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Subclass III Monocalamydeae

1. Partial stem-parasites. Loranthaceae

1. Plants terrestrial, not parasitic:

2. Flowers all bisexual:

3. Ovary superior:

4. Leaves exstipulate:

5. Fruit an achene
enclosed in the
perianth. Nyctaginaceae

5. Fruit usually a
membranous utricle:

6. Flowers bracteate,
bracts and sepals
hyaline, membranous.. Amaranthaceae
(in part)

6. Flowers ebracteate,
or when bracteate,
bracts not hyaline,
membranous; sepals
green. Chenopodiaceae

4. Leaves with ocreate
stipules. Polygonaceae

3. Ovary inferior; gynostemium
present. Aristolochiaceae

2. Flowers unisexual or
polygamous:

7. Male and/or female
flowers in catkin or
spikes:

8. Fruit a membranous
utricle. Amaranthaceae

8. Fruit a capsule. Euphorbiaceae
(in part)

7. Flowers not in catkin
or spike:

9. Ovary 3-celled with
1 or 2 ovules in each
cell. Euphorbiaceae

9. Ovary 1-celled:

10. Fruit multiple,
a syconus. Moraceae

10. Fruit simple:

11. Fruit enclosed in
fleshy perianth.. Moraceae

11. Fruit not enclosed
in fleshy perianth:

12. Fruit a samara
or drupe. . . . Ulmaceae

12. Fruit an
achene. Urticaceae

NYCTAGINACEAE

Scandent or straggling thorny shrubs;
bracts large coloured; cultigen. Bougainvillea

Erect, straggling or scandent herbs;
bracts small not coloured; thorns absent:

Corolla more than 3 cm. long; erect
herbs; plant a cultigen. Mirabilis

Corolla less than 4 cm. long;
straggling or scandent herbs;
plant not a cultigen. Boerhavia

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

Bougainvillea spectabilis Willd. Sp.Pl. 2:348, 1799,
(Buginvillea); C. 2:567; D. & G. suppl. 72;
Bailey, Man. Cult. Pl. 358; Sant. 196.

A woody, scandent, thorny, straggling shrub. Bracts
3 large, coloured, showy.

Flowers: Winter and Summer season.

Bedi, Cultivated at Kanjeta, Dhenpur Ashram and
at few other places on the plains.

Native of Brazil and is cultivated throughout
India.

Various authors have cited different spelling of the generic name. About the spelling of the generic name see, (Harms in Engl. & Prantl, Pflanzenfam. (ed.2) 16 C:122.)

The spelling of the generic name is given in the list of Nomina conservanda, No.2350 of the International Code of Botanical Nomenclature (1961).

Mirabilis Linn.

Mirabilis jalapa Linn. Sp.Pl. 177, 1753; C. 2:567;
Gr. 167; D. & G. Suppl. 72; Bailey, loc.cit. 358;
Sant. 196.

An erect, much branched herb with large swollen nodes. Flowers of various colours, generally crimson-red or yellow.

Local name: Sanji Phuli.

Local usues: It is a common belief amongst local tribes, that if the leaves mixed with garlic is given to hens, they yield eggs more regularly.

Flowers and Fruits: August to March.

Bedi 526.

Commonly cultivated by the native Bheels, as a pot herb.

Native of Tropical America. Commonly cultivated throughout India.

Boerhavia Linn.

Boerhavia diffusa Linn. Sp.Pl. 3, 1753; C. 2:563;

D. & G. 213; G. 814; Sant. 196.

B. repens Linn. Sp.Pl. 3, 1753; FRI. 4:702;

D. & G. 213.

B. procumbens Roxb. Fl. Ind. 1:146, 1820; Gr. 167;

Wight, Icon. t. 874.

A much branched, straggling or a sub-scandent herb. Plants slightly purplish, when growing in dry habitat. Flowers capitate, dark pink.

Local name: Satadi thikedi.

Local uses: Roots are used to cure fever.

Leaves are used as a vegetable.

Flowers & Fruits: Major part of the year.

Bedi 90, 692, 2330.

Very variable in form and habit. Noted from moist grassy places to an extreme dry or rocky soil during summer months. Often noted as a weed in cultivated fields.

Gujarat, Deccan, throughout India. Ceylon;
Tropical and sub-tropical Asia, Africa and America.

AMARANTHACEAE

((A note on the spelling of the family: Following
Bullock (1959) in Taxon 8:153 and Rickett & Stafleu (1959)
in Taxon 8:267, the name of the family is given as
Amaranthaceae A.L. de Jussieu, Gen. Pl. 87, 1789
('Amaranthi'). T.: Amaranthus Linnaeus)

Anther 2-celled:

Leaves alternate:

Seeds many; flowers in simple or
branched spikes. Celosia

Seeds solitary:

Flowers 2-sexual. Digera

Flowers 1-sexual. Amaranthus

Leaves opposite:

Flowers clustered, 1-5 perfect,
surrounded by imperfect flowers
with hooked bristles or $\frac{2}{1}$ ns. . . . Pupalia

Flowers all perfect:

Stamens 1 or 2, staminodes 0.... Notholaena

Stamens with interposed staminodes;
bracts and bracteoles with hardened
spinescent tips. Achyranthes

Leaves alternate or fascicled or with
alternate and opposite mixed; stamens with
interposed staminodes. Aerva

Anther 1-celled:

Flowers white, small, in axillary sessile
heads; stigma capitate. Alternanthera

Flowers white, yellow or crimson in
terminal cylindric heads; stigma
bifid. Gomphrena

Celosia Linn.

Celosia argentea Linn. Sp.Pl. 205, 1753; FBI. 4:714;
C. 2:570; Gr. 167; D. & G. 215; St. Ic. t. 1767.

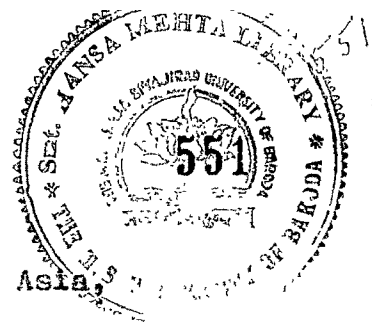
An erect, glabrous herb, about 75 cm. tall. Bracts
pink when young, fading to white with age. Flowers in
spikes.

Local name: Lampadi.

Local uses: Vegetable is prepared from the
young leaves.

Bedi 576, 1873.

Usually seen growing as a weed in cultivated fields,
in grassy ^{places} in forest areas. Fairly common on plains.



Common throughout India. Ceylon, Trop. Asia, Africa and America, cultivated or introduced.

Digera Forsk.

①. *muricata* (Linn.) Mart

Digera alternifolia (Linn.) Aschers in Schwfth. Bactr.

Fl. Aethiopiens 180, 1867; Raizada, in Ind.

Forester 92(5): 308, 1966.

Achyranthes alternifolia Linn. Mant. 50, 1767.

A. muricata Linn. Sp.Pl. (ed.2) 295, 1762.

Digera arvensis Forsk. Fl. Aegypt.-Arab. 65, 1775;

FBI. 4:717; C. 2:572; D. & G. 218.

A small herb with erect or spreading branches. Leaves glabrous very variable. Flowers pink or rose in axillary lax, spikes.

Local name: Kanjaro.

Local uses: Flowers and seeds are used in the local medicine, in urinary discharge.

Flowers & Fruits: August to December, sometimes upto April near moist spots.

Bedi Very common as a weed in cultivated fields. Often noted in moist grassy places. Common every where, less so in hilly forest areas.

Gujarat, W. Peninsula, Deccan, N.W. India.

Ceylon, Java, Afghanistan, Arabia, W. Africa.

Amaranthus Linn.

Stamens 5, sepals 5; spines in the axil of
the leaves. spinosa

Stamens 3, sepals 3; no spines in the axil
of the leaves:

Plants usually erect; fruits densely
rugose, indehiscent. viridis

Plants usually prostrate; fruits
slightly rugose, circumscissile.
dehiscent. polygamus

Amaranthus spinosus Linn. Sp.Pl. 991, 1753; FBI. 4:718;
C. 2:573; D. & G. 216; Wt. Ic. t. 513; Sant. 197;
Chavan & Oza. Fl. Pavagadh, 195.

An erect, much branched, glabrous herb, 20-70 cm.
high. Stem often grooved. Spines in the axil of the
leaves. Leaves ovate or lanceolate, obtuse.

Local name: Cheel; Kantalo dandalo.

Local uses: Leaves are used as a vegetable.

Flowers & Fruits: August to March.

Bedi 407, 2093, 3168.

Common near waste places, near villages,
generally noted as a weed in cultivated fields.

Throughout India. Ceylon and many trop. countries.

Amaranthus viridis Linn. Sp.Pl. (ed.2) 1405, 1763, Quoad
descr. et herb., excl. ref. Bauhin et Tournefort;
FBI. 4:720; C. 2:575; G.820; N. 267; Sant. 197;
Merill in Amer. J. Bot. 23:611, 1936; Van Steenis
in Fl. Males. 1, 4:594, 1954.

An erect, branched, annual herb. Flowers small,
pale green or greenish white in small axillary clusters
or in axillary and terminal panicles.

Local name: Tanduji.

Local uses: Young leaves are used as a vegetable.

Flowers & Fruits: August to March.

Bedi 1203.

Noted as a weed in cultivated fields, near huts,
along the paths and waste places near villages.

Cooke, l.c. writes, "I have seen no specimen
from the Bombay Presidency; there are none in Kew.Herb.
Dalziel and Gibson do not include the plant in their
Bombay Flora. Woodrow, though including it in his
list, assigns it no habitat.

Fairly common in Ratan Mahal Hills, Gujarat,
Deccan, Madras, throughout India. All the Tropical

and warm countries.

On the subject of the identity and nomenclature,
see Van Steenis, loc.cit.

Amaranthus polygamus Linn. Amoen. Acad. 4:294, 1759 (not of
Roxb.); FBI. 4:721; C. 2:575; G. 820.

A. polygonoides Willd. Sp.Pl. 4:389, 1805; Roxb.
Fl. Ind. 3:602; Wt. Ic. t. 512 & 519.

A much branched, prostrate, glabrous, annual herb.
Leaves obovate, obtuse, cuneate.

Local name: Chalai.

Local uses: Leaves are used as a vegetable.

Flowers & Fruits: July to January.

Bedi 1041, 3310.

Common herb near moist spots in the vicinity of
human inhabitation.

Throughout India. Ceylon, most hot countries.

Pupalia Juss. (nom. Cons.)

Shrubby; awns yellow. lappacea

Herbaceous; awns purple. atropurpurea

Pupalia lappacea (Linn.) Juss. in Ann. Mus. Hist. Nat.
Paris 2:132, 1803; FBI. 4:724; C. 2:583; G.821.

Achyranthes lappacea Linn. Sp.Pl. 204, 1753.

An erect or sub-scandent, under shrub. Leaves elliptic or ovate, pointed. Flowers in close or distant clusters forming terminal spikes; imperfect flowers reduced to unequal, yellowish hooked awns.

Local name: Dholo janphatio.

Flowers & Fruits: October to December.

Bedi 1696.

Common at plains, often noted in hedges, rare in the hilly parts.

Gujarat, Deccan, W. Peninsula; W. Trop. Himalaya, Punjab, Bihar. Tropical Asia and Africa.

Pupalia atropurpurea Moq. in DC. Prodr. 13(2):331, 1849;
FBI. 4:723; C. 2:582; D. & G. 219; G. 583.

Desmochaeta atropurpurea DC.: Wr. Ic. t. 731; Gr.168.

A herb with long slender branches. Leaves ovate or elliptic, often tinged with purple. Flowers in sessile, lax terminal spikes 5-25 cm. long imperfect flowers reduced to hooked purple awns.

Flowers & Fruits: August to November.

Bedi 2965, 3135, 3163.

More common than the preceding species, usually found along the banks of streams in the hilly forest areas. Shade and moisture loving plant.

Gujarat, W. Peninsula, Bengal. Nepal, Ceylon, Java, S. Africa, Philippines.

Nothosaerva Wight.

Nothosaerva brachiata (Linn.) Wight, Icon. 6:1, 1853;
FBI. 4:726; G. 2:580; G.823; Baker, in Fl. Males.
1, 4(2): 86, 1949.

Achyranthes brachiata Linn. Mant. 1:50, 1767.

Illecebrum brachiatum Linn. Mant. 2:213, 1771.

An erect, much branched herb, glabrous or sub-glabrous.
Flowers small, white in fascicles of small close spikes.

Flowers: August to October.

Fruits: October to November.

Bedi 3038, 3344.

Common, usually noted in hedges and on moist grassy places. Occasionally noted in the under growth of forest. This species is liable to be confused with Aerva lanata (L.) Juss., which may be distinguished by the distinct hairiness of the stem and leaves, which are usually densely hairy in Aerva lanata.

More common in the hilly regions.

Gujarat, Deccan, Konkan, W. Peninsula. Ceylon,
Burma, Mauritius, Trop. Africa.

Achyranthes Linn.

Leaves tomentose or velvety, thick; spikes
usually with robust rachis. aspera

Leaves glabrous, sometimes slightly
pubescent, much larger; spikes with a
slender rachis. aspera var.
porphyristachya

Achyranthes aspera Linn. Sp.Pl. 204, 1753; FBI. 4:730;
C. 2:580; D. & G. 218; G. 823; Wt. Ic. t. 1777.

An erect, hairy herb. Leaves tomentose, (younger
silky or velvety beneath) orbicular, obovate, or elliptic,
acuminate. Spikes with rigid rachis.

Local name: Andaro.

Local uses: Used in cough and leaves are used
for insect bite.

Flowers & Fruits: September to March.

Bedi 350, 525.

Common on plains, found growing along Jharis and
Roadsides, often in waste places.

Gujarat, Sind, W. Peninsula. Ceylon, Burma,
Mauritius, Trop. Africa.

Achyranthes aspera Linn. var. porphyristachya Hook. f.
FBI. 4:730, 1835; Sant. 199; Chavan & Oza, Pl.
Pavagadh, 196.

A. porphyristachya Wall. Cat. 6925, 1832, nom.nud.

An erect, much branched plant, 50-200 cm., tall, more slender than the type. Leaves 5-20 X 2-10 cm., glabrous or sub-glabrous, thin. Inflorescence 10-35 cm., long, rachis slender.

Flowers & Fruits: September to December.

Bedi 647, (30.10.60) Banvaro.

More common in the hilly regions of Ratanmahal; Often recorded as an under growth of forest along the streams. It can be distinguished from the Linnean⁷ typical A. aspera by its much larger glabrous leaves and spikes with along slender rachis.

Gujarat, Deccan, Khandala.

Note: A.C. Joshi in Journ.Ind.Bot.Soc.11:335, 1932, describes and figures a case of doubling of stamens in this species.

Aerva Forsk (nom. Cons.)

(For the spelling of the generic name please refer
Thomas Archibald Sprague in Kew. Bull. 342, 1928.)

Sub-erect or scandent undershrub; flowers
in axillary and terminal spikes. sanguinolenta
Erect herbs; flowers in axillary spikes. . . lanata

Aerva sanguinolenta (Linn.) Blume, Bijdr. 547, 1825;
Backer in Fl. Males. Ser. 1, 4(2):85, 1949.
Sant. 198.

Achyranthes sanguinolenta Linn. Sp.Pl. (ed.2)
294, 1762.

Aerva scandens Wall. Cat. 6911, 1829, nom. nud.;
Moq in DC. Prodr. 13(2): 302, 1849; FBI. 4:727;
C. 2:577; Wt. Ic. t. 724 (excl. utricle and seed);
G. 825.

A sub-erect, small under shrub, often scandent,
about 100 cm., tall. Leaves elliptic-lanceolate, acute
pubescent.

Flowers & Fruits: October to April.

Bedl 618, 1917, 2145.

Common near streams in dense shady places. Often
noted on plains and in the hilly areas.

Madhya Pradesh, Deccan, Konkan, W. Peninsula,
Punjab, Bengal, Assam, almost throughout India.

China, Malay Islands, Philippines, and
Tropical Africa.

Aerva lanata (Linn.) Juss. in Ann. Mus. Paris 2:131,
1808; FBl. 4:728; C. 2:578; Gr. 163; D. & G. 217;
Sant. 198; Backer. l.c. 84.

Achyranthes lanata Linn. Sp.Pl. 204 (non Celosia
lanata Linn. ibid. 205).

An erect or prostrate herb. Leaves alternate, more
hairy on the lower surface. Flowers greenish-yellow in
short axillary spikes.

Local name: Gorakh bhanja.

Local uses: Roots are used in the treatment
of headache.

Bedi 405, 3475.

A common weed near villages, especially on the
plains; also noted in open grassy places, along the
roadsides and as a weed in cultivated fields.

Deccan, Central India; throughout India.

Ceylon, Arabia, Trop. Africa, Java, Philippines.

Alternanthera Forsk.

Leaves linear oblong or oblanceolate;
 perianth segments not spine tipped;
 stamens 3. sessilis

Leaves sub-orbicular or nearly circular;
 perianth segments spine tipped;
 stamens 5. ungens

Alternanthera sessilis (Linn.) DC. Cat. Hort. Monsp. 77,
 1853; FRI. 4:731; Gr. 168; D. & G. 220; Wt. Ic.
 t. 727; Sant. 200.

Gomphrena sessilis Linn. Sp.Pl. 225, 1753.

Alternanthera triandra Lank. Encycl. 1:95, 1783;
 G. 2:584; G. 825.

A prostrate or sub-erect herb. Leaves linear-oblong,
 lanceolate or oblanceolate. Flowers white, small, in
 axillary clusters.

Flowers & Fruits: August to March.

Bedi 1010, 2666, 2901.

Fairly common along the bank of streams, in
 semidried ditches, along roadsides and as a weed in
 cultivated fields. Often noted on dry sandy beds
 of river Panam.

Throughout Gujarat, hotter parts of Himalaya.

India; Ceylon, all warm countries.

Alternanthera pungens H.B.K. Nov. Gen. & Sp. 2:206,
1818; Melville in Kew Bull. 1958:172, t.2:1958;
Raizada, in Ind. For. 92(5):301, 1966.

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

Illecebrus achyranthes Linn. Sp.Pl. (ed.2) 299,
1769.

Alternanthera repens (Linn.) Link. Enum. Pl. Hort.
Berol. 1:154, 1821 (non J.F. Gmelin 1791); Baker
in Fl. Males 4:91, 1949; Van Steenis in Fl.
Males. 1, 5:554-55, 1958; Sant. 200.

A prostrate, spreading herb. Stem zigzag. Leaves
sub-orbicular, entire, tapering at the base. Flowers
in axillary heads.

Flowers & Fruits: September to December.
and even upto March near moist localities.

Bedi, Fairly common on plains N.E. to Dhenpur.

Plant is rare in the hilly regions of Ratanmahal
hills. It is a native of Tropical America. A
recently introduced, fast spreading weed. Common in
many parts of India.

Even most of the recent works give its correct
name as Alternanthera repens Link., but the correct
name as shown by Melville, l.c. is A. pungens H.B.K.
dates from Feb. 1818. The synonymy is extensive.

Gomphrena Linn.

Gomphrena celosioides Mart. in Nov. Act. Nat. Cur. 13:301,
1826; Sant. 200; Raizad, in JBNHS. 43:675;
Chavan & Oza, Fl. Pavagadh, 200.

Gomphrena decumbens, G. procumbens, G. dispersa auct.

A procumbent herb, with white hairs. Flowers white
or pale in dense cylindric or ovoid terminal spikes.

Flowers: Major part of the year.

Bedi, Fairly common near Kundawala, Tarambkach
and N.E. words.

Common weed in cultivated fields, along the paths
and open grassy places, on the N.E. boarder of our
district, becoming less and less frequent as we move
towards south. Rare in the hilly regions of
Ratanmahal. Plant is very variable in form and habit
depending upon the soil. Introduced weed.

Common throughout W. India. Native of S. Brazil;
Paraguay, Uruguay and Argentina.

CHENOPODIACEAE

Chenopodium Linn.

Chenopodium album Linn. Sp.Pl. 219, 1753; FBI. 5:3;
C. 2:586; Sant.200.

C. viride Linn. Sp.Pl. 219, 1753; Gr. 171.

An erect herb, 10-50 cm. tall (Cooke 1-10 Ft.); I have not seen such a tall specimens as mentioned by Cooke, l.c.: in Ratnmal hills, normally the plants vary between 10-50 cm. Stem striate. Leaves thick very variable in size, often coated with white granular pubescence. Flowers in terminal and axillary clusters, forming greenish, compact panicle spikes. Seeds black, shining.

Local name: Chil ni Bhaji.

Local uses: Extensively used as a vegetable.

Flowers & Fruits: September to April.

Bedi 1006, 2177.

Commonly seen as a weed in cultivated fields, moist grassy places, at times stunted specimens recorded from dry sandy river beds. More common near human inhabitation, rare in the forest areas. Extremely polymorphic.

Gujarat, Deccan, Punjab, Himalaya, Bengal, almost everywhere. Europe, continental Asia, Africa, Australia, America.

POLYGONACEAE

- Prostrate or erect herbs. Polygonum
 Climbing shrubs. Antigonon

Polygonum Linn.

- A diffuse, prostrate, hairy herb; leaves
 small. plebeium
 An erect, herb with large linear lanceolate
 leaves. barbatum

Polygonum plebeium R.Br.Prodr. 420, 1810; FBI. 5:27;
 C. 3:4; Woodr. in JENNS. 12:365, 1899; Sant.201.
 Chavan & Oza, Fl. Pavagadh, 201.

A small, hairy, prostrate herb. Leaves very variable, depending upon the soil conditions and the period of growth. Flowers red in axillary clusters. Extremely polymorphic. Following Hooker's remark loc.cit., I have not considered the varieties or forms of this variable plant.

Flowers & Fruits: December to May.

Bedi 2266 (March 1962, Dhenpur).

Rare, noted at Banvaro and Dhenpur in semidried or dried ditches.

Gujarat, Deccan, N. Kanara, throughout Trop.
India.

Afghanistan, Trop. Asia, Java, Philippines,
Australia, Egypt, Trop. & S. Africa.

Polygonum barbatum Linn. var. gracile Steward in Contr.
Gray. Herb. 88:55, 1930; Sant. 201.

P. serrulatum Hook. f. in FBI. 5:38, 1886, (excl. var.
donii); C. 3:7 (non Lagasca nec Meisn. nec Miq.)

P. rivulare Graham, Cat. 172, 1839 (an Koenigii ?);
D. & G. 214.

An erect or suberect herb. Leaves linear, lanceolate.
Flowers pink in a long slender spike 5-10 cm. long.
Ocreate stipules and leaves covered with small light-
brown hairs.

Flowers and Fruits: October to March.

Bedi 649, 924, 1553.

Very common along the banks of streams in the
hilly forest regions, often noted along the banks of
river Panam, both near still and running water.
Usually inhabits moist shady places.

Deccan, W. Peninsula, Kanara, Upper Gangetic
plains, N.W. Himalaya, Assam. Ceylon, Malay Peninsula,
China.

Antigonon Endl.

Antigonon leptopus Hook. & Arn. Bot. Beech. Voy. 308,
t.69, 1841; C. 3:10; Sant. 202. Chavan & Oza,
l.c. 201.

A large, climber with cordate leaves. Flowers rosy-
pink, elegant, in large panicles.

A south American plant, cultivated at Dhenpur Bhil
Ashram and at few other places.

Largely cultivated in gardens in Gujarat and in rest
of India.

ARISTOLOCHIACEAE

Aristolochia Linn.

Aristolochia bracteolata Lamk. Encycl. 1:258, 1783;
Andrews, Fl. Pl. Anglo-Egypt Sudan 1:21, f.17,
1950; Santapau and Wagh in Bull. Bot. Surv. Ind.
5(2):105, 1963; Chavan & Oza, Fl. Pavagadh, 202;
Raigada in Indian Forester, 92(5):302, 1966.

A. bracteata Retz. Obs. Bot. 5:29, 1789; FBI. 5:75;
C. 3:16; Gr. 178; D. & G. 224; Witt, 192.

A prostrate, slender herb. Leaves glabrous. Flowers
dark purple, turning black after drying. Capsule ribbed,
1-3 cm. long, oblong-ellipsoid, glabrous.

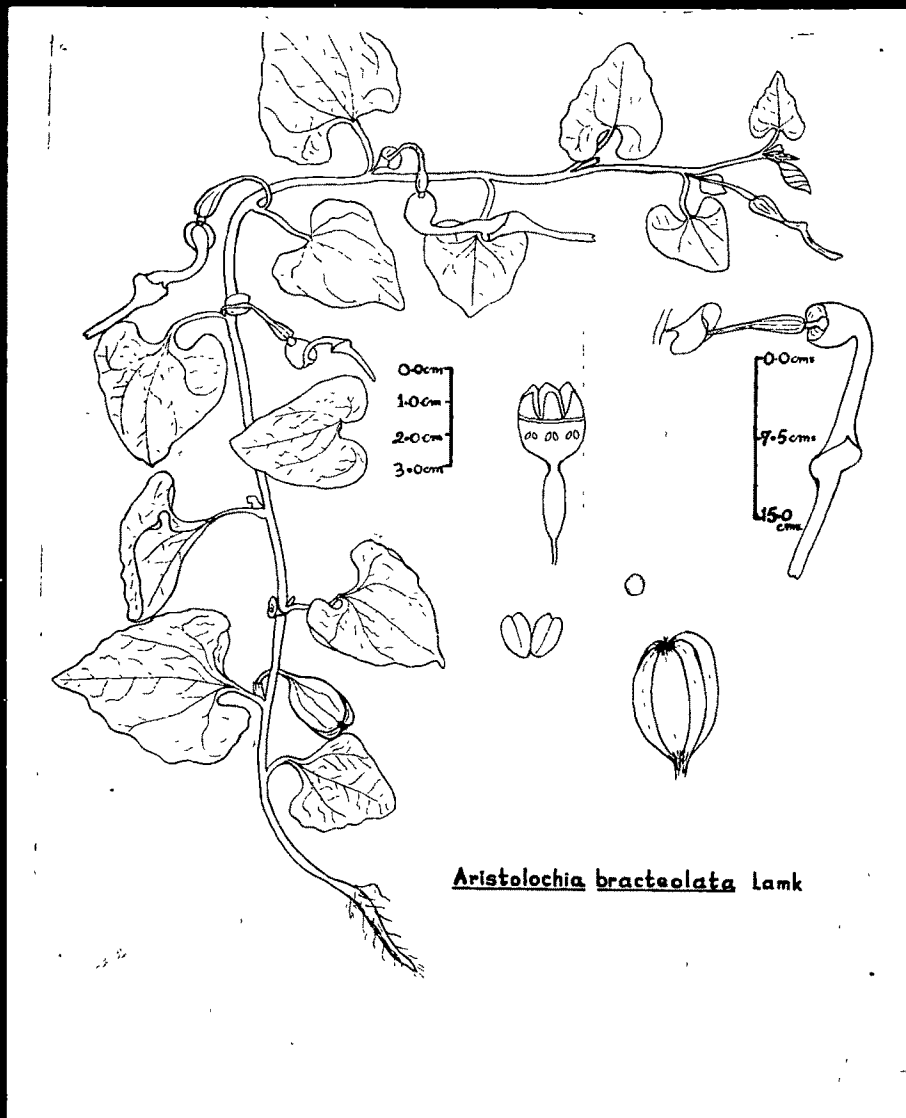


PLATE NO. - 34

Aristolochia bracteolata Lamk.

Plate No: 34

Local name: Kida mari.

Local uses: Leaf juice is squeezed into wounds to kill worms.

Flowers & Fruits: July to September.

Bodi 3050 (19.6.1962, Vadhbade).

Rare, only noted few specimens among grasses, on the N.E. boundry of our area. I have not observed any plant in the hilly region of Ratanmahal.

Gujarat, Madhya Pradesh, W. India, Deccan.

Ceylon, Arabia, Tropical Africa.

LORANTHACEAE

Leafless partial parasites; flowers

unisexual. Viscum

Leaves large, thick; partial parasite;

flowers hermaphrodite. Dendrophthoe

Viscum Linn.

Viscum nepalense Spreng. Syst. Veg. 47, 1827; Sant. 212;
Chavan & Oza, l.c. 202.

V. dichotomum D. Don, Prodr. Fl. Nep, 142, 1825
(non Gilibert 1792, nec. Spreng. 1825).

V. attenuatum DC. Prodr. 4:284, 1830; Gr. 85.

V. articulatum HK. f. in FBI. 5:226, 1886, pro parte,
non Burn; C. 3:47; Talb. ed.2, 293. Seshagiri Rao
in JIB. 36:126, f.5, 1957.

V. nepalense var. thelocarpum Dans. in Blumea 4:289,
1941.

A leafless, partial parasite, green; internodes in
younger branches flatten and broad (phylloclades).

Flowers minute, green or greenish-yellow.

Generally noted parasitic on Madhuca indica, Dalbergia
latifolia, D. lancedaria, Mangifera indica and Terminalia
crenulata.

Local name: Vando, Rasana.

Flowers & Fruits: December to May.

Bedi 768, 2424.

Fairly common in almost all the forest areas,
especially in hilly regions.

Western Peninsula, Deccan, Madhya Pradesh,
Konkan, Kanara and Himalaya.

Ceylon, Malacca, Burma, Java, Australia.

On the question of identity and nomenclature,
please refer to Santapau & Rola Seshagiri Rao, loc.cit.

Dendrophthoe Mart.

Santapau in Journ. Scient. & Indr. Research 10B:49-50, 1951 & Fl. Khandala, 207, quotes from Danser's monograph "The only genus bearing rightly the name Loranthus is nowadays called Psittacanthus and is restricted to tropical America". (Danser, New Syst. Loranth. and Nomencl. p.65).

Dendrophthoe falcata (Linn. f.) Etting. in Denkschr.

Akad. Wissen. Math. Naturw. Cl. 32:52, 53, 58, t. 13f. 14, 1872; Sant. 208; Chavan & Oza, Fl. Pavagadh. 203.

Loranthus falcatus Linn. f. Suppl. 211, 1781.

L. longiflorus Desr. in Lamk. Encycl. 3:598, 1789;

FBI. 5:214; G. 3:42; Gr. 86; G. 877; Wt. Ic. t. 302.

A much branched, bushy parasite, commonly noted on branches of various tree species. Leaves thick, glabrous. Flowers crowded in short racemes, Orange, pink or pale coloured.

Local name: Vando.

Flowers: November to May.

Bedi 760, 1102.

Fairly common both in hilly regions and on plains. Parasite on various plants; often noted on the branches of Salmalia malabarica; Mangifera indica; Cassia fistula; Firmiana colorata; Ailanthus excelsa; Alangium salvifolium; Tectona grandis, Madhuca indica; Butea monosperma; Anogeissus latifolia; and a very large number of other trees and shrubs (see Oza in Ind. For. 88:912 et Chavan & Oza in JBNHS. 60:472-473, 1963). Various other authors have reported different hosts for this partial parasite. Recently (17.12.67 & on 18.12.67), the author has recorded Vitex negundo and Dendrocalamus strictus as the hosts; from a locality Bar Ganga near Asba Dungar in Chota Udaipur taluca.

All this has lead the author to believe the cosmopolitan nature of its parasitism.

EUPHORBIACEAE

1. Flowers in cyathia i.e. reduced to a single stamen enclosed in a 4-5 lobed involucre with a single, central, female flower. Plants with silky juice. Euphorbia

1. Flowers not in cyathia, not reduced to a single stamen or a single ovary contained in an involucre:

2. Cells of ovary 2-ovuled; leaves simple alternate:

3. Petals small; fruit a drupe. Bridelia

3. Petals 0; disc present; male flowers in clusters:

4. Fruit a dry capsule; calyx 5-lobed; stamens 3. Phyllanthus

4. Fruit a berry:

5. Fruit small fleshy, purple black when ripe; calyx 5-lobed; stamens 5. Kirganelia

5. Fruit large, yellowish-green when ripe, consists of 3-6 hard cocci; calyx 5-6 lobed; stamens 3. Emblica

5. Fruit dry or fleshy with 6 cocci; stamens 5; filaments alternating with disc glands and surrounding the pistillode. Securinega

2. Cells of ovary 1-ovuled:

6. Calyx in male flower valvate:

7. Petals present in male flowers; herbs or under shrubs, stellately hairy. Chrozophora

- 7. Petals 0 in male flowers:
 - 8. Filaments not branched:
 - 9. Anthers not vermiculiform
 nor-linear; style plumose;
 fruit a capsule. Malilotus
 - 9. Anthers vermiculiform or
 linear; style laciniate..... Acalypha
 - 8. Filaments much branched;
 staminal bundles indefinite;
 leaves palmatilobed. Ricinus
- 6. Calyx in male flower imbricate:
 - 10. Petals present in male flowers;
 leaves palmatinerved. Jatropha
 - 10. Petals in male flowers
 wanting; leaves not
 palmatinerved. Baliospermum

Euphorbia Linn.

- 1. Stems reduced to a fleshy, elongated,
 underground tubers; leaves all radical.... fusiformis
- 1. Stems well developed above ground;
 leaves not radical:
 - 2. Plants armed with stipular spines;
 perennial shrubs or sometimes
 assuming the shape of a small tree;
 branches thick fleshy. neriifolia

2. Plants unarmed; annual herbs, with erect or prostrate stem:
 3. Leaves exstipulate, alternate below, opposite above; 3-5 cm. long. dracunculoides
 3. Leaves stipulate, or if stipules absent, then opposite pairs of leaves joined by interpetiolar line; leaves all opposite:
 4. Glands of involucre with a conspicuous petaloid limb; capsule hairy. parviflora
 4. Involucre with a single, large gland; erect shrubs or undershrubs. geniculata
 4. Glands of involucre without a petaloid limb, or limbs not conspicuous:
 5. Erect or ascending herbs, covered with yellowish brown hairs; leaves 2-4 cm. hirta
 5. Prostrate herbs, leaves less than 15 mm. long:
 6. Stem hairy; capsule pubescent. thymifolia
 6. Stem glabrous or so; capsule glabrous. bombalensis

Euphorbia fusiformis Buch.-Ham. in Don, Prodr. Fl.

Nep. 62, 1825; FBI. 5:257; Santapau, in Bull. Bot.
Soc. Beng. 8:3, 1954.

E. acaulis Roxb. Hort. Beng. 36, 1814 nom. nud &
Fl. Ind. 2:472, 1832; C. 3:57; Gr. 179;
D. & G. 226; G. 893.

A small, soft herb. Stem reduced to long cylindric root stock 5-30 cm. long. Leaves ^aradicle present only during monsoon, absent during flowering season. Flowers pale coloured on dichotamously branched cymes. Bracts at the forks, ovate-lanceolate or acuminate, at times somewhat triangular in outline.

Local name: Khur kund.

Local uses: Reputed locally for its medicinal properties, especially to cure fever.

Flowers: March to April.

Fruits: April to May.

Leaves: June to November.

Bedi 1233, 3714.

Fairly common, every where in the undergrowth of forest, on the plains and in hilly regions, upto 500 m. S.L., above which it is rare.

Deccan, Konkan, W. Peninsula, Trop. Himalaya,
Bengal, Nepal.

Since Roxburgh's acaulis in Hortus Bengalensis is a nomen nudum, the oldest valid name is fusiformis.

For identity and its closely allied species, E. khandallensis Blatt. & Halb. and E. panchganiensis Blatt. & McCann and their differentiation please see Santapau, l.c.

After examining a large number of herbarium specimens at Blatter's Herbarium, Bombay & F.R.I. Herbarium, Dehra Dun, I am inclined to believe Santapau's statement, "It seems rather a variable plant and the allied species may in the end become varieties", but it still requires more critical study.

Euphorbia neriiifolia Linn. Sp.Pl. 451, 1753. FBI. 5:255; C. 3:59; Gr. 179; D. & G. 226; G. 893; Santapau, loc.cit. 7; Sant. 213.

E. lingularia Roxb. Hort. Beng. 36, 1814, nom. nud. Fl. Ind. 2:465, 1832; C. 3:58; Talb. 2:432, t. 485.

A large, spiny shrub or sometimes assume the form of a tree. Branches thick fleshy, bearing spirally twisted ribs, furnished with stipular spines in pair. Leaves deciduous.

Local name: Thor.

Local uses: Milky juice is said to be an antidote in snake bite.

Flowers: January to May.

Fruits: April to June.

Bedi, Commonly used as a hedge around the fields.

Fairly common on plains and in hilly regions.

Also common on the Southern dry rocky steep slopes of Ratannahal plateau, where they are in truly wild state. These plants have longitudinal dark green bands along their branches.

Gujarat, Deccan Peninsula, N.W. Himalaya.

Ceylon, Baluchistan, Malay Islands.

The Linnean plant is the more commoner one in our parts of India (for comments see Santapau, l.c.)

Euphorbia dracunculoides Lamk. Ency. 2:428, 1786;

Roxb. Fl. Ind. 2:474; FBI. 5:262; C. 3:59;

G. 894; Santapau, l.c. 11; Chavan & Oza, Fl.

Pavagadh, 207.

A much branched, erect or prostrate herb. Leaves narrow, 2-6 cm., long. Flower yellowish.

Flowers & Fruits: October to April.

Common weed in cultivated fields on the plains, especially near Dhenpur, Chari, Lindi, Tokerwa and Vakasia. Rare in the hilly regions.

Gujarat: Pavagadh, Deccan, Kanara, Punjab,
Bihar, throughout India.

Arabia and Tropical Africa.

Euphorbia parviflora Linn. Syst. (ed.10) 2:1047, 1759;
Roxb. Fl. Ind. 2:472; Gr. 179; D. & G. 227;
Santapau, l.c. 13; Sant. 216; Chavan & Oza,
l.c. 207.

E. hypericifolia Linn. Sp.Pl. 454, 1753, pro parte;
FBI. 5:249, pro parte.

E. hypericifolia var. parviflora Prain, Beng.
Fl. 2:924, 1903; C. 2:567.

An erect, or sub-erect herb. Leaves opposite with
slightly serrate margin. Flower pinkish.

Flowers and Fruits: August to December.

Bedi 1471 & 1.8.62 Panam village.

Common weed in cultivated fields & in open grassy
places. Often recorded among grasses along the
banks of Panam river.

Gujarat, Deccan, Konkan, throughout the hotter
parts of India.

Ceylon, Burma, Malacca, Java, generally tropics
of both the hemispheres, except Australia and Pacific
Islands.

Euphorbia geniculata Orteg. Nov. Rar. Pl. Matrit. 18:1797;
FBI. 5:239; C. 3:66; Woodr. in JBNHS. 12:369, 1899.

An erect or ascending, annual herb. Leaves alternate below, opposite above, elliptic or ovate-elliptic. Involucre 4 mm. long, 5 lobed, with one conspicuous lateral gland.

Flowers: August to October.

Fruits: October to November.

Bedi 122, 2939, 3021.

Not common, noted in semidried ditches, along the roadsides. Very rare in the hilly regions. An introduced weed from Trop. America.

Occasionally seen as a weed in gardens in many parts of India.

Euphorbia hirta Linn. Sp.Pl. 454, 1753; Gr. 179;
D. & G. 227; G. 892; Santapau, l.c., 15; Sant. 214;
Chavan & Oza, l.c., 207.

E. pilulifera Hook. f. in FBI. 5:250; C. 3:64, et al
auct. ind. passim. Sed. not Linn.

A sub-erect or prostrate hispid herb, during dry season plants are covered with long yellowish brown hairs. Leaves and branches at times with purplish tinge. Cyathia axillary and terminal, clustered in dense, crowded cymes. Seeds reddish brown trigonous.

Local name: Rati chudli. .

Flowers & Fruits: Almost throughout the year.

Bedi 305, 428, 3500.

Abundant, on the plains, as a weed in cultivated fields and in open grassy places. Often noted on the dry banks of Panam river.

Throughout Gujarat and hotter parts of India.

Ceylon, throughout the tropics and some sub-tropical countries.

Euphorbia thymifolia Linn. Sp.Pl. 454, 1753; F&E. 5:252; C. 3:64; D. & G. 227; G. 893; Santapau, l.c. 16; Sant. 215; Chavan & Oza, l.c. 203.

E. prostrata Graham, Cat. 179, 1839 (non Ait.)

A small, prostrate, hairy herb. Leaves obliquely oblong, crenulate. Capsule keeled, hairy.

Flowers & Fruits: August to December.

Bedi 3814.

Common along the paths; as a weed in cultivated fields and in open grassy places, rare in the hilly region and on plateau. .

Gujarat, Deccan, Konkan, Kanara, throughout India in the plains and lower hills.

Ceylon, all hot countries except Australia.

orbiculata Miq

Euphorbia bombaiensis Santapau, in Bull. Bot. Soc.

Beng. 8:17, 1954; Chavan & Oza, l.c. 208.

E. microphylla Heyne in Roth, Nov. Pl. Sp. 229,
1821 (non Lamk. 1786); FBI. 5:252; G. 3:65;
G. 893; Sant. 215.

E. uniflora D. & G. 227, 1861 (non Roxb.)

A glabrous herb with prostrate branches. Leaves
oblique, elliptic or obovate. Capsule glabrous.

Flowers & Fruits: July to February.

Bedi 1035; also on 26.7.62 Tokerwa.

A common weed in cultivated fields and along the
paths.

Gujarat Pavagadh, W. Peninsula, Konkan, Bihar,
Bengal, Java.

This species, resembles with the preceeding species
in habit and general appearance, except its glabrous
nature. (Nomenclature see Santapau l.c.)

Bridelia Willd.

Bridelia squamosa (Muell. Arg.) Germ. in Engl. Bot.
Jahrb. 41, Beibl. 95:30, 1908; Santapau in
JBNHS. 50:308, f.2; Sant. 216; Chavan & Oza,
l.c. 209.

B. retusa var. squamosa Muell.-Arg. in DC. Prodr.
15(2): 493, 1866.

B. retusa Hook. f. in FBI. 5:268 & C. 3:68,ambo pro
parte, non Spreng.

A medium sized tree, having grayish bark with
longitudinal cracks. Leaves elliptic-oblong to ovate-
lanceolate. Flowers yellowish green in axillary clusters
or on long axillary paniced spikes.

Local name: Rasano.

Flowers: August to November.

Fruits: October to December.

Bedi 2807, 3161.

Not common, noted few trees near Pepargota.

Gujarat, Deccan, Konkan, throughout India.

Ceylon, Burma.

For identity of Bridelias see Santapau, l.c.

Phyllanthus Linn.

In recent years, the earlier known genus Phyllanthus
has been split into various genera.--Kirganelia Bail.,
Emblica Gaertn., and Phyllanthus Linn., as shown in the
generic key.

Anthers erect, filaments united into a column:

- Capsule smooth. maderaspathensis
- Capsule echinate. urinaria

Anthers sub-globose, didymous or reniform;

seeds with regular parallel ribs. fraternus

Phyllanthus maderaspathensis Linn. Sp.Pl. 982, 1753; *Simplex*

FBI. 5:292; C. 3:82; Gr. 180; At. Ic. t. 1895, f.3; G. 902; Sant. 218.

An erect, glabrous herb, at times suberect. Flowers white. Capsule glabrous or slightly dotted.

Flowers & Fruits: July to December.

Bedi 1936, 2962.

Fairly common weed in cultivated fields and open grassy places. More common on plains N. & N.E., of Panam river.

Gujarat, Deccan, drier parts of India.

Ceylon, Trop. Africa, Arabia, Java, China, Australia.

Phyllanthus urinaria Linn. Sp.Pl. 982, 1753; FBI. 5:293; C. 3:83; Gr. 180; G. 902; Sant. 218.

P. leprocarpus Wight, Icon. t. 1895, f.4, 1852.

Slightly branched, erect or suberect herb. Leaves closely placed, distichously imbricate, oblong or linear oblong. Capsule echinate.

Flowers & Fruits: July to November.

Bedl 8, 192, 1480.

Noted as a weed in cultivated and dry fallow fields, especially on the plains. Also common in open grassy places near Alindra and Panam.

Deccan, Konkan, throughout India.

Ceylon, Burma, generally in the tropics.

asporuletus Hulch.

Phyllanthus fraternus Webster. in Contrb. Gray. Herb.

No. 176:53, 1955 at in Journ. Arnold. Arb.

38:309, 1957; Sant. 290; J. K. Maheshwar, Fl.

Delhi, 320; Chavan & Oza, l.c., 210; Raizada in

Ind. For. 92(5):320, 1966.

P. niruri auct. plur. (non Linn.); FBI. 5:298

(pro parte); C. 3:84; Gr. 180; Wt. Ic. t. 1894;

Sant. 218.

An erect, annual herb, 15-50 cm., high. Leaves elliptic oblong or obtuse, mucronate. Flowers small white. Capsule smooth, glabrous. Seeds with longitudinal, parallel ribs.

Local name: Bhuni amlī.

Local uses: Leaves are used in fever.

Flowers & Fruits: August to December.

Bedi 191, 524.

Fairly common during monsoon as an undergrowth of forest. Often noted as a weed in cultivated fields.

Gujarat, Deccan, Konkan, Punjab, Assam; throughout India. Ceylon, Malacca, generally tropics except Australia.

Most of Indian floras mention this plant as P. niruri Linn., which is a west Indies plant. On the subject of identity, please see, Santapau or Raizada or Webster, l.c.

Kirganelia Baill.

Kirganelia reticulata (Poir.) Baill. Etud. Gen. Euph. 613, 1858; G. 905; Sant. 219; Chavan & Oza, l.c. 211.

Phyllanthus reticulatus Poir. in Lamk. Encycl; 5:298, 1804; FBI. 5:288; C. 3:81; Talb. 2:440, f. 490; Witt. 199.

P. multiflorus Willd. Sp.Pl. 4:581; Gr. 180.

Anisonema multiflora Wight. Ic. t. 1899, 1852; D. & G. 234.

A large, diffuse or straggling, glabrous shrub with long drooping branchlets. Flower pinkish. Fruit a purple-black fleshy berry.

Local name: Kamboi, Kamoi.

Flowers & Fruits: September to May.

Bedi 1220, 1484.

Fairly common along the banks of streams and Panan river, both in plains and in hilly regions. Occasionally noted in hedges.

Gujarat, Deccan, Konkan, Kanara; throughout Trop. India. Ceylon, Tr. Africa, China, Malay Islands.

Emblica Gaertn.

Emblica officinalis Gaertn. Fruct. 2:122, 1791;
D. & G. 235; G. 906; St. Ic. t. 1896; Sant. 219;
Chavan & Oza, l.c. 211.

Phyllanthus emblica Linn. Sp.Pl. 982, 1753;
FBI. 5:289; C. 3:81; Gr. 180; Talb. 2:441;
Witt. 199.

A small to a medium sized tree with light gray bark. Leaves small linear-oblong. Flowers minute, greenish-yellow, in lax fascicles on the leaf bearing branchlets. Fruits fleshy.

Local name: Amalo.

Local uses: Fruit is used for preparing pickles and is also eaten raw. Timber is used commercially.

Flowers: March to May.

Fruits: July to March.

Bedi 1174, 1324.

Very common everywhere, usually associated with Tectona grandis; Alangium salvifolium; Anogeissus latifolia; on plains; and Terminalia sps on plateaus and at higher altitudes.

Gujarat, Deccan, Konkan, Madhya Pradesh; throughout trop. India. Wild or planted.

Ceylon, Malay Islands, China.

These plants occur in a great abundance that they can be very well exploited commercially.

Securinega Juss. (nom. Cons.)

Securinega virosa (Roxb. ex Willd.) Pax & Hoffm. in Pfam. (ed.2) 190:60, 1931; Sant. 217.

Phyllanthus virosus Roxb. ex Willd. Sp.Pl. 4:57 & 1805 & Fl. Ind. 3:639, 1832.

Flueggea microcarpa Blume, Bijdr. 580, 1825; FRI. 5:328;
C. 3:77; Talb. 2:454; f. 497; Witt. 200.

Phyllanthus retusus Roxb.: Gr. 180.

Chorisandra pinnata Wight, Icon. t. 1994, 1853.

A large shrub, 2-4 m., tall with spreading branches.
Leaves very variable in size on the same plant 2-12 cm.,
long elliptic or obovate, obtuse. Flowers greenish white
in axillary clusters. Fruits white, globose, berry
about 6 mm., in diameter.

Local name: Thumri;

Local uses: Bark is used as fish poison.

Flowers: April to July.

Fruits: July to August.

Dedi 2372, 2541.

A fairly common shrub in and around Kanjeta.
Common along the banks of streams and Panam river.

Throughout Western India in the deciduous forests
and in rest of India.

Trop. Africa, China, Malay Islands and Australia.

Chrozophora A.H.L. Jussieu. 1924 ('Croizophora')

Corr. Benth. et. Hooker 1880 (nom. Cons.) The generic name Chrozophora Juss Corr. Benth. et. Hooker is given in the list of Nomina conservanda No. 4335 of the International Code of Botanical Nomenclature, 1961.

Please also see Rickett et Stafleu in Taxon 8:305, 1959.

Plants erect, not branching from the base.....rottleri

Plants prostrate, branching from the base.....prostrata

Chrozophora rottleri (Geis.) Juss. ex. Spr. Syst.

3:850, 1826; Pax & Hoffm. in Pfreich. 57:19;

G. 921; Sant. 221; Chavan & Oza, l.c. 212.

Croton rottleri Geis. Croton. Monogr. 57, 1807.

C. plicata Voigt, Hort. Sub. Calc. 156, 1846;

D. & G. 233; C. 3:104 (non A. Juss.).

C. plicata forma Hook. f. in FBI. 5:410, 1887.

An erect herb, 20-50 cm. high. Leaves large, wrinkled, stellately hairy. Flowers with yellowish petals and red stigmas. Capsule 8 mm. in diameter hairy.

Flowers: October to February.

Fruits: January to April.

Bedi 2122 & (25.3.63 Chari).

(Plate No: 35)



PLATE NO. - 36

Chrozophora rottleri (Geis.) Juss. ex Spr.

Common on plains, usually found growing in ditches, as a weed in cultivated and dry fallow fields. Noted in open grassy places near Kanjeta Ashram.

Gujarat, Deccan, Punjab, Bengal, throughout drier parts of India. Ceylon, Burma, N. Africa and Spain.

Chrozophora prostrata Dalz. in Dalz. & Gib. Fl. Bomb. 233, 1861; C. 3:105; G. 921; Sant. 221.

C. plicata forma 3, Hook. f. in FBI. 5:410, 1887.

A prostrate herb. Leaves much smaller than the preceeding species and more wrinkled. Flowers in short raceme, yellow. Entire plant covered with white wooly hairs.

Local name: Botho akhrod.

Flowers and Fruits: December to May.

Bedi 1145, 1226.

Fairly common in dry ditches near Tokerwa, Kundawara, Ved bedh, Chari & various other localities on plains. Often noted as a weed in the fields.

Gujarat, Deccan, throughout India.

Acalypha Linn.

Bracts concealing the capsule:

Bracts shortly dentate or truncate..... indica

Bracts fimbriate or ciliate. ciliata

Bracts small not concealing the capsule..... lanceolata

Acalypha indica Linn. Sp.Pl. 1003, 1753; FBI. 5:416;

C. 3:108; Gr. 186; D. & G. 228; G. 930; Wt. Ic.
t. 877.

A. spicata Forsk. Fl. Aegypt.-Arab. 160, 1775.

A small, annual herb. Leaves alternate, ovate with long petioles, serrate. Flowers in elongated axillary spikes.

Local name: Dadaro.

Flowers & Fruits: October to March.

Bedi 907, (19.12.60., Tokerwa.)

Not common on plains, noted at moist spots near Tokerwa. Rare, in the hilly regions of Ratanmahal.

Gujarat Pavagadh, Deccan, Konkan, Madras, Bihar, Assam, Madhya Pradesh.

Ceylon, Burma, Trop. Africa, Philippines.

Acalypha ciliata Forsk. Fl. Aegypt.-Arab. 162, 1775;
 FBI. 5:417; G. 3:109; D. & G. 228; G. 930;
 Chavan & Oza, Fl. Pavagadh, 214.

An erect, much branched herb, younger branches pubescent. Leaves with long petiole, usually as long as or longer than the blade. Bracts with ciliate or fimbriate apex.

Flowers & Fruits: August to December.

Bedi 1453, (15.8.61., Kanjeta).

Common on plains, near huts, among grasses and as a weed in cultivated fields. Rare, in the hilly regions.

Gujarat, W. Peninsula, Kanara, Bengal.

Ceylon, Arabia, Trop. Africa.

Acalypha lanceolata Willd. Sp.Pl. 4:524, 1805; G.3:109;
 G. 931.

A. fallax Muell.-Arg. in Linnaea 34:43, 1865;
 FBI. 5:416.

An annual herb, 20-50 cm., tall. Leaves ovate-lanceolate with a slender petiole. Spikes 2-10 cm., long. Capsule hispid.

Flowers & Fruits: August to November.

Bedi 193, 2838, 3187, 3585.

Commonly seen in the undergrowth of forest,
during monsoon. Often noted in the hilly slopes
near Dumka and Khalta.

Cooke, l.c., "Rare in the Bombay Presidency; S.M.
country", but for distribution writes, W. Peninsula,
Ceylon, Burma.

The identity of my specimens has been confirmed at
Kew Herbarium, England.

My specimens come more closer to the form 2 given
by Hooker, in FBI. l.c.

This species has not been reported by other workers
and is being mentioned here as a new Record for Gujarat
state.

Mallotus Lour.

Mallotus philippensis (Lamk.) Muell. Arg. in Linnaea
34:196, 1865; FBI. 5:442; C. 3:113; Talb. 2:482,
f. 509; Sant. 222; Witt. 205.

Croton philipensis Lamk. Encycl. 2:206, 1786.

Rottlera tinctoria Roxb. Pl. Cor. 2:36, t. 167, 1798;
Gr. 134; D. & G. 230.

A medium sized deciduous tree, 10-15 m., tall.
Leaves glabrous above, slightly pubescent below. Capsule
3-lobed covered with a bright red powder.

Local name: Kampalio, Kunkuma.

Flowers: September to December.

Fruits: December to March.

Bedi 657, 936, 1316.

Common on the southern slopes of Banvaro
(Karari Hill), and in Alindra. Rare on plains in
the northern regions of our district.

Gujarat, Deccan, Konkan, throughout Trop. India.
Ceylon, Burma, China, Malay Islands, Australia.

The correct spelling of the specific name of this
plant is philippensis and not philippinensis, as is
often given in our floras.

Ricinus Linn.

Ricinus communis Linn. Sp.Pl. 1007, 1753; F&B. 5:475;
C. 3:125; Gr. 183; D. & G. Suppl. 78; G. 933;
Sant. 224; Chavan & Oza, l.c., 214.

A small, soft tree, 3-5 m. high, at times shrubby
in appearance. Flowers in branching racemes, yellowish
green. Regma usually echinate few specimens with smooth,

glabrous regma were collected from Chari and Limdi Mendhri villages.

Local name: Arindi.

English name: Castor Oil plant.

Local uses: Used as a lubricant and as a burning oil.

Flowers & Fruits: Greater part of the year.

Bedi 2175, 2270.

Commonly cultivated by the natives near their huts, often found as an escape.

Probably native of Africa. Cultivated throughout India and naturalized near habitation.

The identity of my specimen with smooth, glabrous regma have been checked at Kew Herb.

Inspite of intensive search, I could not trace the record of smooth and glabrous regma. I believe that this should be given a varietal rank.

Recently, I have observed (near Amba Dungar 18.12.67) flowering and fruiting specimens of this species, having height only 5-25 cm. long. which is a rare and interesting observation.

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Jatropha Linn.

Leaves glandular, palmately 3-5 lobed,
capsule about 1 cm. long. gossypifolia

Leaves glabrous 3-5 lobed or angled,
capsule 2-3 cm., long. curcas

Jatropha gossypifolia Linn. Sp.Pl. 1006, 1753; FBI.5:383;
C. 3:94; D. & G. Suppl. 78; G. 937; Watt. 203.

An erect, glandular, much branched shrub, 1-2 m.,
tall. Leaves 3-5 lobed, glandular hairy, younger red
in colour then turning to green. Flowers red in terminal
cymes.

Local name: Valeti Arindi.

Flowers & Fruits: Almost throughout the year.

Bedi 3492, (10.10.62 Dhenpur).

Common only in the N.E., parts of our district.

Many shrubs were noted near Dhenpur tank. Very rare
in the hilly regions of Ratanmahal.

Gujarat, Madhya Pradesh, Bengal, Deccan.

Singapore. Native of Brazil.

Jatropha curcas Linn. Sp.Pl. 1006, 1753; FBI. 5:383;
C.3:95; Gr.183; D. & G. Suppl.77; G.937; Talb.
2:467, f.502; Witt.203; Sant.220; Chavan & Oza,
l.c., 214.

A large shrub or a small tree. Leaves 3-5 angled or lobed, glabrous with cordate base. Flowers pale green or faint pink.

Local name: Ratan jot.

Local uses: Oil is prepared from the seeds which is used medicinally and even as a burning oil.

Bedi 2449, 26.4.62 near Banvaro.

Rare in the hilly regions, noted few shrubs near Punjala's hut on Banvaro plateau and near Alindra village. Fairly common on plains near Kundawala, Vedhbed, Dhenpura and Dungar pura.

A native of Tropical America. Cultivated and naturalised in India. Ceylon. Throughout the tropics.

Baliospermum Blume

Baliospermum montanum Muell.-Arg. in DC. Prodr. 15(2):1125, 1866; G. 939; Chavan & Oza, Fl. Pavagadh. 215.

B. axillare Blume, Bijdr. 604, 1825; PEI. 5:461; C. 3:106; Talb. 2:479; Witt, 206.

B. polyandrum Wt. Ic. t. 1885; D. & G. 232.

A stout undershrub, 50-150 cm., tall. Leaves very variable in size and shape; upper usually small lanceolate,

lower much larger, lobed variously, sinuate toothed.

Flowers greenish yellow in axillary racemes.

Local name: Danti.

Local uses: . . . stem used as a remedy for toothache. Natives prefer the branch as tooth brush.

Flowers & Fruits: August to March.

Bedi 1038, 1043, 1451.

Common along the banks of streams, especially near Kanjeta. Many plants were observed growing near a well in Kanjeta village.

Deccan, Madhya Pradesh, Konkan, W. Peninsula, Bihar, N. Bengal, Chota Nagpur, Assam; Trop. and Sub-tropical Himalaya.

Burma, Java, Siam.

ULMACEAE

Fruit dry, samara; leaves deciduous. Holoptelea

Fruit drupe; leaves persistent. Trema

Holoptelea Planch.

Holoptelea integrifolia (Roxb.) Planch. in Ann. Sci.

Nat. (Ser.3) 10:259, 1848; FRI.5:481; C.3:127;

D. & G. 238; Wt. Ic. t. 1968; Fischer, 3:943;

Sant. 224; Witt, 207; Talb. 2:497.

Ulmus integrifolia Roxb. Fl. Cor. 1:56, t.78, 1795;

Gr. 188.

A large deciduous tree, 15-20 m. high. Leaves alternate, elliptic, glabrous. Flowers greenish in fascicles on leafless branches. Samara orbicular with reticulately veined membranous wing.

Local name: Charal.

Flowers: January to April.

Fruits: March to June.

Bedi 2321 (20.4.62, Mendhri), 25.3.63

near Kundawala.

Not common, sparsely distributed on plains, along the bank of Panam river. Rare in the hilly regions of Katanmahal.

Deccan, Madhya Pradesh, Kanara, W. Peninsula; lower ranges of Himalaya. Ceylon, Cochinchina.

Trema Lour.

Trema orientalis (Linn.) Blume, Mus. Bot. Lugd.-Bat.
2:58, 1856; FBI. 5:884; C. 3:129; Talb. 2:500,
t. 515; Fischer in G. 945; Witt, 208; Chavan &
Oza, l.c., 215.

Celtis orientalis Linn. Sp.Pl. 1044, 1753; Gr. 189.

Sponia wightii Planch. in Ang. Sc. Nat. (Ser.3) 10:322,
1848; Wt. Ic. t. 1971; D. & G. 238.

Small to a medium sized tree. Leaves alternate with
serrate margin, scabrous above, grey pubescent beneath.
Flowers greenish in axillary cymes. Fruit a small black
drupe.

Local name: Ghol.

Local uses: Charcoal is prepared from the wood.

Flowers & Fruits: November to April.

Bedi 1080, 1959.

Widely distributed, common in the hilly regions
rare on plains.

Gujarat: Pavagadh, Deccan, Kanara, Travancore,
Bengal. More or less throughout India.

Ceylon, Malay Islands.

URTICACEAE

Plants with stinging hairs:

Slender, annual herbs; stipule small
or 0; hairy small and weak. Fleurya

Erect large rough herb or undershrub;
stipules large, hairy, foliaceous..... Girardiana

Plants without stinging hairs:

Flowers on a saucer-like receptacle.... Elatostemma

Flowers in axillary clusters, not on
a fleshy receptacle. Pouzolzia

Fleurya Gaud.

Fleurya interrupta (Linn.) Gaud. in Bot. Freyc. Voy. 497,
1826; F&B. 5:548; C. 3:131; D. & G. 238; Wt. Ic.
t. 1975; Fischer, 959; Sant. 225.

Urtica interrupta Linn. Sp. Pl. 985, 1753. Gr. 187.

A slender herb with ovate, acuminate, coarsely-
toothed leaves. Stipule small or 0. Flowers on a slender
interrupted racemes. Fruits in spiked raceme, reaching
upto 25 cm., long.

Flowers & Fruits: August to November.

Bedi 195, 300, 3207.

Fairly common on moist hilly slopes in the dense forest areas. Rare on the plains. Often noted on tree trunks during monsoon, especially near Banvaro, Alindra, Bhanpur etc.

Gujarat, Konkan, Kanara, W. Peninsula, Bihar, Bengal. Ceylon, Malaya, Pacific Islands, China.

Girardinia Gaud.

Girardinia zeylanica Decne. in Jacq. Voy. 152, 1844;
C. 3:132; Fischer, 960; Sant. 225; Chavan & Oza,
Fl. Pavagadh, 216.

Urtica heterophylla Roxb. (non vahl): Gr. 187;
Wt. Ic. t. 687.

Girardinia heterophylla var. zeylanica Decne.
loc.cit., FBI. 5:551.

A large, erect herb or an undershrub with stinging hairs. Leaves 3-7 lobed with serrate or dentate margin and cordate base. Inflorescence in clusters.

Flowers & Fruits: October to May.

Bedi 1737, 2181.

Rare, noted few patches near Alindra. Stinging hair cause great irritation.

Deccan, Konkan, W. Peninsula, Gujarat. Ceylon.

The identity of my specimens has been checked and confirmed at Kew Herb. England.

Elatostemma Forst.

Elatostemma cuneatum ("cuniata") Wight, Icon. 6:35,
t. 2091, 1853; F&B. 5:568; C. 3:134; D. & G. 239;
Fischer, 963; Sant. 226.

A slender, erect or sub-erect small herb, 3-10 cm.,
high. Leaves coarsely dentate above the middle, alternate,
sparsely hairy.

Flowers & Fruits: September to October.

Hedi 3094, 3418.

Very rare, only collected from few moist rocky
places on the slopes of Patan Mata and Rai aingna
hills. Restricted in distribution.

W. Peninsula, Konkan, Kanara; Trop. Himalayas,
Ceylon, Java.

The identity of my specimens has been checked
and confirmed at Kew Herbarium, England.

It has not been recorded from Gujarat, so a new
record for Gujarat state.

Pouzolzia Gaud.

Pouzolzia zeylanica (Linn.) Benn. Pl. Jav. Rar. 67, 1838;
Sant. 226; Chavan & Oza, l.c., 217.

Parietaria zeylanica Linn. Sp.Pl. 1052, 1753.

P. indica Linn. Mant. 1:123, 1767; Gr. 187.

Pouzolzia indica Gaud. in Freyc. Voy. Bot. 503,
1826; FBI. 5:581; C. 3:137; D. & G. 240.

A small, erect or suberect hairy herb, upto 30 cm.,
tall. Leaves ovate lanceolate. Flowers small greenish.

Flowers & Fruits: September to November.

Bedi 302, 3399, 3401.

Commonly noted in the moist rocky crevices on
the Northern slopes of Kanvara, Dungar ("Bachelor hill")
near Khalta and on Handva hill near Kanjeta.

Gujarat, Deccan, throughout Tropical and sub-
tropical India.

Ceylon, Burma, Malay Islands, China.

MORACEAE

Flowers not crowded inside fleshy receptacle;
male flowers in pedunculate heads; Stamens
inflexed in bud with recurved anthers.....Streblus

Flowers crowded inside close fleshy
receptacle; stamens straight in bud.....Ficus

Streblus Lour.

Streblus asper Lour. Fl. Cochinch. 2:615, 1790;
PBI. 3:489; C. 3:141; Talb. 2:502, t. 516;
Witt, 209; Chavan & Oza, l.c., 217.

Epicarpurus orientalis Blume, Bijdr. 488, 1825;
D. & G. 240; Wt. Ic. t. 1961.

A large shrub or a small tree. Leaves irregularly
dentate, rough on both sides. Fruit yellow, a small
fleshy berry.

Local name: Kharoti.

Flowers & Fruits: January to May.

Bedi, Chari 25.3.61 & Tokerwa.

Rare, only noted on plains, in the N.E.,
parts of Ratanmahal.

Gujarat, Madhya Pradesh, Deccan, almost all drier parts of India. Ceylon, Malay Islands, Cochinchina, China, Siam.

Ficus Linn.

Receptacles cauline or ramal, clustered or on more or less leafless branches:

Leaves some or all opposite, scabrid, male flower with 1 stamen:

Basal bracts 3. hispida

Basal bract 0; Leaves alternate or subopposite. asperriana

Leaves all alternate; male flowers with 2 stamens. glomerata

Receptacles 1-2 or more, axillary or from the scar of fallen leaves:

Receptacles stalked, pubescent. lucescens var.
lambertiana (Miq)
Santapau.

Receptacle quite sessile, not pubescent; shoot and leaves quite glabrous:

Leaves not caudate acuminate. lucescens

Leaves more or less caudate acuminate. religiosa

Receptacles in axillary pairs on leafy shoot; shoot and leaves pubescent or tomentose. benghalensis

Ficus hispida Linn. f. Suppl. 442, 1781; FBI. 5:522; C. 3:154; King in Ann. Roy. Bot. Gard. Calc. 116, tt. 154-155, 1887-1889; Talb. 2:523, t. 530; Sant. 230; Fischer in G. 956; Chavan & Oza, l.c. 218.

F. oppositifolia Willd. Gr. 191; Wt. Ic. t. 638.

F. daemonum Koen. Gr. 192; Wt. Ic. t. 641.

A large shrub or a small tree. Leaves elliptic acuminate with variously toothed margin, scabroid above, hispid below. Receptacles hispid on short branches.

Local name: Dadh Umari.

Receptacles: February to July.

Bedi 1299, 1340 (confirmed at C.N. Herb).

More common near human inhabitation, along the paths, on waste places near Ppargota, Banvaro and at various other places.

Gujarat, Deccan, Konkan, S.M. country, Kanara, Punjab, throughout India.

Malacca, Ceylon, Malay Islands, China, Australia.

Ficus asperima Roxb. Fl. Ind. 3:554, 1832; FBI. 5:522;
C. 3:155; Gr. 191; D. & G. 243; King, l.c.,
t.100; Talb. 2:522, t. 529; Fischer in G. 955;
Sant. 230.

A large shrub or a small tree, often reaching upto
5 m. high. Leaves oblong-lanceolate to elliptic acute
or acuminate; scabrid on both sides. Receptacles on
short branches.

Local name: Dali umari.

Receptacles: February to May.

Bedi 1300, 2190.

Common along the streams in the moist shady
places. Bedi 3348, 3349 (Chari), shows few lobed
leaves. In all other essential details it resembles
with the above species. Cooke, l.c. considered it
as a sport. Due to lack of receptacles in the lobed
specimens it is not possible to comments at this
stage.

W. Peninsula, Madhya Pradesh, Deccan, Konkan,
Kanara.

Ficus glomerata Roxb. Pl. Cor. 2:13, t. 123, 1798;
FBI. 5:535; C. 3:154; King. 173, t. 218;
Talb. 2:524, t. 531; wt.Ic. t. 667; Sant. 230;
Chavan & Oza, Fl. Pavagadh. 220.

Covellia glomerata Miq.: D. & G. 243.

A large tree. Leaves glabrous. Receptacles peduncled, found in bunches on the main stem and on branches. Bark gray to reddish-brown.

Local name: Gulad umrao.

Receptacles: September to March.

Bedi 516, 1171, 2127, 2797.

Not common, noted along the banks of streams at Kanjeta, Pepargota, Banvaro and also on plains. It is said, that wild bear is very fond of ripe receptacles.

Common throughout Gujarat, Maharashtra, almost throughout India. Ceylon.

Ficus lucescens Blume Bijdr. 440, 1825; Alston Fl.

Kandy 34, f.181; Raizada in Ind.For. 92(3) 310, 1966.

F. lacor Buch.-Ham. in TSL. 15, 150; Raizada Ind. For. Rec. 5(1):18; Sant.229.

F. infectoria Roxb. Fl. Ind. 3:550, 1832, (excl. Syn. Rheede); FBI. 5:515; Gr. 191; D. & G. 241; wt. Ic. t.665; King in ARBG. Cal. 1:60, t. 75 & 84Y2; C. 3:151; Fischer in G. 953.

A medium sized much branched tree with glabrous leaves. Receptacle sessile or subsessile with three bracts just below the receptacle, about 1 cm. across.

Local name: Garphla.

Receptacles: October to March.

Bedl 643, 1025, 1291.

Not common, noted on the Southern parts of Ratansahal Hills near Banvaro, Pāpargota, Alindra and Morai.

E. & W. Peninsular, Deccan, Kanara - not common in a wild state often cultivated along the roads, Bengal, Assam.

Ceylon, Burma and Malaya.

Roxburgh's name "infectoria" is invalid, as it is pre-occupied by that of Willdenow, which is a synonym of F. tsjakela Burm. Hamilton's F. lacor and Blume's F. lucescen were published in the same year i.e. 1825. Raizada l.c. has shown F. lucescen has priority of publication, so should be accepted.

Our specimens belong to F. lucescen var. lucescens proper.

Ficus lucescens Blume. var. lambertiana (Miq) Santapau in Fl. Khandala. App. 291.

F. lacor Buch.-Ham. var. lambertiana (Miq.) Santapau in RBSE. 16(1) 292, 1953; Sant. 229.

F. infectoria var. lambertiana King. Sp. Pic. 63, t.76, 1887; C.3:151; Talb.2:520, t.527; Fischer in G. 953.

Urostigma lamberitianum Miq. in Hook. Lond. Journ.
Bot. 6:565, 1847; D. & G. 241.

A large tree. Leaves glabrous, distinctly coriaceous, base broad, rounded, emarginate or sub-cordate with acuminate apex. Recept^ucles stalked, pedicels from 5 to 8 mm. long. Recept^ucles larger than the typical species.

Local name: Pepar.

Recept^ucles: December to March.

Rare, noted along the banks of a stream, due to this old large tree, place is named as Pepar na Pani.

Khandesh, Konkan, W. Ghats, Kanara.

Ficus religiosa Linn. Sp.Pl. 1059, 1753; FBI. 5:513;
C. 3:149; King 55, t. 67A & t. 84; Talb. 2:514,
t. 523; Sant. 229; Chavan & Oza, Fl. Pavagadh
219.

A large tree with smooth greyish bark. Leaves entire, glabrous, with acuminate apex. Recept^ucle smooth, in axillary pairs, sessile.

Local name: Pepal, Pipalo.

Receptacles: September to March.

Bedi (13.9.60 Kanjeta), (26.11.61 Tokerwa)!

Noted at various places in the hilly regions, more common on plains, especially near human inhabitation. This species has a great tendency to grow in the rocky crevices, on old buildings and even on the bark of certain trees, especially Morassus flabellifer.

Universally planted, often noted as an escape in the forest areas.

Ficus benghalensis Linn. Sp.Pl. 1059, 1753; FBI. 5:449; Brandis. For. Fl. 412; Bedd. Fl. Silv. 222; C. 3:145; King 18, t. 13 & t. 81, f.c, 1887; Talb. 2:507, f. 518; Sant. 289; Chavan & Oza, 219.

F. indica Linn. ibid. 1060, emend. Lamk. Encycl. Bot. 2(2):494, 1788 (non King, 1887); Gr.189.

A large tree with long horizontally spreading branches and having prop roots. Leaves elliptic to broadly ovate with obtuse apex. Receptacles red, in axillary pairs, globose, puberulous.

Local name: Vad.

English name: Banyan.

Receptacles: August to December.

Bedi November, 1961 near Kenjetal

Common near village, especially on plains. Often noted as an escape in the forest regions.

Gujarat, Deccan, S.M. country, W. Ghat, Sub-Himalayan forests and on the lower slopes of the hill ranges of Southern India. Planted throughout the plains of India usually in avenues and as a roadside.