

# Annotated List of Seed Plants of Singapore (VIII)\*

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## II. Angiospermae-Dicotyledons (cont'd)

### 111. Ericaceae

#### *Rhododendron indicum* Sweet

A densely branched shrub; leaves narrowly lanceolate to oblanceolate, 1.8-3.5 cm long, red-brown hairy. Flowers rose-red to scarlet, with round lobes, borne in short clusters at branch-tips. A pot plant introduced from Japan, has never set fruit here.

#### **Rhod. longiflorum** Lindl.

An epiphytic shrub with bright red flowers, formerly collected from lofty *Hopea* trees near the top of Bukit Timah, *Ridley* 2030 in 1891, now extinct.

### 112. Epacridaceae

#### **Styphelia malayana** Spr. (= *Leucopogon malayanus* Jack)

A shrub; leaves narrow and stiff with a sharp-pointed tip. Flowers white, in axillary clusters. Fruit red, baccate, Formerly found on the sea-shore near Changi, Tanah Merah, *Ridley* 1832, now extinct.

### 113. Sapotaceae

#### Key to the genera

1. Sepals 4, in two whorls ..... *Ganua*, *Madhuca*, *Payena*
1. Sepals 5, 6 or 8, in one or two whorls

\* continued from *Gdns' Bull. Sing.* 35: 103, 1982.



- 2. Sepals 5, in one whorl
  - 3. Staminodes 5 ..... *Planchonella*, *Pouteria*
  - 3. Staminodes absent ..... *Chrysophyllum*
- 2. Sepals 6 or 8, in two whorls
  - 4. Sepals 6
    - 5. Stamens 6 ..... *Manilkara*
    - 5. Stamens about 12 ..... *Palaquium*
  - 4. Sepals 8 ..... *Mimusops*

*Chrysophyllum cainito* L.

A tree with elliptic, drooping leaves. Leaf-blades coppery-silvery beneath. Corolla purplish white. Fruit large, broadly ellipsoid to spherical, 5-7 cm across, white or purple, with a star-like core in transverse section (hence Star-apple). Native of tropical America, occasionally planted.

**Chrys. lanceolatum** DC. (= *C. roxburghii* G. Don)

Tree; leaves dark green, with numerous pairs (12-35) of parallel secondary veins. Corolla yellow, 5-merous; staminodes absent. Fruit globose, 5-lobed. Tanglin, Bukit Timah (*Sinclair SF 40200*).

**Ganua kingiana** (Brace) v.d. Assem (= *Madhura kingiana* (Brace) Lam)

Large tree; leaves closely clustered. Flowers white, 1-6 per cluster, above the leaf scars. Bukit Timah, *Ridley 6294*, type of *Bassia kingiana*.

**Ganua motleyana** Pierre ex Dubard

Tree; leaves spiral, glabrous. In freshwater and peat swamps, Seletar, Jurong, Kranji, Bukit Mandai, Changi (*Ridley 5645*).

**Ganua sessilis** (K. & G.) Lam (= *Payena sessilis* K. & G.)

Leaves obovate, the base gradually tapered downward, hence appearing sessile. Tuas, *Goodenough 5076*, type.

**Madhuca malaccensis** (Clarke) Lam

Small or medium tree; leaves loosely clustered. Flowers white or yellow, many in axillary clusters. Gardens' Jungle, *Ridley 6521*.

**Madh. sericea** (Miq.) Lam

Medium tree; leaves yellowish brown to silvery, velvety below. MacRitchie Reservoir, *Sinclair SF 39656*.

*Manilkara zapota* (L.) van Royen (= *Achras zapota* L.)

Small tree; leaves glabrous, dark green below. Fruit roundish ovoid, up to 9 × 7 cm, the rind thin, brown; flesh pinkish, juicy, in which are embedded about 10 black seeds. The milky latex tapped from the trunk is known as Chicle or Chicle gum, the main ingredient of chewing gum. A native of tropical America, locally grown for its edible fruit, *Chicku*. 人心果。

*Mimusops elengi* L.

Small or medium tree; leaves alternate or laxly spirally arranged, margin wavy and curled; flowers white, with 8 flat and hairy staminodes. Native to India and Thailand, often cultivated as an ornamental and roadside tree.



***Palaquium gutta* (Hook. f.) Baill.**

Medium-sized tree, buttressed; leaves obovate to oblong-elliptic, spirally arranged, golden brown velvety below. Flowers pale green, in small axillary clusters. Fruit ovoid, 2.5 cm across. This species furnishes the top grade of Gutta Percha which was an important commodity for insulation material during the last century. Probably introduced from the Malay Peninsula, formerly widely planted; a small patch can still be found at the foot of Bukit Timah Nature Reserve.

**Pal. hexandrum** (Griff.) Baill.

Large tree; leaves obovate or oblong-elliptic, to 20 cm long; petioles glabrous, narrowly grooved above. Bukit Timah, *Ridley* 11373.

**Pal. microphyllum** K. & G.

Large tree; leaf-blades spatulate, less than 11 cm long; petioles finely hairy. Bukit Timah, *Sinclair* SF 38245.

**Pal. obovatum** (Griff.) Engl.

Medium-sized or large tree; leaf-blades obovate, leathery, to 35 cm long; flowers green, crowded along the twigs behind the leaves. Tanglin, Changi, Pulau Senang (*Burkill & Kiah* HMB 503). Vern. *Nyatoh*.

**Pal. oxleyanum** Pierre

Small to medium-sized tree; leaf-blades obovate, to 28 cm long; petioles strongly grooved above; very similar to *P. gutta*. Pulau Dammar Darat, *Goodenough* in 1892.

**Pal. ridleyi** K. & G.

Large tree; leaf-blades obovate to elliptic, to 12 cm long. In swamps; Kranji, *Ridley* 4796.

**Pal. rostratum** (Miq.) Burck (= *P. bancanum* Burck)

Large tree; leaf-blades obovate to spatulate, to 80 cm long. Gardens' Jungle, Bukit Timah (*Mat* 6134).

**Pal. xanthochymum** Pierre

Large tree; leaves obovate to spatulate, to 15 cm long. In freshwater swamps, Changi, *Ridley* 3639a.

**Payena lucida** (G. Don) DC.

Small or medium tree; leaves oblong, to 25 cm long; flowers in small axillary clusters; sepals 4, in two pairs; corolla white, mostly 8-lobed; stamens 16; fruit ovoid to ellipsoid, 2 cm across. Seletar, *Ridley* 5644, type.

**Pay. maingayi** Clarke

Medium-sized or large tree; leaves oblong, to 30 cm long, velvety beneath. Flowers white or pale yellow. Chua Chu Kang, *Ridley* 6696, Mandai Road.

**Pay. obscura** Burck (= *P. havilandii* K. & G.)

Leaves elliptic, to 15 cm long, glabrous beneath. Bukit Timah, *Ngadiman* SF 35800.



**Planchonella maingayi** (Clarke) Van Royen (= *Sideroxylon maingayi* Clarke)

Tree; leaves obovate. Like the next species, but leaves glabrous below, tertiary veins transverse. Less common; Gardens' Jungle, Bukit Timah (*Liew* 36465).

**Planch. obovata** (R.Br.) Pierre (= *Sideroxylon ferrugineum* Hook. & Arn.)

Small or medium-sized tree; leaves obovate, usually velvety below, tertiary veins reticulate; flowers small, 5-merous; staminodes tongue-shaped, alternate with corolla-lobes; fruit obovoid, small. In mangroves and on the sea-coast; Pulau Dammar Darat, *Goodenough* 2763.

**Pouteria malaccensis** (Clarke) Baehn. (= *Lucuma malaccensis* Dubard)

Large or medium-sized tree; flowers small, in leaf-axils, 5-merous; staminodes 5, alternate with corolla-lobes. Seletar, *Mat* 6499.

## 114. Ebenaceae

**Diospyros argentea** Griff.

Small tree with dense golden-yellow hairs on various parts; leaves oblong, 15-32 cm long; flowers 4-5 merous, in axillary cymes, usually dioecious; fruit round, about 5 cm across, covered with red hairs. In dense jungle, Bukit Timah, Changi (*Hullett* 410), Chua Chu Kang.

**Diosp. buxifolia** (Bl.) Hiern. (= *D. microphylla* Bedd.)

Tree; leaves small, ovate, 1.2-5 cm long. Fruit ellipsoid, 1.1 cm across, 1-seeded. Producing black heartwood, the Malacca Ebony. Bukit Timah, MacRitchie (*Sinclair SF* 39482).

**Diosp. clavigera** Clarke

Large tree; leaves obovate, 5-13 cm long. Fruit round, 1.2 cm across. Sungei Morai, Bukit Timah (*Ngadiman SF* 36396).

**Diosp. diepenhorstii** Miq. (= *D. pyrifera* Ridl.)

Leaves oblong, 15-30 cm long. Fruit obovoid or oblong, 8 cm across. Bukit Timah, *Ridley* 8101.

**Diosp. discolor** Willd.

Small, densely crowned tree; leaves lanceolate or oblong-elliptic, 8-30 cm long, densely hairy below; fruit depressed globose, 5-12 cm across, densely hairy. Native to the Philippines, occasionally planted for the edible fruits (*Buah Mentega*). 毛柿。

**Diosp. ferrea** (Willd.) Bakh. (= *Maba buxifolia* Pers.)

Leaves small, elliptic or obovate, 1.6-6 cm long. Fruit globose, 0.8 cm across. Often near the sea, Tempinis, Kranji (*Ridley* 6703).

**Diosp. kaki** Thunb.

Fresh fruits of the Chinese persimmon ( 柿 ) are imported from China, Japan and Java usually during the end of the year. Compressed dried ones are sold in stores almost throughout the year.



**Diosp. lanceifolia** Roxb. (= *D. lucida* Wall.)

Leaves lanceolate to oblong-elliptic, 4.5-15 cm long. Fruit globose, about 2 cm across, beaked. In the forest, sometimes near the sea, Bukit Timah, Changi, Loyang, Tempinis.

**Diosp. maingayi** (Hiern.) Bakh. (= *D. bilocularis* Oliv.)

Leaves elliptic, 6-17 cm long. Fruit oblong, 3.5 cm across. Gardens' Jungle, Changi (*Goodenough s.n.* in 1890).

**Diosp. pilosauthera** Blanco var **oblonga** (Wal. ex G. Don) Ng

Leaves oblong, 15-33 cm long. Fruit ovoid, 2.5 cm across, Bukit Timah, Tanjong Gul, Gardens' Jungle (*Abu Kassim* 267).

**Diosp. styraciformis** K. & G.

Leaves lanceolate to oblong, 5-13.5 cm long. Fruit globose, to 2.5 cm across, pointed. MacRitchie, *Samsuri* 1463.

**Diosp. venosa** Wall. ex A. DC. (= *Maba venosa* (Wall.) K. & G.)

Leaves lanceolate to elliptic. Fruit globose to oblong, 1.3-1.7 cm across. Changi, *Ridley* 4667.

**115. Styracaceae****Styrax benzoin** Dryand

Medium-sized tree; buttressed. Leaves ovate to elliptic, 6-20 cm long, glaucous beneath; corolla white, fragrant; fruit depressed-globose to globose, 2-3.8 cm across. Gum benzoin is a fragrant resin, tapped from deep incisions into the bark. It is used as incense and in medicine. Bukit Timah, Seletar (*Ridley* 2650), Chua Chu Kang, Gardens' Jungle. Vern. *Kemenyan*. 安息香。

**Styr. crotonoides** Clarke

Leaves elliptic to broadly ovate, 8.5-20 cm long, densely rust-hairy below; fruit ovoid to round, to 3 cm across. Recorded in Singapore by a single collection, *Wallich* 7848.

**116. Symplocaceae****Symplocos adenophylla** Wall, ex D. Don

Shrub or small tree; young twigs and undersurface of leaves covered with red brown hairs. Leaves ovate-lanceolate, 4-14 cm long; flowers white; fruits ellipsoid, to 0.8 cm long. The fruits of *Symplocos* are drupes, usually bluish when ripe, crowned with a persistent calyx, and have a ribbed stone. Seletar (*Ridley* 2752b), Tuas.

**Syml. barringtonifolia** Brand (= *S. rigida* Clarke)

Small tree; leaves oblong or elliptic, 26-31 cm long; flowers white; fruit oblong, pointed, to 3 cm long. Changi, *Ridley* 5960.



**Sympl. celastrifolia** Griff. ex Clarke

Leaves elliptic to ovate, 5.5-12 cm long; fruit ovoid, to 1 cm long. Jurong, *Ridley* 8423.

**Sympl. fasciculata** Zoll.

Leaves oblong-lanceolate, 5-11 cm long; fruit ovoid, with a short beak, blue, 6 mm long. In the forest and belukar, Bukit Timah, Chua Chu Kang, Tanglin, Bukit Mandai (*Ridley* 3626a).

**Sympl. odoratissima** (Bl.) Choisy ex Zoll.

Leaves narrowly elliptic to obovate, 7.5-17 cm long; fruit ovoid, 0.8-1.5 cm long. Bukit Timah, *Ridley* 4428.

**Sympl. rubiginosa** Wall. ex DC.

Leaves narrowly elliptic to obovate, 15-35 cm long; fruit ellipsoid, 0.8-1 cm long. Chua Chu Kang, Bukit Timah (*Ngadiman* SF 36363).

**117. Myrsinaceae**

## Key to the genera

1. Woody climbers
  2. Ovary and fruit superior, seed solitary, globose ..... *Embelia*
  2. Ovary and fruit half-inferior, seeds numerous, angular ..... *Maesa*
1. Erect subshrubs, shrubs or small trees; fruit 1-seeded
  3. Herbaceous subshrubs, rhizomatous; flowers in small fascicles along the rachis of a racemose inflorescence ..... *Labisia*
  3. Shrubs or small trees, not rhizomatous; flowers in umbellate or other inflorescences, but not as above
    4. Fruit cylindric, curved, acute; pericarp dry, leathery ..... *Aegiceras*
    4. Fruit globose, pericarp fleshy
      5. Corolla-lobes contorted in bud, flowers perfect, style and stigma tapering to a point ....  
..... *Ardisia*
      5. Corolla-lobes imbricate or valvate, stigma tongue-shaped ..... *Rafania*

**Aegiceras corniculatum** (L.) Blanco

Shrub; leaves thick-leathery, obovate, 4-8 cm long; flowers pale pinkish, 10-20 in terminal and axillary umbels. Fruit cylindric, acute, curved, pericarp leathery. In mangroves, Tuas, Changi (*Ridley* s. n. in 1890), Lim Chu Kang, Pulau Ubin.

*Ardisia corolata* Roxb. (= *Ard. stylosa* Miq.)

Shrub or small tree; leaves papery, oblong-lanceolate, 12-25 cm long, variable, reddish-brown beneath. Bukit Timah, Gardens' Jungle, Changi Road, Jurong Road (*Ridley* 11342).

**Ard. crassa** Clarke

Shrub or small tree; leaves leathery, narrowly oblong; panicles rusty pubescent, flowers pink. Rare, Seletar, Chua Chu Kang (*Ridley* 3844).



**Ard. crispa** DC. (= *A. crenata* Roxb.)

Glabrous shrub; leaves thinly leathery, lanceolate, with a crenate margin, 5-10 cm long; flowers pink, in short umbellate racemes. In open places, Alexandra Road, Changi, Sentosa Island (*Samsuri 1347*).

**Ard. lanceolata** Roxb.

Shrub or small tree; leaves leathery, lanceolate or elliptic-oblong, 15-28 cm long, petioles winged; panicles terminal. Seletar, Bukit Timah (*Ridley 6436*).

**Ard. littoralis** Andr. (= *A. elliptica*)

Large shrub; leaves leathery, obovate, 8-12 cm long, nerves nearly invisible; flowers rose pink, 6-8 in an umbel, corolla gland-dotted. Drupe flattened, globose, red then black. In tidal swamps and muddy river banks. Changi, *Ridley 20115*.

**Ard. ridleyi** K. & G.

Slender spreading shrub; leaves membranous, oblong-lanceolate, 10-20 cm long. Sole record in Singapore: Ang Mo Kio. No specimens available.

**Ard. singaporensis** Ridl.

Small tree, young parts densely red-scurfy; leaves thinly leathery, elliptic-lanceolate, gland-dotted, 10-18 cm long. Rare, Pulau Ubin (*Ridley 2816*, type), and Changi Road; probably extinct.

**Ard. teysmanniana** Scheff. (= *Pimelandra wallichii* DC.)

Shrub or small tree; branches rusty tomentose; leaves papery, oblong or oblanceolate, 30-45 cm long, margin entire; flowers in branched short racemes. Gardens' Jungle, Bukit Timah (*Corner s.n.* in 1940), Changi, Nee Soon.

**Ard. tuberculata** Wall.

Glabrous shrub; leaves leathery, elliptic, 8-15 cm long, coppery scaly beneath; flowers pink, in a lax terminal panicle. In forests, Bukit Timah, Seletar (*Ridley 432*), Jurong, Gardens' Jungle.

**Ard. villosa** Roxb.

Small shrub; leaves papery thin, oblong-lanceolate, villose beneath, 10-20 cm long. In dense forests, Pulau Ubin (*Ridley 2809*).

**Embelia amentacea** Clarke

Slender climber, branches brown velvety; leaves papery, oblong, 3-8 cm long, pubescent beneath; flowers small, in panicles of slender hanging racemes. In secondary forests and their edge; Bukit Timah Road, Changi Road.

**Emb. canescens** Jack (= *E. garcinifolia*)

Slender woody climber; inflorescences terminal, red-hairy; fruit small, black. Catchment forests (*Goodenough 1822*), Changi (*Ridley 5927*).

**Emb. coriacea** DC.

Large liana; leaves stiff, coriaceous, oblong, 16-25 cm long; panicles very large, pendent, corolla white; fruit black. In secondary forests, Seletar, Bukit Mandai, Chua Chu Kang (*Ridley 2812*).



**Emb. lampani** Scheff.

Woody climber; leaves oblong, 4-8 cm long. In forest edge, Changi, Bukit Timah, Gardens' Jungle, Catchment forests (*Ridley s.n.* in 1906).

**Emb. ribes** Burm.

Slender woody climber; in forest edge, Changi, Bukit Timah (*Ridley s.n.* in 1889), Gardens' Jungle.

**Emb. ridleyi** K. & G.

Large climber; leaves thinly papery, oblong-acute, 10-18 cm long; panicles axillary. Forest edge; Chua Chu Kang, Bukit Mandai. Probably extinct.

**Labisia pumila** (Bl.) Benth. & Hook. f. (= *L. pothoina* Lindl.)

A shrublet; leaves variable, usually lanceolate-elliptic, crenulate, petioles short or long, sometimes winged (var. *alata*). Corolla pink, flowers in small clusters on a spike-like inflorescence; fruit globose, bright red, 3-4 mm across. In dense forests; Sungei Bajau, Bukit Timah, Kranji (*Ridley 1799a*), Changi. Vern. *Akar Fatimah*.

**Maesa ramentacea** Wall.

Scandent shrub or small tree; branches often bearing masses of abortive branchlets; leaves membranous, ovate-lanceolate, 8-20 cm long; flowers with a white corolla, very small, in axillary panicles. In secondary forests, Catchment forests, Bukit Timah (*Ridley 2064*).

**Rafania avensis** (Bl.) Mez (= *Myrsine avensis* DC.)

Small tree; leaves oblong-lanceolate, 3-6 cm long, nerves obscure; flowers in compact, few-flowered umbels. Drupe globose, 3-4 mm across. In mangrove forests, Bajau, Tanjong Gul (*Sinclair SFN 39637*).

**Raf. umbellulata** (Wall.) Mez (*Myrs. umbellulata* A. DC.)

Shrub or small tree; leaves oblanceolate, 4-8 cm long, nerves visible; flowers 3 or more in an umbel; drupe globose, 7-8 mm across. Near the sea, Changi, Chua Chu Kang (*Ridley 6827*).

**118. Plumbaginaceae***Plumbago auriculata* Lamk. (= *P. capensis* Thunb.)

A dwarf shrub, much branched; flowers in umbel-like clusters, corolla tubular, light blue. Native of S. Africa, planted as an ornamental or hedge. 藍雪花。

*Plumb. indica* Linn. (= *P. rosea* L.)

Corolla rose-pink or red. Native of India.

**Plumb. zeylanica** Linn.

Corolla white. Native of tropical Asia; cultivated or as garden escape on roadside, waste ground or near villages.



## 119. Plantaginaceae

**Plantago major** L. (or as *P. asiatica* Michx)

A herb with thin or thick rhizomes; leaves lanceolate to ovate, in a radical rosette; flowers small, white, in a spike-like inflorescence. A cosmopolitan weed, used in herbal medicine. 車前草。

## 120. Loganiaceae

## Key to the genera

1. Leaves with one main vein from the base; tendrils often present ..... *Strychnos*
1. Leaves with 3-5 basal veins; no tendrils
  2. Corolla-lobes imbricate or contorted; fruit baccate ..... *Fagraea*
  2. Corolla-lobes valvate in bud; capsules 2-valved ..... *Norrisia*

**Fagraea auriculata** Jack

Epiphytic or climbing shrub; leaves stalked, with auricles present at the base of stalk; corolla tubular, large, to 30 cm long. Pulau Pawai (*Sinclair SF 38900*).

*Fagr. crenulata* Maingay ex Clarke

Large tree, trunk and branches often thorny; leaves obovate, 18-35 cm long, sessile, like those of the cabbage plant (hence Cabbage Tree). Native to the swamp-forests in S. Malaya, cultivated in large gardens or along roadsides. Superficially it resembles the *Ketapang* tree (*Terminalia catappa*), but the leaves are green and larger. Vern. *Birah*.

**Fagr. fragrans** Roxb.

Medium-sized tree; leaves elliptic, 5-13 cm long; flowers cream-white, becoming yellow, fragrant, 2 cm across; berry orange, round, 8 mm across. Usually found in open places and belukar, also widely planted. A form with a wavy leaf-margin and reddish brown bark, found in the primary forest, is sometimes considered as a separate species, namely *Fagr. gigantea* Ridl. Vern. *Tembusu*.

**Fagr. racemosa** Jack ex Wall.

Shrub or small tree, rarely climbing; leaves elliptic, 15-30 cm long, without distinct auricles, but stipules united around the twig into a short ocrea. In secondary forests, Changi (*Goodenough 2783*), Kranji.

**Fagr. ridleyi** K. & G.

Climbing or straggling shrub or small tree; leaves obovate, 15-25 cm long, secondary veins prominent below. Very rare, Bukit Timah (*Ridley 11363*), Sungei Karang.

**Norrisia major** Solerod. (= *N. malaccensis* Gardn.)

Small tree; leaves oblong to elliptic, 6-10 cm long; flowers cream-yellow, in terminal corymbs, branched; capsules opening by parting of 2 valves. Mandai Road (*Corner s.n.* in 1937).



**Strychnos axillaris** Colebr. (= *S. malaccensis* Benth. & *S. pubescens* Clarke)

A liana, sometimes a shrub or small tree; twigs pubescent; leaves lanceolate to suborbicular, 9-12 cm long, 3-5 nerved from the base; flowers less than 0.5 cm long, corolla-tube nearly as long the limb; fruit ovoid, oblique, 1-1.5 cm across. Bukit Timah (*Ridley 6317*), Gardens' Jungle.

**Strychn. ignatii** Berg. (= *S. ovalifolia* Wall, ex G. Don)

Large liana; leaves ovate to elliptic, 8-12 cm long; flowers in axillary cymes, salver-shaped, 1-1.5 cm long, the corolla-tube longer than the limb; fruit globose, 5-8 cm across, on thickened branches. The seeds contain strychnine (Saint Ignatius' Bean); the roots are used for poison arrows and as fish poison. Changi, Gardens' Jungle, MacRitchie (*Whitmore 68*).

**Strychn. ridleyi** K. & G.

Climbing shrub; leaves oblong, 8-10 cm long; flowers 0.5 cm long, corolla-tube longer than the limb. Rare, once collected at Tuas, *Ridley 6313* (type).

**121. Gentianaceae****Nymphoides indica** (L.) O. Kuntze (= *Limnanthemum indicum* Griseb).

Aquatic plant; leaves broadly ellipsoid or rounded, solitary at the top of stem or branches, floating; lowermost leaves submerged; flowers in fascicles, at the top of the petiole-like stem; corolla white, the lobes densely covered with long, white hairs. In shallow stagnant water at the margin of the Catchment Area, *Haviland & Lim 5741*.

**122. Apocynaceae**

## Synoptic key to the genera

1. Herbs; leaves opposite (introduced and naturalised) ..... *Catharanthus*
1. Trees, shrubs or woody climbers
  2. Erect trees or shrubs
    3. Leaves alternate and spiral
      4. Native plants, both wild and planted ..... *Cerbera*
      4. Introduced plants ..... *Thevetia, Plumeria, Adenium*
    3. Leaves opposite or in whorls
      5. Leaves opposite
        6. Native plants ..... *Kibatalia, Kopsia, Tabernaemontana*
        6. Introduced and cultivated plants ..... *Carissa, Tabernaemontana*
      5. Leaves usually in whorls of 3-8
        7. Native plants, small to larger trees ..... *Alstonia, Dyera*
        7. Introduced cultivated plants, small trees or shrubs .. *Nerium, Ochrosia, Strophanthus*
  2. Climbers or scramblers,
    8. Leaves opposite
      9. Native plants *Anodendron, Leuconotis, Melodius, Parameria, Strophanthus, Willughbeia*
      9. Introduced cultivated plants ..... *Allamanda, Beaumontia, Chonemorpha, Odontadenia*
    8. Leaves in whorls of 3-4
      10. Native plants ..... *Alyxia*
      10. Introduced cultivated plants ..... *Allamanda*



***Adenium obesum* Balf. (= *A. coetaneum* Stapf)**

A bushy shrub; 1-1.5 m tall; stem and branches thick, succulent; leaves ovate, 5-10 cm long, spirally arranged in tufts. Flowers purple or pink, funnel-shaped, 4-5 cm long, in small clusters. Native to E. Africa. A pot plant.

***Allamanda cathartica* L.**

Climbing shrub; leaves opposite or in whorls of 3-4, oval-shaped, tapering at both ends, 10-15 cm long. Flowers broad-tubular, 4-5 cm long and across, in small clusters at branch-tips. A large flowered form, sometimes called *A. hendersoni* Rafill., native to Brazil, is often planted in gardens. 軟枝黃蟬。

***Allamanda violacea* G. & E.**

A climbing shrub also from Brazil. Differs from the above species in having flowers 5-7 cm across and a reddish-purple corolla. Less commonly planted.

***Alstonia angustifolia* Wall. ex A. DC.**

Small tree, to 10 cm tall; leaves in whorls of 3, oblanceolate, 6-14 cm long. Fruit of 2 long, slender, woody follicles. Seeds small, numerous, flat, with a tuft of silky hairs at both ends. In the forest, Gardens' Jungle, Bukit Timah, Jurong (*Corner s.n.* in 1933), Pasir Panjang.

***Alst. angustiloba* Miq.**

Big tree, buttressed; branches in distinct whorls; leaves in whorls of 5-8, oblong-elliptic, 8-16 cm long. In the forest; Gardens' Jungle (*Ridley s.n.* in 1890), Sentosa Island. Vern. *Pulai*.

***Alst. scholaris* (L.) R. Br.**

Small or big tree; leaves in whorls of 5-8, elliptic, 7-17 cm long. Native to the Malay Peninsula, sometimes planted.

***Alst. spathulata* Bl.**

Small to big tree; leaves in whorls of 4-6, obovate, 7-10 cm long. In wet forests or swamps; Cluny road, Bukit Mandai, Changi (*Sinclair SF 40541*).

***Alyxia reinwardti* Bl. var. *lucida* (Wall.) Markgr. (= *A. lucida* Wall.)**

Woody twiner; leaves thin-leathery, elliptic or obovate, 4-8 cm long, in whorls of 3-4. Flowers white, with an orange throat, fragrant. Drupe ellipsoid, pulpy, black. On the sea-coast; Kranji, Sungei Morai (*Ridley 4427*).

***Anodendron candolleianum* Wight**

Big climber; leaves opposite, leathery, elliptic or ovate, 12-20 cm long. Flowers cylindric, yellow, very small, in panicles. Follicles dagger-shaped, 15-18 cm long. In swampy forests. No specimens available.

***Beaumontia multiflora* T. & B.**

Woody climber, leaves opposite, oblong, 10-25 cm long, wavy-margined. Flowers funnel-shaped, 5-7 cm long and 8-10 cm across, white, fragrant, clustered at the end of branches. Native to SE. Asia; cultivated.



***Carissa carandas* L.**

A much branched shrub; small branches zigzag and with opposite, sharp, bifid spines to 3 cm long. Leaves opposite, oblong, 3-7 cm long. Flowers in terminal cymes, solitary, salver-shaped, white, 3-4 cm across. Fruit a black berry. Native to S. Asia, sometimes grown as a hedge plant or for its edible fruit.

***Catharanthus roseus* G. Don (= *Lochnera rosea* Rchb. ex Steud.)**

A perennial herb, 30-60 cm tall, ever blooming; leaves opposite, oblong, 3-8 cm across, rose-purple or white (var. *albus* Sweet) with a slender tube 2-3 cm long. Native to tropical America; cultivated as an ornamental, often wild. 長春花。

***Cerbera manghas* L.**

Small tree; leaves spirally arranged, obovate, 12-30 cm long. Flowers large, fragrant, white, with a pink eye in the throat of the corolla tube (2.5-4 cm long). Drupes solitary or in pairs, oblong, slightly compressed, 5-7 cm long. Rare, at Pasir Panjang and Katong. Vern. *Pong Pong*. Pinked-eyed Cerbera. 海芒果。

***Cerb. odollam* Gaertn.**

Like the above species but the corolla-tube is shorter (1.5-2 cm long), the eye yellow, and the drupe is roundish, 5-10 cm across. Common on sea-shores and mangroves, and planted along roadsides. Vern. *Pong Pong*. Yellow-eyed Cerbera.

***Chonemorpha fragrans* Alst. (= *Ch. macrophylla* G. Don)**

Large liana with milky sap; leaves opposite, elliptic with a heart-shaped base, pubescent, 10-15 cm long. Flowers in cymes, bell-shaped, white, fragrant, 3-4 cm long. Native to the Malay Islands, sometimes found in gardens.

***Dyera costulata* (Miq.) Hook.f.**

Huge tree, to 60 m tall, the bark dark grey, not buttressed; branches in whorls; leaves in whorls of 6-8, ovate-oblong, 7-18 cm long. Flowers in branched cymes. Fruit a pair of massive woody follicles, 20-30 cm long, a commercial timber tree, the latex used to be tapped for chewing gum. Vern. *Jelutong*.

***Kibatalia maingayi* (Hook.f.) Woodson (= *Vallaris maingayi* Hook.f.)**

Medium tree, to 20 m tall; leaves decussate, elliptic, 7-10 cm long; flowers white, in axillary cymes or fascicles. Follicles oblong, slender, to 15 cm long. Seeds plumed. In the forest, Tanglin, Gardens' Jungle (*Hassan SF 36262*).

***Kopsia fruticosa* (Ker) DC.**

Shrub or small tree; leaves oblong-lanceolate, 16-23 x 5-9 cm; flowers pink with a dark eye, grouped in a much-branched sessile cyme. Native to Burma, sometimes planted.

***Kops. singaporensis* Ridl.**

Shrub or small tree; leaves oblong-ovate, 14-26 x 7-11 cm; flowers in large terminal dense cymes; corolla white, with a crimson eye. In forests, Chua Chu Kang, Seletar (*Md Noor 17*).



**Leuconotis griffithii** Hook.f.

Climber; leaves leathery, elliptic-oblong, 8-10 cm long; corolla yellow, 0.75 cm long; calyx thin, dry. In the forest, Serangoon Road (*Ridley 9166*), Seletar, Bukit Mandai, Jurong.

**Leuc. maingayi** Dyer

Leaves leathery, often in whorls of 3; corolla smaller and shorter (0.5 cm long) than the above species, calyx fleshy. In forest edge, Bukit Timah, Changi, Jurong (*Ridley 3868*).

**Melodinus micranthus** Hook.f.

Climber; leaves leathery, oblong-lanceolate, with 10-15 slender parallel nerves; flowers in axillary cymose panicles; corolla-tube slender, with bifid scales in the mouth. In the forest, Jalan Bray, *Mat 5999*.

**Nerium indicum** Mill.

Erect shrub; leaves leathery, narrowly lanceolate, 10-30 cm long, usually 3 in a whorl; flowers red, pink or white (often double), fragrant, 4-5.5 cm across. This is a native to South Asia, easily differentiated from the European Oleander (*N. oleander* L.) by its scented flowers. 夾竹桃。

**Ochrosia borbonica** Gmel. (= *Calpicarpum oppositifolium* Boireau)

Small tree with stout branches; leaves fleshy, 3-4 in a whorl, obovate, 10-25 cm long; flowers white, in short cymes; drupe ovoid, oblique. Serimbum, *Ridley s.n.* in 1894.

**Odontadenia macrantha** Markgr. (= *O. speciosa* Benth.)

A woody climber; leaves opposite, oblong, 10-25 cm long; flowers yellow or orange, many in terminal or upper axillary cymes; corolla salver-shaped, 6-10 across, the tube 3-4.5 cm long, 5-lobed. Native to tropical America.

**Parameria glandulifera** Benth.

Large climber; leaves opposite or 3 in a whorl, elliptic to obovate, 8-12 cm long; flowers white, bell-shaped, fragrant, very small (0.3 cm long), in terminal corymbose panicles, glabrous; follicles slender, 25-30 cm long. Locality unstated in Cantley's collection.

**Param. polyneura** Hook.f.

Like the above, but flowers pink, and, follicles much longer, 50-60 cm. Garden's Jungle, Changi. No specimens available.

**Parsonia helicandra** Hook. & Arn. (= *P. spiralis* Wall.)

Slender twiner, glabrous; leaves membranaceous, ovate-oblong, 7-15 cm long; flowers pinkish yellow, with a pink eye, very small. Follicles cylindric, linear-lanceolate, 8-15 cm long. Climbing up bushes, usually near the sea. Seletar, Tuas, Pulau Brani, Tempinis (*Ridley s.n.* in 1891).

**Plumeria acuminata** Ait.f. (= *P. acutifolia* Poir.)

A broad-crowned tree; branches thick, succulent; leaves oblong, pointed, 20-40 cm long, alternate and spiral, congested at branch ends; flowers funnel-shaped,



4-5 cm across, waxy, white with a yellow centre. The Frangipani is a native of tropical America. 雞蛋花。

*Plum. alba* L.

Like the above, but the leaf-tips blunt, and the white flowers much longer (the spread corolla 8-15 cm across). Other species and hybrids are also planted, one of them, *P. rubra* or the Red Frangipani with leaves having a pointed tip and flowers pink to red, also from tropical America.

***Strophanthus brevipaudatus* Wight (= ? *S. singaporianus* Gilg)**

Erect shrub; leaves opposite, membranaceous, oblong-elliptic, 5-10 cm long; flowers small, purple, corolla-lobes not tailed; terminal cymes much branched; follicles cylindric, to 20 cm long. In damp, open places; Holland Road, Jurong, Balestier Plain (*Ridley* 9149), probably extinct.

***Stroph. dichotomus* DC. (= ? *S. caudatus* Kurz)**

Stout shrub with long, slender trailing shoots; leaves obovate-oblong, 7-12 cm long; flowers white, corolla-lobes ovate, with long, slender tails, 7-10 cm long, purple; the follicles cylindric, twinned, stout, divaricate, each 20 cm long and 5 cm across. In open places and edge of forests; Changi (*Ridley* s.n. in 1890) Seletar. Vern. *Sembrong*, *Seram*.

***Tabernaemontana corymbosa* Roxb. (= *Ervatamia corymbosa* K. & G.)**

Shrub or small tree; leaves leathery, elliptic, 15-40 cm long; petiole-base enlarged, clasping stem; corymbs in upper axils, much branched; follicles often twinned, ovoid, curved, beaked, 3.5-4 cm long. Mandai Road, *Corner* 30668.

***Tabern. divaricata* Roxb. (= *T. coronaria* Willd., *Ervatamia divaricata* Burke)**

Cultivated shrub, less than 60 cm tall; corolla white, often in double form; flowers 2-3 in a cyme. Probably native to N. India. 狗牙花。

***Tabern. malaccensis* Hook.f. (= *Ervatamia malaccensis* K. & G.)**

Slender shrub; leaves membranaceous, lanceolate, 4-10 cm long; cymes terminal and axillary; corolla white with a yellow throat; follicles oblong, falcate, beaked, orange, 2.5-3 cm long. Gardens' Jungle (*Hullet* 521), Changi.

***Thevetia peruviana* K. Schum. (= *T. neriifolia* Juss.)**

Much branched shrub; leaves leathery, alternate and spirally arranged, narrowly lanceolate, 8-14 cm long; flowers, many together in cymes, 1-2 blossoming at a time; corolla bright yellow, 6-7 cm long; drupe compressed-globose, 4-5.5 cm across. Native of Central America. Yellow oleander. 黄花夹竹桃。

***Urceola brachysepalae* Hook.f.**

Large climber; leaves papery, elliptic, 10-14 cm long; panicles terminal and axillary; flowers white, small, corolla globose, short; follicles cylindric, slender, 15-18 cm long. Jurong, Bukit Timah (*Ridley* 8397), Bukit Mandai.

***Urc. lucida* Benth.**

Stout liana; leaves papery, elliptic, 7-12 cm long; follicles dagger-shaped below, recurved. Jurong, Changi, P. Ubin (*Ridley* s.n. in 1894).



**Urc. maingayi** Hook.f.

Large climber; leaves leathery, elliptic, 6-8 cm long; follicles terete, 15 cm long, the tip hooked. In the forest, Kranji, *Goodenough* 2717.

**Urc. malaccensis** Hook.f.

Climbing shrub; leaves leathery, ovate, 5-12 cm long; follicles terete, recurved, 20 cm long. Gardens' Jungle, Changi (*Hullet* 398), Bukit Timah, Bedok.

**Urc. torulosa** Hook.f.

Climber; leaves leathery, oblong-lanceolate, 10-17 cm long; follicles very slender, constricted at intervals. Gardens' Jungle, Tempinis (*Ridley* 3602a), Seletar, Nee Soon.

**Willughbeia apiculata** Miq. (= *W. flavescens* Dyer)

Differs from *W. coriacea* in the flowers being in slender-peduncled, lax cymes and in the smaller, spherical fruit (2-5 cm across). Chua Chu Kang (*Ridley* 6143), Changi.

**Will. coriacea** Wall. (= *W. firma* Bl.)

Large woody climber with tendrils (modified peduncles); leaves leathery, opposite, distichous, oblong-elliptic, 8-14 cm long; cymes sessile, axillary; flowers white; berry pear-shaped, orange to dull red, to 10 cm across. In the forest, common; Bukit Timah, Gardens' Jungle, P. Ubin, Tanjong Gul (*Ridley* 3594a).

**Will. tenuiflora** Dyer

Like *W. coriacea*, but leaves thin, leathery, oblong, 10-12 cm long; fruit larger, to 14 cm across. In the forest; Bukit Timah, Catchment Reserve forest (*Corner* s.n. in 1937).

**Wrightia religiosa** (T. & B.) Hook.f.

Shrub, less than 1 m tall, with many short and slender branchlets; leaves opposite, oblong-lanceolate, 2-5 cm long; flowers in terminal cymes; corolla white, salver-shaped, less than 0.5 cm long and 2 cm across. native to Thailand, a popular bush planted for training as bonsai or miniature plant. 水梅。

**123. Asclepiadaceae**

Synoptic key to the genera

- 1. Erect herbs, shrubs or small trees
  - 2. Erect herbs ..... *Stapelia, Asclepias*
  - 2. Shrubs or small trees ..... *Calotropis*
- 1. Climbers
  - 2. Corolla-tube very short or almost none, or corolla wheel-shaped .... *Cynanchum, Finlaysonia, Genianthus, Hoya, Sarcolobus, Tylophora*
  - 2. Corolla with a distinct tube
    - 3. Corolla urn-shaped ..... *Dischidia*
    - 3. Corolla bell-shaped ..... *Physostelma, Telosma*
    - 3. Corolla salver-shaped or funnel-shaped ..... *Ceropegia, Stephanotis, Toxocarpus*



*Asclepias curassavica* L.

Perennial herb, 50-60 cm tall; leaves opposite, narrowly oblong, both ends pointed, 5-12 cm long; flowers umbellate; corolla red; corona orange, protruding; fruit a pair of follicles, erect; seeds with a tuft of silky hairs. The milkweed is a native to tropical America, occasionally planted as an ornamental. 蓮生桂子花。

*Calotropis gigantea* (Willd.) Dryand ex Ait.f.

Bushy shrub or sometimes a small tree, to 5 m tall; young parts woolly-greyish; leaves elliptic, 10-35 cm long, fleshy; flowers in umbellate clusters; corolla white to pale lilac, 2.5-3.5 cm across; corona prominent. Native to India and the Malay Islands.

*Ceropegia woodii* Schlecht.

Slender tuberous vine; leaves heart-shaped, mottled with dark green; flowers 2-3 together, pinkish; corolla tube 1.5-2 cm long, with swollen base. Native to S. Africa, occasionally planted in hanging baskets.

*Cynanchium ovalifolium* Wight

A slender twiner; leaves thin, oval or oblong, 6-10 (-15) cm long, tip pointed; flowers 5-15 in a bundle; corolla 5-6 mm across, yellowish, tipped red; follicles narrow oval, 8-10 cm long, pointed. Cluny Road, Balestier Plain, Bukit Timah Road, Holland Road (*Ridley 11456*).

*Dischidia albiflora* Griff. (= *D. collyris* Wall.)

Slender creeper, epiphytic; leaves rounded or kidney-shaped, buff-yellow above, purple beneath, lying flat on the trees; flowers white. Ants often nesting between the leaves of the epiphyte and the branches of the host tree. Tanglin, Chua Chu Kang (*Ridley 2928*), Bukit Timah, Kranji.

*Disch. bengalensis* Colebr.

Large creeping epiphyte; stem glaucous green, long and nearly leafless, or with a few narrow oblong leaves, 2-3 cm long; flowers creamy white. In the forest near the sea; Bajau, Kranji, *Ridley 2729*.

*Disch. cochleata* Bl. (= *D. coccinea* Griff.)

Stem slender; leaves fleshy, rounded (1.5-2 cm across), crowded together, the edges pressed close to the bark of the host tree, harbouring ants and roots; flowers scarlet, tipped blue. Usually on lofty trees; Bukit Timah, (*Ridley s.n.* in 1896), Seletar, Chua Chu Kang.

*Disch. hirsuta* Decne

Stem slender; leaves small (1-2.5 cm long), purple green, hairy; flowers red. In the forest; Seletar, Chua Chu Kang (*Goodenough s.n.* in 1889), Kranji.

*Disch. major* Merr. (= *D. rafflesiana* Wall.)

Epiphytic twiner; leaves opposite, of two forms: the smaller ones rounded (2-2.5 cm across), the pitcher leaves oblong, pouch-like (7-12 cm long), outside yellowish green, inside purple, with holes at the base for ants and aerial roots. Flowers golden yellow, in small umbels. Common on trees all over the Island especially near the sea. Berlayer (*I.H. Burkill 239*).



**Disch. nummularia** R. Br. (= *D. gaudichaudii* Decne)

Creeping epiphyte; stem very slender; leaves small (5-6 mm long), thick and fleshy; flowers pale yellow or white, 2-3 in leaf-axils. In open places often in masses closely covering the tree trunk and limbs and causing damages to the host trees, throughout the Island. Tyersall Road *Ridley* 5746.

**Disch. singaporensis** Ridl.

Leaves ovate, flat, 1.5-2.5 cm long. Collected only once at Changi by *Ridley* (*Ridley s.n.* in 1908, type).

**Finlaysonia obovata** Wall. (= *F. maritima* Backer)

Woody climber; leaves fleshy, green, broadly obovate, 5-10 cm long; flowers in branched axillary cymes; corolla 1 cm across, yellowish green, purplish in the centre; follicles pear-shaped, oblique, 3-4 ribbed, 8-10 cm long. In mangroves and on tidal river banks, Kranji, Geylang (*Ridley s.n.* in 1893).

**Genianthus maingayi** Hook.f.

Slender climber, with a purply pubescence; leaves leathery, oblanceolate to obovate, 6-9 cm long; flowers reddish white, very small (2-3 mm long), in long spikes. Bukit Timah, *Cantley s.n.* (not seen).

**Hoya coriacea** Bl.

Epiphytic climber; leaves thin, ovate-lanceolate, 12-15 cm long; flowers yellowish white, tipped purplish. Collected once at Tempinis (*D'Almeida s.n.* in 1893).

**Hoya coronaria** Bl.

Densely hirsute; stem stout; leaves coriaceous, elliptic, 8-10 cm long. Flowers waxy, 2-3.5 cm across, the largest of all the species; when opened, white, with a yellow tint, then becoming pink. Common near the sea, Serangoon, Changi, Kranji, P. Tekong, Ulu Berih (*I.H. Burkill* 4336).

**Hoya diversifolia** Bl.

Leaves fleshy, elliptic-obovate with narrowed base, 10-13 cm long; umbels 1-20 flowers; flowers pink. Often densely covering trees; Jurong, Chua Chu Kang, Kranji, Serangoon (*Ridley* 2733).

**Hoya finlaysonii** Wight

Leaves coriaceous, ovate-oblong. Collected once from Singapore (*Wallich* 2724).

**Hoya lacunosa** Bl.

Creeping epiphyte; leaves thick-fleshy, lanceolate to ovate, 2-4 cm long; corolla white. On trees; Tanglin, Seletar, Bukit Mandai, Chua Chu Kang, Bukit Timah (*Ridley s.n.* in 1892).

**Hoya latifolia** G. Don

Stem deep red young; leaves fleshy, ovate with a heart-shaped base, up to 25 cm long; flowers small, pink. On trees in dense jungles; Kranji, Seletar, Ponggol, Changi, P. Tekong, Changi (*I.H. Burkill* 10013).



**Hoya obtusifolia** Wight

Stout climber; leaves oblong thick, 12-15 cm long; umbels 1-20 flowers; flowers yellow, with a pinkish centre. Serangoon (*Ridley* 8932), Changi, Bukit Timah.

**Hoya parasitica** Wall (= *H. ridleyi* K. & G.)

Leaves fleshy, elliptic with cuneate bases, 8-10 cm long; umbels 1-40 flowered; flowers pink or white. Often near the sea, Changi, Chua Chu Kang, Tuas, Kranji, Pulau Tekong (*Ridley* 1796).

**Physostelma wallichii** Wight

Slender climber; leaves oblong to elliptic, abruptly pointed, 5-12 cm long; flowers large, in axillary bundles; corolla bell-shaped, 2-2.5 cm across, thin, cream-white, with a purple centre; fruits long and narrowly cylindric, 15-20 cm long. Tempinis River (*Ridley* s.n. in 1894), Kranji, Tuas.

**Sarcolobus globosus** Wall.

Small twiner; leaves fleshy, oblong, pointed, 7-10 cm long; flowers small in umbels, light purple with brown streaks; follicles nearly globose, ridged on one side, greyish brown; seeds not plumed. On edges of mangroves and river banks. Changi, Seletar, Serangoon (*Ridley* 11640). Pulau Ayer Chawan.

**Stapelia nobilis** N.E. Br.

Small leafless herb; stem cactus-like, succulent, bluntly 4-angled, 5-20 cm long, with soft spines; flowers star-shaped, dark purple, 3-5 cm across, hairy. Native to Africa, sometimes planted.

**Stephanotis floribunda** Brongn.

Climber; leaves oval, leathery, shiny, 5-10 cm long; flowers in axillary clusters, tubular, waxy, white, 2.5-5 cm long, fragrant. Native to Malagasy (Madagascar).

**Steph. maingayi** Hook.f.

Climber; flowers white, bigger than the above species. Once collected at Changi (*Hullett* 147).

**Telosma cordatum** Merr. (= *Pergularia minor* Andr.)

Slender vine; branches downy; leaves cordate, 4-11 cm long, pubescent below; flowers yellowish green, bell-shaped, about 1 cm long, in axillary clusters. Probably a native to E. Asia, occasionally cultivated. 夜來香。

**Toxocarpus griffithii** Decne

Slender twiner; leaves papery, elliptic-oblong, 5-10 cm long; flowers in small clusters; corolla-lobes pinkish-crimson outside, yellow inside; follicles cylindric, 25-30 cm long. Jurong, *Corner* s.n. in 1933.

**Tylophora asthmatica** W. & A.

Slender twiner; leaves oblong or ovate-lanceolate, 4-10 cm long; flowers small in compound umbels, yellow or pink; follicles narrowly lanceolate, 8-10 cm long. In sandy places by the river or sea; Changi, *Ridley* s.n. in 1891.



**Tyl. squarrosa** Ridl.

Slender twiner; leaves ovate, 5-8 cm long; flowers in racemes. Tanah Merah (Ridley 2737). Probably synonymous with *T. wallichii*.

**Tyl. tenuis** Bl.

Slender climber; leaves small, lanceolate, tip pointed, 2-6 cm long; flowers small, purple, in axillary, spreading inflorescence. In open places or on banks of tidal rivers; Alexandra Road. (Ridley 5746), Sentosa, Tanjong Rhu.

**124. Oleaceae****Key to the genera**

- 1. Scrambling, scandent or climbing shrubs ..... *Jasminum*
- 1. Erect shrubs or trees
  - 2. Flowers 4-merous
    - 3. Trees; corolla-lobes nearly free to the base ..... *Linociera*
    - 3. Shrubs; corolla-lobes connate below ..... *Olea*
  - 2. Flowers 5-merous; cultivated shrubs ..... *Nyctanthes*

**Jasminum bifarium** Wall.

Scrambling or climbing shrub; leaves simple, opposite, ovate-lanceolate, 4-8 cm long; flowers 3-5 in axillary clusters higher up; calyx 5-7 lobed; corolla-tube 1.5-2.5 cm long, 5-7 lobed, the pointed; drupe black. In open country and hedges; Tanglin, Balestier Plain, Mandai Road (Sinclair SF 40007), Changi, Vern. *Melor Hutan*.

**Jasm. griffithii** Clarke

Scandent or climbing shrub; hairy; leaves ovate or elliptic, 10-15 cm long; cymes densely hairy; corolla-tube 1.5-2 cm long, drupe white. In forests, Gardens' Jungle, Chua Chu Kang (Goodenough s.n. in 1893).

**Jasm. longipetalum** K. & G.

Slender climber; leaves elliptic to lanceolate, 5-15 cm long, 3-nerved from the base; flowers in short cymes; corolla-tube 2 cm long, 9-lobed, the lobes linear-oblong, acute, 2-2.5 cm long; fruit glabrous, black. In forests, Mandai, Ridley 10937.

**Jasm. rex** Dunn

Climbing shrub, glabrous; leaves simple, 3-5 nerved at the base; flowers white, often tinted violet, odourless; corolla-tube 2.5-3 cm long, 5-11 lobes, the lobes oblong-obovate. The Royal Jasmine is native to Thailand, often cultivated.

**Jasm. sambac** Ait.

Scandent or climbing shrub; leaves oval or rounded, 2.5-5 cm long; flowers white, often violet outside, fragrant; corolla-tube 0.7-1.5 cm long, 8- or more lobed, the lobes oblong to oval, blunt, or often the corolla double. Native to India, often planted in gardens. 茉莉花。



**Linociera ramiflora** (Roxb.) Wall (= *L. pauciflora* Clarke)

Small tree; leaves coriaceous, elliptic oblong, 10-20 cm long; flowers in panicles; petals oblong. In wet forests, Jurong, Bukit Timah, Bukit Mandai (Goodenough 5079), Seletar.

**Nyctanthes arbor-tristis** L.

Shrub, much-branched, the branches 4-angled, hairy; leaves ovate, 4-11 cm long, flowers 3-7 in an axillary head; corolla-tube orange, 1-2 cm long, the lobes white; capsule dark brown, 2-seeded. Night blooming, strongly fragrant; native to India, one of the sacred plants of that country; occasionally cultivated. (The genus *Nyctanthes* is sometimes classified under Verbenaceae). Vern. *Seri Gading*.

**Olea brachiata** Merr. (= *O. maritima* Wall.)

Much-branched shrub; young parts pubescent; leaves leathery, elliptic or ovate-lanceolate, 7-10 cm long; flowers in cymose panicles; corolla globose or campanulate, yellow, very small; drupe pear-shaped, 7-8 mm long, black. In open places near the sea, Changi (Sinclair SF 40017), P. Ubin.

**ADDENDA, CORRIGENDA ET EMENDANDA****A) MALPIGHIACEAE**

Through an oversight the family Malpighiaceae was left out in the previous treatment. The following is to be read after 85. Erythroxylaceae and before 86. Oxalidaceae on page 341, in *Gdns' Bull. Sing.* 33(1980).

**85 A. Malpighiaceae**

## Key to the genera

1. Erect shrubs; fruit smooth, neither winged nor horned
  2. Leaves membranous, entire, with 2 glands at the base ..... *Galphimia*
  2. Leaves leathery, usually with spiny teeth, glandless ..... *Malpighia*
1. Scandent or twining shrubs; fruits winged or horned
  3. Petals yellow
    4. Flowers in racemes; petals  $\pm$  equal, keeled ..... *Tristellateia*
    4. Flowers in umbellate clusters; petals unequal, not keeled ..... *Stigmaphyllon*
  3. Petals white or pink
    5. The central mericarp surrounded by a large oblong wing, and the 2 lateral by smaller and narrow wings ..... *Hiptage*
    5. Mericarps surrounded by broad, oblong to orbicular wings ..... *Aspidoptreys*

**Aspidoptreys concava** (Wall.) Juss.

Liana to 20 m tall; young parts dark-red hairy; leaves ovate-elliptic, opposite; panicles axillary, flowers white, ovary glabrous, with 3 winged sides; samara of 3 membranous, ovate to orbicular, winged mericarps. In forests, Bukit Mandai, Seletar, Chua Chu Kang, Bukit Timah (Ridley 3583a), Nee Soon.



***Galphimia glauca* Bartl.**

Shrub, to 2 m high; young parts reddish hairy, older twigs brown, glabrous; leaves oblong, 2.5-5 cm long, with 2 small glands at the base of the blade; flowers yellow, in terminal racemes. Native to Central America, cultivated in gardens.

***Hiptage sericea* Hook.f.**

Climber; young twigs densely brown hairy; leaves oblong, 4-6 cm long; flowers pink and white, in axillary racemes; samara 3-winged, the central wing 3-4 cm long, and 2 lateral wings 1.5-2 cm long. In open places, Changi (*Ridley* 3989), Bukit Mandai.

***Malpighia coccigera* L.**

Small shrubs, 1-2 m high; leaves leathery, elliptic, 1-2 cm long, entire or with a few spiny teeth; flowers axillary, single or in pairs; petals pinkish, fringed, abruptly narrowed at the base. From the West Indies, planted as hedges or in pots as a miniature plant or bonsai.

***Stigmaphyllon ciliatum* (Lam.) Juss.**

A slender woody vine; leaves heart-shaped, 2.5-6 cm long, with hairy edge; flowers 3-7 in a cluster; petals yellow, wavy. Native from the West Indies to Brazil, occasionally planted.

***Tristellateia australasiae* A. Rich.**

Liana to 10 m tall; twigs purple, lenticellate; leaves oblong-ovate, 7-12 cm long; petioles with 2 small stipules at the base; racemes terminal; flowers bright yellow; samara of 3 mericarps, the lateral wings of the mericarp 4-10 lobed or horned, expanding in one plane, star-shaped. In mangroves, tidal swamps or in forests; often cultivated in gardens. Jurong, *Ridley* s.n. in 1894.

**B) VITACEAE (Gdns' Bull. Sing. 35: 86-88, 1982)**

Dr. Abdul Latiff Mohamed of Universiti Kebangsaan Malaysia, in a letter dated 19th January 1983, kindly informed that the following 8 species should be included in this family.

**1. *Pterisanthes cissoides* Bl.**

Nee Soon, *Enoch* s.n. in 1955.

**2. *Pter. eriopoda* (Miq.) Planch.**

Chua Chu Kang, *Ridley* 425.

**3. *Ampelocissus ascendiflora* Latiff**

Catchment Reserves, Bukit Timah (*Ridley* 5846).

**4. *Ampel. polystachya* (Wall.) Planch.**

Bukit Timah, *Sinclair* SF 39649.

**5. *Ampel. thrysiflora* (Bl.) Planch.**

Changi, *Ridley* s.n. in 1893.



6. **Tetrastigma lanceolarium** (Roxb.) Planch.  
Bukit Timah, *Ridley s.n.* in 1894.
7. **Tetr. curtisii** (Ridl.) Suesseng.  
Bukit Timah, *Ridley s.n.* in 1894.
8. **Cissus quadrangularis** L. (alt. names: *Vitis quadrangularis* Wall.)  
Native to Bengal, India; sometimes cultivated as a hedge plant, also used in local herbal medicine

Dr. Latiff also mentioned that he has elevated *Vitis macrostachya* Miq. or *Ampelocissus spicifera* Planch. to a generic status, namely *Nothocissus*, recently published in Mus. J. (N.S.), 27, 1983.





Keng, Hsuan. 1983. "Annotated List of Seed Plants of Singapore (VIII)." *The Gardens' bulletin, Singapore* 36, 103–124.

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