Flowers purplish-red. Stamens many, purple. Pods elastically dehiscent from the apex.

Rare; grown in the gardens of B.R.C. Udhana.

Flowers and fruits : February - March.

JVJ 2053.

### 5. Leucaena Benth.

Leucaena latisiliqua (L.) Gills, in Taxon 23: 190, 1974;  
Bhandari, 149.

Mimosa latisiliqua Linn., Sp. Pl. 519, 1753.

Leucaena leucocephala (Lamk.) de Wit., in Taxon 10: 53,  
1961; Saur. 1: 202.

L. glauca Benth., in Hook. Journ. Bot. 4: 416, 1842; FBI. 2:  
290; C. 1: 469.

A handsome, unarmed, small tree. Leaflets 15-20 pairs,  
linear-oblong. Flowers creamy-white. Pods straight, flat.

A tropical American plant, grown at many places for its  
attractive flowers and foliage.

Local name : Vilayati Baval.

Flowers and fruits : August - December.

JVJ 451.

### 6. Mimosa Linn.

Pinnae 1-2 pairs; leaves sensitive ..... 2. M. pudica

Pinnae more than 2 pairs; leaves not  
sensitive ..... 1. M. hamata



1. Mimosa hamata Willd., Sp. Pl. 4: 1033, 1806; FBI. 2: 291;  
C. 1: 471; Gam. 1: 298; Saur. 1: 202.

An erect, branched, prickly undershrub. Leaflets 7-8 pairs, small, oblong. Flowers pink, in globose head. Pods flat, curved, 4-8-jointed; joints prickly.

Fairly common along the sides of railway track between Bhestan and Udhana; gregarious on waste, fallow lands near Dumas and Magdalla, frequent in the rest of the localities. Flowers and fruits : August - February.

JVJ 58, 461, 999, 1472.

2. Mimosa pudica Linn., Sp. Pl. 518, 1753; FBI. 2: 291; C. 1: 470; Gam. 1: 298; Sant. 83; M. 147.

A diffuse undershrub. Stems and branches sparingly prickly and bristly. Leaflets 4, small, sensitive. Flowers pink. Pods flat, jointed, membranous with spinose-bristly margins.

Cultivated in many gardens as a botanical curios.

Local name : Lajamani. English name : Sensitive plant.

Flowers and fruits : October - March.

JVJ 694.

## 7. Neptunia Lour.

Neptunia triquetra (Willd.) Benth., in Hook. Journ. Bot. 4:

355, 1842; FBI. 2: 286; C. 1: 464; Gam. 1: 295;

Saur. 1: 199.

Desmanthus triquetra Willd., Sp. Pl. 4: 1045; 1805;

Wt. Icon. t. 756.

A prostrate or sub-erect herb. Leaflets 10-15 pairs.  
Flowers yellow. Pods oblong, black when ripe.

Common on water-logged soils near ditches and canals;  
occurs as a monsoon weed, often hidden amongst grasses.

Flowers and fruits : August - October.

JVJ 18, 800, 944.

#### 8. Pithecellobium Mart.

Pithecellobium dulce (Roxb.) Benth., in Hook. Journ. Bot. 3:

199, 1844; FBI. 2: 302; C. 1: 485; Gam. 1: 308; Saur. 1:  
211; M. 152.

Mimosa dulcis Roxb., Pl. Cor. 1: 67, t. 99, 1795.

Inga dulcis Willd., Sp. Pl. 4: 1105, 1806.

A large tree. Leaves with one pair of pinnae, each pinna  
with 2-leaflets. Flowers whitish-green. Pods spirally twisted.  
Seeds black, embedded in a whitish, edible aril.

Found in all localities but more on the upper-belt of  
river bank at Ved, Rander, Singanpor. Noted wild in all stages  
of development at Dumas and Hajira; planted near human  
habitation.

Local name : Goras amali.

Uses : Aril is edible; leaves are used as fodder.

Flowers and fruits : August - April.

JVJ 782, 1417.

9. Prosopis Linn.

1. Prickles small, conical; pods cylindrical,  
torulose .....2. P. cineraria

1. Prickles usually none; pods compressed ....1. P. chilensis

1. Prosopis chilensis (Molina) Stuntz., in U.S. Dept. Agric.

Bur. Pl. Invent. Seeds and Pl. Import. 31: 85, 1914;

Bhandari, 151.

Ceratonia chilensis Molina Sagg. Chil. 172, 1782.

Prosopis juliflora (Swartz.) DC. Prodr. 2: 447, 1825;

Parker, 200; Raizada & Chatterji, Ind. For. 80(11):

675, 1954; Saur. 1L 201; M. 145.

Mimosa juliflora Sw. Prodr. 85, 1788.

A large shrub or small tree with long, spreading,  
drooping branches. Flowers yellow. Pods compressed, curved  
and torulose. Seeds brown.

Found in all the stages of development throughout the  
area. Extensively planted by the Forest Department on the  
coastal regions of Hajira, Bhimpor and Dumas as sand-binders.

Local name : Gando-Baval.

Uses : Pods are used as a fodder.

Flowers and fruits : August - April.

JVJ 864, 2004.

2. Prosopis cineraria (L.) Druce, in Rep: Bot. Exch. Club.

Br. Is. 3: 422, 1914.

Mimosa cineraria Linn., Sp. Pl. 517, 1753.

Prosopis specigera Linn., Mant. 68, 1767; FBI. 2: 288;

C. 1: 467; Gam. 1: 297; Saur. 1: 200; M. 145.

A small, armed tree. Flowers yellow. Pods turgid, cylindrical, straight. Seeds dull-brown.

Occasionally observed in all stages of development on depleted, eroded soil of the elevated banks of river Tapi; also found in hedges and along railway track.

Local name : Shami or Khijado.

Uses : Sacred tree, worshiped on Dassera.

Flowers and fruits : September - March.

JVJ 863.

#### 42. ROSACEAE

There are numerous horticultural varieties, commonly cultivated in gardens all over Surat and environs presenting nice beds of roses of various colours. The colour of flowers

vary from pink, rosy, red, yellow, white. These seem to be more common and are called by different local names. Greenish-white, deep-orange and dark-purple are the rare varieties found only in few private gardens.

Local name : Gulab.

Flowers : Throughout the year.

#### 43. VAHLIACEAE

##### Bistella Adans.

Bistella digyna (Retz.) Bullock, Acta. Bot. Neerl. 15: 84, 85, 1966; Siddiqui, in Fl. W. Pak. 10: 1, 1971; Bhandari, 158.

Oldenlandia digyna Retz. Obs. 4: 23, 1786-1787.

Vahlia digyna (Retz.) O. Kuntze, Rev. Gen. Pl. 3: 227, 1891.

V. viscosa Roxb. Hort. Beng. 86, 1814 (nom. nud.) et Fl. Ind. 2: 89, 1832; Wt. Icon. t. 593; FBI. 2: 399; C. 1: 493.

An erect or diffuse annual. Stem and branches grooved, glandular-pubescent. Leaves opposite, linear or oblong-lanceolate, sparsely hairy on both surfaces. Flowers axillary, solitary or in pairs, whitish-yellow. Capsule oblong-ellipsoid, glandular hairy. Seeds many, minute.

Not found in all localities, but noted from Ved and

Variav, where they were found on moist, muddy soils of river bed.

Flowers and fruits : October - December.

JVJ 1272.

#### 44. CRASSULACEAE

##### Kalanchoe Adans.

1. Flowers yellowish-green .....1. K. floribunda var. glabra

1. Flowers pale red .....2. K. pinnata

1. Kalanchoe floribunda Wight & Arn. Prodr. 359, 1834 var.

glabra C.B. Clarke, in FBI. 2: 415; C. 1: 496;

Gam. 1: 319.

A succulent herb. Leaves fleshy, elliptic-spathulate.  
Flowers yellowish-green, in trichotomous cymes.

Planted in gardens for the beautiful flowers.

Flowers : March - April.

JVJ 1597.

2. Kalanchoe pinnata (Lamk.) Pers. Syn. 1: 446, 1805.

Cotyledon pinnatum Lamk., Encycl. 2: 141, 1786.

Bryophyllum calycinum Salisb. Parad. Lond. t, 3, 1805 &

Bot. Mag. t. 1409, 1811; FBI. 2: 413; C. 1: 494.

A succulent, glabrous herb. Leaves decussate, simple or

compound with crenate margins. Flowers pendulous on a long scape.

Grown in gardens.

Local name : Panfuti or Jakhme hayat.

Flowers and fruits : February - April.

JVJ 1603.

#### 45. COMBRETACEAE

1. Trees or shrubs; petals absent :

2. Flowers a in globose heads .....1. Anogeissus

2. Flowers in spikes .....4. Terminalia

1. Climbing shrubs; petals present :

3. Petals 4; flowers under 1 cm long .....2. Combretum

3. Petals 5; flowers over 5 cm long .....3. Quisqualis

1. Anogeissus Wall.

Anogeissus latifolia (Roxb.) Wall. ex Beddome, Fl. Sylv. t.

15, 1869; FBI. 2: 458; C. 1: 515; Gam. 1: 332; Sant. 91;  
Saur. 1: 220.

Conocarpus latifolius Roxb. Fl. Ind. 2: 442, 1824; Wt. Icon.  
t. 994.

A tall tree. Leaves ovate-oblong. Flowers small, whitish-green. Fruits winged.

A rare plant; planted along with hedge plants at Dumas,  
Ved and Variav.

Local name : Dhavado.

Flowers and fruits : January - March.

JVJ 1949, 1998.

## 2. Combretum Loeffling (nom. cons.)

Combretum ovalifolium Roxb., Hort. Beng. 28, 1814 & Fl. Ind.

2: 226, 1832; FBI. 2: 458; C. 1: 515; Gam. 1: 332;

Sant. 91.

A large climber. Leaves elliptic or ovate-lanceolate.  
Flowers yellowish green. Fruits 4-winged, golden-brown.

Local name : Madhvel, Dhamanivel.

Flowers and fruits : February - May.

JVJ 1448, 1999.

## 3. Quisqualis Linn.

Quisqualis indica Linn., Sp. Pl. (ed. 2) 556, 1762; FBI. 2:

459; C. 1: 517; Gam. 1: 332; Sant. 92; Bailey, 724; M.157.

A large climber. Leaves elliptic or ovate-oblong. Flowers  
white, pink or red; colour of the corolla changes with age of  
the flower.

Extensively cultivated throughout the area.

Local name : Madhumalti. English name : Rangoon Creeper.



Flowers : Summer and Monsoon.

JVJ 680.

4. Terminalia Linn. (nom. cons.)

1. Fruits winged ..... 1. T. arjuna

1. Fruits not winged :

2. Leaves clustered at the end of  
branches, alternate :

3. Fruits sub-globose, very faintly

5 ridged when dry, brown tomentose... 2. T. bellirica

3. Fruits ellipsoid, compressed, 2-ridged

when dry, glabrous ..... 3. T. catappa

2. Leaves not clustered, opposite ..... 4. T. chebula

1. Terminalia arjuna (Roxb. ex DC.) Wt. & Arn. Prodr., 314,  
1834; FBI. 2: 447; C. 1: 509; Gam. 1: 329; M. 156.

A large, handsome tree. Leaves oblong or elliptic with  
1-2 glands at the base of the leaf. Flowers pale yellow.  
Fruit 5-7-winged.

Occasionally planted in gardens of P. T. Science College  
and Gandhi Baag.

Local name : Arjun sadad.

Flowers and fruits : November - March.

JVJ 1778.

2. Terminalia bellirica (Gaertn.) Roxb., Pl. Cor. 2: 54, t. 198, 1805; FBI. 2: 445; C. 1: 508; Gam. 1: 328; Sant. 80; Saur. 1: 217; M. 155.

Myrobalanus bellirica Gaertn. Fruct. 2: 90, t. 97, 1790.

A medium-sized tree. Leaves broadly elliptic, coriaceous, long-petiolate. Flowers pale yellowish-green. Drupes oblong, spherical.

Rare; planted in the gardens of Swami Atmanand Saraswati Pharmacy at Nana Varachha.

Local name : Behada.                      English name : Myrobalan.

Flowers and fruits : November - March.

JVJ 1086.

3. Terminalia catappa Linn., Mant. 519, 1771; FBI. 2: 444; C. 1: 511; Saur. 1: 218.

A large shrub or small tree with whorled, horizontal branches. Leaves obovate-oblong. Flowers greenish-white. Fruit ovoid.

Frequently planted near human habitation as a shade tree. The fruits are eaten and sold under the name Lili badam. Dumas is famous for its cultivation.

Local name: Lili badam.

Flowers and fruits : October - April.

JVJ 1087.

4. Terminalia chebula (Gaertn.) Retz. Obs. Bot. 5: 31, 1788;

FBI. 2: 446; C. 1: 509; Gam. 1: 328.

Myrobalanus chebula Gaertn., Fruct. 2: 91, t. 97, 1791.

A medium-sized tree. Leaves elliptic-oblong. Flowers whitish-yellow. Fruits ovoid, entire.

A rare tree; planted in the Swami Atmanand Saraswati Pharmacy garden.

Local name : Harde.

Uses : Fruits are used along with myrobalan in making 'Trifala choorna'.

Flowers and fruits : December - April.

JVJ 1104, 1548.

#### 46. MYRTACEAE

1. Flowers in spikes; petals caducous;

stamens bright red ..... 1. Callistemon

1. Flowers not as above :

2. Fruit dehiscent capsule; flowers in

capitate cymes or umbels ..... 2. Eucalyptus

2. Fruits fleshy, indehiscent :

3. Calyx limb closed in bud, flowers

large, white; ovary 5-celled ..... 3. Psidium

3. Calyx lobes open in bud; flowers  
small, greenish white; ovary 2-celled...4. Syzygium

1. Callistemon R. Br.

Callistemon lanceolatus DC. Prodr. 3: 223, 1828; Benthall,  
249; M. 158.

A medium-sized tree with fissured bark and numerous  
drooping branches. Flowers crimson, in terminal spikes. Capsule  
with a truncate apex.

Cultivated in the gardens of P. T. Science College.

English name : Bottle brush.

Flowers and fruits : November - March.

JVJ 1593.

2. Eucalyptus L'Herit.

Eucalyptus paniculata Sm., in Trans. Linn. Soc. 3: 287, 1797;  
M. 159.

A tall tree with bark peeling in long strips or sheets.  
Leaves lanceolate. Flowers in umbels. Capsule circumscissile.

Grown in gardens.

Local name : Nilgiri.

Flowers and fruits : December - March.

JVJ 574.

3. Psidium Linn.

Psidium guajava Linn., Sp. Pl. 470, 1753; Benthall, 244;

Bailey, 729; M. 160.

A shrub or small tree. Leaves oblong-elliptic. Fruit globose, ovoid or pyriform.

Grown in a number of fruit orchards in and around Surat.

Local name : Jamfal.

Flowers and fruits : October - February.

JVJ 661.

4. Syzygium Gaertner (nom. cons.)

1. Berries oblong or globose, purple ..... 1. S. cumini

1. Berries pear-shaped, whitish-green ..... 2. S. malaccense

1. Syzygium cumini (L.) Skeels, U.S.D.A. Bur. Pl. Ind. Bull.

248 : 2, 1912; Benthall, 241; Sant. 92; M. 160.

Myrtus cumini Linn., Sp. Pl. 471, 1753.

Eugenia jambolana Lamk., Encycl. 3: 198, 1789; Wt. Icon. t.

535; FBI. 2: 499; C. 1: 523.

Syzygium jambolanum (Lamk.) DC., Prodr. 3: 259, 1828;

Gam. 1: 340.

A large tree. Leaves elliptic-lanceolate to oblong-ovate. Flowers greenish-white.

Frequently cultivated near habitation and private premises.

Local name : Jambu.

English name : Black plum.

Uses : Fruits are edible.

Flowers and fruits : July - October.

JVJ 1831.

2. Syzygium malaccensis (L.) Merrill & Perry, in Journ. Arn.

Arb. XIX 215, 1938; Benthall, 241.

Eugenia malaccensis Linn., Sp. Pl. 470, 1753; FBI. 2: 471;

C. 1: 526.

A small tree. Leaves elliptic-lanceolate. Flowers crimson-white. Fruit pear-shaped, with a depression at the end surrounded by the old lobes of the calyx.

Rare; few plants grown at Dumas.

Local name : Safed Jambu.

Uses : Fruits edible.

Flowers and fruits : August - November.

JVJ 1956.

#### 47. LECYTHIDACEAE

1. Flowers in long pendulous spike,

less than 1 cm wide ..... 1. Barringtonia

1. Flowers in racemes, borne on short leafless

branches or from the trunk, more than 1 cm wide..2. Couroupita

1. Barringtonia Forst.

Barringtonia acutangula Gaertn., Fruct. 2: 97, 1791; FBI. 2: 508; C. 1: 528; Gam. 1: 344; Benthall, 252-253.

A medium-sized tree with smooth bark. Leaves obovate-oblong or elliptic-cuneate. Flowers whitish-pink on long pendulous racemes. Berry globose-ovoid, fibrous.

Planted at the Pharmacy gardens of Swami Atmanand Saraswati - Nana Varachha.

Flowers and fruits : October - January.

JVJ 1103.

2. Couroupita Aubl.

Couroupita guianensis Aubl., Pl. Guil. II 708, t. 282, 1775; Bailey, Std. Cycl. Hort. 1: ( 7th print) 870-871, t. 1084, 1958; Benthall, 257-258.

A handsome tree. Leaves oblong-obovate or broad lanceolate, entire or very obscurely toothed. Flowers yellow and red tinged on the exterior and crimson-lilac within; borne from the trunk and larger branches. Fruits nearly globular, 15-20 cm in diam., reddish and hard on the exterior, pulpy inside.

A native of tropical South America, planted in public gardens at Gandhi Baag, Nehru garden, Hari Nursery and in the botanical garden of P. T. Science College.

Local name : Shivlingi.      English name : Cannon-Ball.

Flowers and fruits : January - April.

JVJ 1781.

Plate : 31 A.

#### 48. LYTHRACEAE

##### 1. Herbs :

2. Capsule ruptures irregularly; flowers  
in axillary cymes .....1. Ammannia

2. Capsule ruptures by valves; flowers in  
dense terminal racemes .....4. Rotala

##### 1. Shrubs or small trees :

3. Flowers irregular; calyx tube slightly  
curved, bright-red .....5. Woodfordia

3. Flowers regular, calyx tube straight :

4. Stamens 8; flowers tetramerous .....3. Lawsonia

4. Stamens many; flowers hexamerous .....2. Lagerstroemia

Ammannia Linn.

1. Cymes distinctly peduncles .....2. A. multiflora

1. Cymes sessile or sub-sessile :



2. Leaves narrowed at the base ..... 1. A. baccifera

2. Leaves rounded or cordate at the base..3. A. salicifolia

1. Ammannia baccifera Linn., Sp. Pl. 2: 175, 1762; Burm. f.

Fl. Ind. 38, t. 15, f. 3-4, 1768; FBI. 2: 569; C. 1:

541; Gam. 1: 360; Sant. 97; Saur. 1: 226; M. 161.

An erect, glabrous, branched herb. Leaves linear-oblong or oblong-lanceolate. Flowers red, in dense axillary clusters.

Commonest species, found in all moist damp places along the lower bank of river Tapi, margins of ditches; as a weed of paddy fields, often mixed with sedges and grasses.

Local name : Jal Agiyo.

Flowers and fruits : August -April.

JVJ 200, 235, 1225, 2043.

2. Ammannia multiflora Roxb., Fl. Ind. 1: 447, 1820; FBI. 2:

570; C. 1: 541; Gam. 1: 360; Sant. 97; Saur. 1: 225.

An erect, branched herb. Stem quadrangular, slender, glabrous. Leaves linear-oblong to elliptic-oblong, subauriculate at base. Flowers reddish-pink. Capsule pale-purple.

A less common species, found occasionally on moist, muddy soils near ditches, often mixed with grasses.

Flowers and fruits : August - January.

JVJ 242, 1024, 1263.

3. Ammannia salicifolia Monti, in Comm. Bonon 1: 112, 1767;  
FBI. 2: 567; C. 1: 542.

An erect, robust herb with purple, smooth, 4-gonous stems.  
Leaves oblong-lanceolate, rounded or cordate at the base.  
Flowers clustered in the axils.

Frequently found growing in wet, damp soil.  
Flowers and fruits :August - April.

JVJ

## 2. Lagerstroemia Linn.

1. Calyx tube ribbed outside; flowers purple,  
2 cm or more long; small tree ..... 2. L. reginae

1. Calyx tube smooth outside; flowers white,  
rose or pink, 1 cm or less long; shrub .... 1. L. indica

1. Lagerstroemia indica Linn., Syst. 1076, 1759; FBI. 2: 575;  
C. 1: 546; Gam. 1: 362; Blatt. & Mill., 105; M. 162;  
Jindal, 78.

A shrub. Leaves elliptic-oblong. Flowers white, pink rose;  
petals clawed.

Native of China. Grown in gardens for its lovely flowers  
during summer and monsoon.

Local name : Chinai Mehendi.

Flowers and fruits : March - August.

JVJ 659.

2. Lagerstroemia reginae Roxb., Pl. Cor. t. 65, 1795; Wt. Icon. t. 413; Furtado & Srisuko, Gard. Bull. Straits Settlement. 24 : 261, 1969; Hassan, 273.

L. flos-reginae Retz., Obs. 5: 25, 1788; FBI. 2: 577;  
C. 1: 546; Gam. 1: 362.

A medium-sized tree. Leaves oblong-lanceolate or elliptic. Flowers large, showy, petals crumpled, clawed. Capsule ellipsoid or sub-globose, woody.

A rare plant; seen only at Hari Nursery. It should be planted in public parks and gardens as an ornamental tree.

English name : The Pride of India or Queen's flower.

Flowers and fruits : April - July.

JVJ 643.

### 3. Lawsonia Linn.

Lawsonia inermis Linn. Sp. Pl. 349, 1753; M. 162.

L. alba Lam. Encycl. 3: 106, 1789; FBI. 2: 573; C. 1: 544;  
Gam. 1: 363.

A large shrub. Leaves elliptic, coriaceous. Flowers yellowish-white. Capsule globose.

A native of Egypt. Planted as a hedge throughout the area.

Local name : Mendi.

Flowers and fruits : March - November.

JVJ 911, 1355.

#### 4. Rotala Linn.

Rotala serpyllifolia (Roth) Bremek. in Act. Bot. Neerl. 3: 149, 1954; Sant. 99.

Micranthus serpyllifolius Roth, Nov. Pl. Sp. 282, 1821.

Ameletia tenuis Wt. Icon. t. 257, 1840; D. & G. 96.

Ammannia tenuis Clarke, in FBI. 2: 567.

Rotala tenuis (Wt.) Koehne, in Bot. Jahrb. 1: 177, 1880.

A small, erect herb. Stems filiform, purplish. Leaves ovate-elliptic, close to the stem. Flowers purple in dense terminal spike-like racemes. Capsule 2-valved, ellipsoid.

Occasionally found on sandy bank near running waters of river Tapi near Varachha.

Flowers and fruits : Cold season.

JVJ 1120.

#### 5. Woodfordia Salisb.

Woodfordia fruticosa (L.) Kurz., in JASB. 40: 56, 1871; Gam. 1:

361; Sant. in RBSI. 16(1): 114, 1953; Saur. 1: 227; M. 161.

Lythrum fruticosum Linn., Sp. Pl. 641, 1762.

Woodfordia floribunda Salisb. Parad. Lond. t. 42, 1806;

FBI. 2: 572; C. 1: 543.

A shrub. Leaves ovate-lanceolate. Flowers bright-red, stamens 10. Capsule enclosed by the persistent calyx-tube.

Occasional on a vertical slope of river bank near Ashwanikumar and along the bank of nallah near B.R.C., Udhana.

Local name : Dhavadi.

Flowers and fruits : February - April.

JVJ 578, 2026.

#### 49. PUNICACEAE

Punica Linn.

Punica granatum Linn., Sp. Pl. 472, 1753; FBI. 2: 581; C. 1: 548; M. 163.

A large shrub. Leaves oblong-obovate or oblanceolate. Flowers bright-red. Balausta, fleshy, globose; seeds angled; aril filled with an acidic or sweet juice.

Cultivated in gardens and orchards.

Local name : Dadam.      English name : Pomegranate.

Uses : The fruits are edible.

Flowers and fruits : March - July.

JVJ 575.