

Sepals united at the base into a short or long disk-bearing tube, the free part separating into 5 or fewer valvate or induplicate lobes. Petals 5. inserted at the summit of the tube, usually clawed, more or less unequal. Stamens 10, free, either all perfect or some reduced to small staminodia. Ovary stipitate, the stalk adnate to one side of the calyx-tube, with several ovules; style usually filiform, with a capitate, broad or oblique, terminal stigma. Pod linear or oblong, compressed, 2-valved. Seeds compressed; albumen usually thin; radicle short and straight.—Trees or woody climbers. Leaflets either 2 distinct from the base, or (in the majority of species not Australian) united into an entire or 2-lobed leaf, with 5 to 11 digitate nerves. Racemes terminal.

A large genus, distributed over the tropical regions of the New and the Old World. It has been divided into several genera, which I have in other works been disposed to adopt; but it may be more convenient to follow De Candolle and others in considering them as subgenera. The following Australian species, all endemic, with one or two nearly allied Asiatic ones, form a small group, with the 2 leaflets quite distinct, and in their flowers and fruit agreeing with *Phanera*, except that the 10 stamens are all perfect.

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| Calyx disk-bearing base very short, free part campanulate, deeply lobed. Outer petals 5 to 6 lines long. Pod 2 in. broad | 1. <i>B. Cunninghamii</i> . |
| Calyx disk-bearing base turbinate, free part as long, shortly lobed. Petals 6 or 7 lines long. Pod not 1½ in. broad | 2. <i>B. Curronii</i> . |
| Calyx disk-bearing base cylindrical, free part as long, divided to the base. Outer petals 1½ in. long. Pod 1 to 1¼ in. broad | 3. <i>B. Hookeri</i> . |

2. **B. Carronii**, *F. Muell. in Trans. Vict. Inst.* iii. 49. A tree, with the foliage and inflorescence of *B. Cunninghamii*, or with rather narrower leaflets, but undistinguishable without the flowers or fruit, both of which are narrower. Calyx slightly tomentose, about $\frac{1}{2}$ in. long, the disk-bearing base narrow-turbinate, the free portion about the same length, very shortly 5-lobed. Petals obovate, silky outside, the lower ones exceeding the calyx by about 5 lines, the others rather shorter. Stamens and pistil of *B. Cunninghamii*. Pod coriaceous, not quite $1\frac{1}{2}$ in. broad, the valves coriaceous, slightly convex when ripe.

Queensland. On the Burdekin, *F. Mueller*; in the interior, *Mitchell*.

N. S. Wales. Towards Cooper's Creek, *Howitt's Expedition*.

Sepals 5, shortly united at the base, much imbricated, the lowest one larger and concave. Petals 5, spreading, rather unequal, the upper inner one the smallest, the 2 lowest outer ones the largest. Stamens 10, free; anthers uniform, ovate. Ovary with 2 or more ovules; style subulate, with a small stigma. Pod flattened, obliquely ovate, oblong or broadly linear-falcate, without prickles, 2-valved. Seeds thick or flattened, with a very small hilum; albumen none; radicle short, straight.—Shrubs trees or woody climbers, often armed with scattered recurved prickles. Leaves abruptly bipinnate. Flowers yellow, in racemes, either single in the upper axils or forming terminal panicles. Filaments more or less hairy at the base.

A considerable genus, spread over the tropical regions of the New and the Old World. The Australian species are both of them common Asiatic ones.

Glabrous. Pinnæ 2 to 4 pairs. Leaflets 2 or 3 pairs, ovate, rather acute.

Pod ovate, 1-seeded 1. *C. nuga.*

Pubescent or tomentose. Pinnæ 6 to 8 pairs. Leaflets 8 to 12 pairs, oblong, very obtuse. Pod oblong, 6 to 8-seeded 2. *C. sepiaria.*

NIB

CAESALPINIACEAE
Caesalpinia bonduca

N 13

CAESALPINIACEAE
Caesalpinia crista

Sepals 5, somewhat unequal, much imbricate, the outer ones the smallest, scarcely connected at the base. Petals 5, spreading, nearly equal or the lower outer ones rather larger. Stamens usually 10, free, either all nearly equal and perfect or 2 or 3 lower ones larger or on longer filaments, and 3 or 4 upper ones reduced to small staminodia; anthers when perfect opening at the end in pores or in short lateral slits. Ovary with several ovules, incurved, tapering into a short style. Pod cylindrical or flat, indehiscent or 2-valved. Seeds oblong or obovate, transverse, with fleshy albumen; cotyledons flat or rarely folded, usually cordate; radicle short, straight.—Trees shrubs or herbs. Leaves abruptly pinnate, the leaflets opposite. Flowers yellow or very rarely reddish-purple or white, in axillary or terminal racemes or solitary. Bracts usually deciduous. Bracteoles none.

A large genus, widely distributed within the tropical and subtropical regions of both the New and the Old World, but particularly numerous in America. Of the 27 Australian species, 5 are widely spread over tropical Asia and Africa, 1 is American also found in Africa, the remaining 21 are all endemic. The genus is divided into several sections, founded chiefly upon the fruit; but as some are only represented in Australia by single species, and the perfect pod rarely accompanies the specimens, the chief divisions in the following synopsis are, for convenience, selected also from other characters.

A. *Flowers in pedunculate racemes or umbels, either axillary or forming a terminal panicle or compound raceme. (The Australian species all shrubs or trees.)*

- Stamens 7 perfect, of which 2 or 3 lower ones larger or on longer filaments; 3 small and imperfect staminodia.
- Lower stamens with long filaments and short ovate anthers, the other perfect ones with oblong-linear anthers. Pod very long and thick, with horizontal seeds (**Cathartocarpus**) 1. *C. Brewsteri*.
- Perfect anthers all oblong-linear, the lower ones longer.
- Racemes short, almost corymbose, axillary or in a narrow terminal panicle. Pod thick or turgid. Seeds mostly horizontal. (**Chamaefistula**.)
- Leaflets 3 or 4 pairs, with glands between those of each pair, but none on the petiole below 2. *C. laevigata*.
- Leaflets 4 to 10 pairs, with a gland at the base of the petiole, but none between the leaflets 3. *C. Sophera*.
- Racemes short, loose, on long peduncles, forming a large terminal panicle. Leaflets 10 to 20 pairs, pubescent. Pod very flat (**Chamaesenna**) 4. *C. laxiflora*.
- Racemes elongated, on long axillary peduncles. Bracts large, deciduous. Pod very flat. (**Chamaesenna**.)
- Glabrous. Leaflets 4 to 8 pairs, large, broad, very obtuse, reticulate. Stipules ovate. Bracts broad, obtuse 5. *C. magnifolia*.
- Pubescent. Leaflets 9 to 15 pairs, oblong or ovate, obtuse, mucronate. Stipules ovate-cordate, acuminate, rigid. Bracts broad, obtuse 6. *C. venusta*.
- Pubescent. Leaflets 9 to 15 pairs, ovate-lanceolate, acute, mucronate. Stipules narrow. Bracts acuminate 7. *C. notabilis*.
- Glabrous. Leaflets 4 or 5 pairs, oblong-linear. Stipules small, subulate. Bracts broad, obtuse 8. *C. pleurocarpa*.
- Stamens 10, all with oblong-linear perfect anthers, all equal or the lower ones rather longer. (**Psilorhagma**.)
- Glands between the leaflets (at least of the lowest pair), oblong, subulate or stipitate, very rarely wanting.
- Bracts acuminate.
- Glabrous or minutely pubescent. Leaflets 6 to 10 pairs, obovate. Bracts lanceolate, often rather broad 9. *C. suffruticosa*.
- Softly pubescent. Leaflets 4 to 6 pairs, obovate or cuneate, mostly emarginate. Bracts very narrow 10. *C. retusa*.
- Bracts small, broad, obtuse. Leaflets oblong-lanceolate or linear.
- Leaflets usually 6 to 10 pairs (Eastern species) 11. *C. australis*.
- Leaflets usually 3 to 5 pairs (Western species) 12. *C. Chatelainiana*.
- Glands between the leaflets sessile, flat, obscure or none (ovoid in *C. leptoclada*).
- Very glutinous, otherwise glabrous. Leaflets usually 4 or 5 pairs 13. *C. glutinosa*.
- Glabrous or glaucous. Stipules leafy, semicordate. Leaflets usually 3 to 5 pairs 14. *C. pruinosa*.
- Glabrous, glaucous, hoary, or white-tomentose. Stipules small-subulate or none. Flowers in very short corymbose racemes.
- Leaves all simple, phyllodineous. Glands none or on the upper edge about the middle.
- Leaves usually slender and green. Peduncles 1- or 2-flowered. Pod very much curved or annular 15. *C. vircinata*.
- Leaves usually thick, hoary or white, vertically compressed. Peduncles several-flowered. Pod straight or slightly curved 16. *C. phyllodinea*.
- Leaflets 1 or more pairs, rarely none in the lower leaves and then the phyllodineous petiole has a gland at the end.
- Leaflets mostly 1 or 2 pairs, terete or linear 17. *C. eremophila*.
- Leaflets mostly 3 to 6 pairs, linear-terete, channelled above 18. *C. artemisioides*.
- Leaflets mostly 3 to 6 pairs, linear-lanceolate, cuneate, elliptical or almost obovate 19. *C. Sturtii*.

24. **C. Absus**, *Linn.*; *Vog. Syn. Cass.* 50. A viscidly pubescent much-branched annual or biennial, rarely exceeding 1 ft. Leaflets 2 pairs, obliquely and broadly obovate, obtuse, $\frac{1}{2}$ to 1 in. long or rarely more; the common petiole rather long and slender; glands small between the leaflets of the lowest or of both pairs. Stipules narrow. Flowers small, in short terminal or at length lateral racemes. Bracts small, reflexed. Sepals narrow, obtuse, pubescent, about 3 lines long. Petals scarcely longer. Stamens usually 5. Style dilated at the end, with a rather broad fringed stigma. Pod 1 to $1\frac{1}{2}$ in. long and about $\frac{1}{4}$ in. broad. Seeds with very little albumen.—*F. Muell. Fragm.* iii. 50.

N. Australia. Upper Victoria river, *F. Mueller*; islands of the Gulf of Carpentaria, *R. Brown*.

Queensland. Bustard Bay, *Banks and Solander*; Port Denison, *Fitzalan*; Bowen river, *Bowman*.

The species is common in tropical Asia and Africa.

11. **C. australis**, Sims, *Bot. Mag. t.* 2676. A tall erect shrub, either quite glabrous or loosely pubescent, the young branches more or less angular. Leaflets usually 8 to 10 pairs, in some specimens reduced to 6 or 7, in others increased to 11 or 12 pairs, oblong lanceolate or almost linear, obtuse or acute, $\frac{1}{2}$ to $\frac{3}{4}$ or rarely 1 in. long, the margins usually recurved and sometimes revolute; glands slender or stipitate between the leaflets of most or only of the lower pairs, or rarely almost none. Stipules subulate, deciduous. Flowers 2 to 6 in a loose umbel on peduncles usually shorter than the leaves, but sometimes longer. Bracts small, broad, obtuse. Sepals very obtuse, 2 to 3 lines long. Petals broad, $\frac{1}{2}$ in. long or rather more. Anthers 2 or 3 often rather larger than the others. Pod shortly stipitate, glabrous, 3 to 4 in. long, 3 to 4 lines broad, straight or curved into a half-circle. Seeds shining black.—*Bot. Reg. t.* 1322; *C. umbellata*, Reichb. *Icon. Exot. t.* 206; *C. Schultesii*, Colla, *Hort. Ripul. App. ii.* 344, and *iii. t.* 10; *C. Barrenfieldii* (afterwards corrected to *C. Fieldii*), Colla, *Hort. Ripul. App. iv.* 23, *t.* 11; *C. coronilloides*, A. Cunn.; Benth. in *Mitch. Trop. Austr.* 384.

Queensland. Broad Sound, *R. Brown, A. Cunningham*; Burdekin river and Peak Downs, *F. Mueller*; Rockhampton, *Thozet*; Comet and Condamine rivers, *Leichhardt*.

N. S. Wales. Paramatta, *Woolfs*; Blue Mountains and Hunter's River, *R. Brown, A. Cunningham*, and others; New England, *C. Stuart*; Hastings, Macleay and Clarence rivers, *Beckler*; Boyd river, *Leichhardt*.

Victoria. Gipps' Land, *F. Mueller*.

Var. *revoluta*. Leaflets narrow-linear and acute, the margins much revolute, glabrous or pubescent.—*C. revoluta*, *F. Muell. in Trans. Vict. Inst.* 1852, 120; *C. aciphylla*, Benth. in *A. Gray, Bot. Amer. Expl. Exped. i.* 465. To this belong most of the southern and several of the N. S. Wales specimens from the interior.

Var. *pedunculata*. Peduncles much longer than the leaves.—*St. George's River, R. Brown*; Blue Mountains, *A. Cunningham*, and others.

Var. (?) *glaucescens*. Slender and glaucous. Leaflets few.

N. Australia. Hooker's Creek, *F. Mueller*.

N3B

CAESALPINIACEAE

Cassia cladophylla

NSB

CAESALPINIACEAE

Cassia costata

NSB

CASALPINIACEAE

Cassia desolata

NIP

CAESALPINIACEAE

Cassia Ferraria

N 10

CAESALPINIACEAE

Cassia glauca

13. **C. glutinosa**, DC. *Prod.* n. 495. An erect glabrous shrub, the specimens very glutinous and brittle. Leaflets usually 4 or 5 pairs, oblong-linear, rather obtuse, $\frac{1}{2}$ to 1 in. long or rather more, flat and rather thick; gland flat and broad between the leaflets of the lowest 1 or 2 pairs. Flowers umbellate on axillary peduncles usually shorter than the leaves. Sepals coloured, obtuse, 3 to $3\frac{1}{2}$ lines long. Petals twice as long. Anthers 2 or 3 lower ones upon rather longer filaments than the others. Pod straight, about 4 lines broad, as glutinous as the rest of the plant.—Vog. Syn. Cass. 47.

N. Australia. Attack Creek, *M'Douall Stuart's Expedition*. Described by De Candolle probably from specimens gathered on the N. coast in Baudin's Expedition, but I have not seen them.

NIB

CAESALPINIACEAE

Cassia hamersleyensis

N13

CAESALPINIACEAE

Cassia helmsii

NIB

CAESALPINIACEAE

Cassia leurossenii

5. **C. magnifolia**, *F. Muell. Fragm.* i. 166. Glabrous. Leaflets 4 to 8 pairs, broadly ovate, very obtuse and emarginate, broad and oblique at the base, 2 to 3 in. long, coriaceous and strongly veined on both sides, the common petiole $\frac{1}{2}$ to 1 ft. long; glands between the leaflets obscure or none. Stipules persistent, ovate, the margins recurved at the base. Peduncles attaining 1 ft. in length, rigid, bearing a raceme in the upper part. Flowers not seen. Fruiting pedicels 1 in. long. Pod very flat, 3 to 4 in. long, $\frac{1}{4}$ in. broad, glabrous, with thin valves. Seeds flat, on slender funicles; albumen scanty.

Queensland. Rocky granite ridges, Upper Gilbert river, *F. Mueller.*

27. **C. mimosoides**, *Linn.*; *Vog. Syn. Cass.* 68. An annual or perennial of short duration, with a hard almost woody base, and numerous diffuse or ascending wiry stems, of 1 to 2 ft. or rarely more, usually pubescent. Leaves $1\frac{1}{2}$ to 2 in. long; leaflets numerous (20 to 50 pairs), linear-falcate, mucronate, seldom above 2 lines long; gland depressed, below the lowest pair. Pedicels axillary, solitary or 2 or 3 together, unequal, but rarely above $\frac{1}{2}$ in. long. Sepals very acute, above 3 lines long. Petals 3 to 4 or rarely 5 lines long. Stamens 7 to 10; anthers all similar, but rather unequal in size. Style slightly dilated at the end with a truncate stigma. Pod $1\frac{1}{2}$ to 2 in. long, scarcely 2 lines broad, oblique or slightly curved.—*F. Muell. Fragm.* iii. 48.

N. Australia. Victoria river, *F. Mueller*; Port Essington, *Armstrong*; islands of the Gulf of Carpentaria, *R. Brown*.

Queensland. Broad Sound and Northumberland islands, *R. Brown*; common in the colony in moist pastures, *A. Cunningham*, *F. Mueller*, and others.

N. S. Wales. Clarence river, *Beckler*.

17. **C. eremophila** (by a clerical error **nemophila**), *A. Cunn. in Vog. Syn. Cass.* 47. An erect bushy shrub, glabrous or slightly hoary but never so white as some of the allied species. Leaflets 1 or 2 pairs, very narrow-linear, thick, terete and channelled above or slightly flattened out, sometimes very short, usually about 1 in. long, and often more, the petiole terete or vertically flattened; gland depressed between the lowest or the only pair; the lower leaves sometimes reduced to a flattened phyllodium with the gland at the end where the leaflets have aborted. Peduncles short, or rarely as long as the leaves, bearing a short almost corymbose raceme of several flowers on slender pedicels. Bracts very small. Sepals obtuse, rarely 2 lines long. Petals usually more than twice as long. Anthers 2 or 3 lower ones rather larger or on longer filaments than the others. Pod straight or slightly curved, 3 to 4 lines broad or rarely more.—R. Br. in *App. Start. Exp.* 14; *C. canaliculata*, R. Br. l. c.; *C. heteroloba*, Lindl. in *Mitch. Three Exped.* ii. 122.

Queensland. On the Maranoa, *Mitchell*; desert of the Suttor and Burdekin, *F. Mueller*.

N. S. Wales. Near Port Jackson, *Herb. F. Mueller*; New England, *C. Stuart*;

N10

CAESALPINIACEAE
Cassia neurophylla

7. **C. notabilis**, *F. Muell. Fragm.* iii. 28. Villous with long soft hairs. Leaflets 9 to 15 pairs, ovate-lanceolate or oval-oblong, acute or the lower ones obtuse and mucronate, sessile, very obliquely rounded or truncate at the base, 1 to $1\frac{1}{2}$ in. long; glands very small between the leaflets of most of the pairs. Stipules narrow and deciduous. Racemes on elongated peduncles in the upper axils. Bracts lanceolate, acuminate, very deciduous. Pedicels short. Sepals villous, about 3 lines long. Petals shortly exceeding the calyx. Perfect anthers 7 on very short filaments, of which 2 larger than the others; 3 small imperfect stamens. Ovary glabrous. Pod not seen.

N. Australia. Between Bonney river and Mount Morphett, *M'Douall Stuart's Expedition*, and probably the same species, leaves only, from Strangways River.

22. **C. oligoclada**, *F. Muell. Fragm.* iii. 49. A shrub of 1 to 3 ft., softly pubescent in all its parts. Leaflets 3 or 4 pairs, or in slender starved specimens only 1 or 2 pairs, elliptical-oblong, obtuse or almost acute, shortly mucronate, $\frac{3}{4}$ to 1 in. long; glands none. Stipules small, setaceous. Flowers 4 to 6, umbellate, on slender axillary peduncles, about as long as the leaves; pedicels almost filiform. Bracts minute, deciduous. Sepals obtuse, the largest about 2 lines long. Petals twice as long or the upper inner ones rather less. Anthers 3 a little larger than the others. Pod stipitate, falcate, pubescent, 1 to $1\frac{1}{2}$ in. long and about 4 lines broad. Seeds 4 to 6, on very short funicles.

N. Australia. Cambridge Gulf, N.W. coast, *A. Cunningham*; Upper Victoria river, *F. Mueller*; Gulf of Carpentaria, *R. Brown*.

Var. (?) *gracilis*. Very slender and quite glabrous. Leaflets 1 or 2 pairs. Flowers smaller.—Attack Creek, *M'Douall Stuart*.

The short broad falcate pod of this species reminds one at first sight of that of the *Sennas*.

21. **C. oligophylla**, *F. Muell. Fragm.* iii. 49. A tall shrub, glabrous or minutely pubescent. Leaflets 2 or rarely only 1 pair, broadly obovate, very obtuse, $\frac{3}{4}$ to 1 in. long, coriaceous; glands depressed and rather large between those of each pair. Flowers in short dense racemes, on axillary peduncles, rather more numerous than in the preceding species, with rather larger oblong or lanceolate bracts. Sepals obtuse, pubescent, about 3 lines long. Petals not twice as long. Anthers 2 or 3 lower ones rather longer than the others. Pod 2 to $2\frac{1}{2}$ in. long, nearly $\frac{3}{4}$ in. broad, very obtuse.

N. Australia. Sandy plains, Nichol Bay, *F. Gregory's Expedition*. From the few specimens gathered, this appears to be closely allied to *C. desolata*, differing chiefly in the pod twice as broad as in *C. artemisioides*; half as broad again as in *C. Sturtii*, and probably as in *C. desolata*; but better specimens are required to confirm the species.

NIB

CASIA PINIACEAE

Cassia planiticola

14. **C. pruinosa**, *F. Muell. Fragm.* iii. 48. A tall erect shrub, glabrous but often more or less glaucous. Leaflets 3 to 5 pairs, oblong-elliptical, rather obtuse, $\frac{1}{2}$ to $\frac{3}{4}$ in. long, rather thick and flat; gland small and flat, usually between the leaflets of the lowest 1 or 2 pairs. Stipules broad, leafy, semi-cordate. Flowers rather large, 2 to 5 together in umbels on axillary peduncles usually shorter than the leaves. Sepals coloured, obtuse, the inner ones fully 3 lines long. Petals twice as long. Anthers 3 or 4 rather longer than the others. Pod stipitate, straight, apparently about 4 lines broad, but not seen perfect.

N. Australia. N.W. coast, *Bynoe*; Rocky Hills, Nichol Bay, *F. Gregory's Expedition*.
N. S. Wales. Between Stokes Range and Cooper's Creek, *Wheeler*.

25. **C. pumila**, Lam.; Vog. Syn. Cass. 65. A diffuse, more or less pubescent perennial of short duration, with a hard almost woody base, the stems rarely exceeding 1 ft. Leaflets much fewer than in *C. mimosoides*, in the Australian specimens usually 8 to 12 pairs, linear-falcate, 2 to 3 lines long; gland stipitate on the petiole below the lowest pair. Pedicels axillary, solitary, shorter than the leaves, with minute bracteoles above the middle. Sepals rather obtuse, about 2 lines long. Petals scarcely exceeding the sepals. Stamens 5, nearly equal, obtuse. Style short, slightly thickened at the end, with a broadly peltate stigma. Pod narrow, 1 to 1½ in. long, oblique or slightly curved.

Queensland. Port Curtis, *M' Gillivray*; Bowen river, *Bowman*. Pedicels longer than in the Indian specimens, but the style and other essential characters are quite the same.

10. **C. retusa**, Soland.; *Vog. in Linnæa*, xv. 72. Shrubby and softly pubescent, especially the young parts. Leaflets 4 to 6 pairs, obovate to oblong-cuneate, very obtuse or emarginate, $\frac{1}{2}$ to above 1 in. long; glands slender or stipitate between those of the 1, 2 or 3 lowest pairs. Stipules linear, acuminate, deciduous. Flowers crowded in short almost umbellate racemes, on axillary peduncles shorter than the leaves. Bracts narrow, acuminate. Sepals broad, very obtuse. Petals not twice as long. Anthers all nearly equal. Pod stipitate, 2 to 4 in. long, 4 to 5 lines broad.

Queensland. Bustard Bay, *Banks and Solander*; Shoalwater Bay, Broad Sound and Thirsty Sound, *R. Brown*. The species is closely allied on the one hand to *C. suffruticosa*, on the other to some forms of *C. australis*.

3. **C. Sophera**, Linn.; *Vog. Syn. Cass.* 20, var. *schinifolia*. An erect shrub or undershrub of several feet, usually glabrous. Leaflets 4 to 10 pairs, lanceolate, mostly acute, 1 to 2 in. long, with an obovate or ovate acute gland on the petiole near the base. Racemes short and few-flowered, on short peduncles in the upper axils, and forming a narrow terminal almost raceme-like panicle. Sepals 3 to 4 lines long. Petals broad, obtuse. Perfect anthers 2 larger than the others, all on short filaments. Pod 2 to 4 in. long, at first flat but thick, when ripe terete or turgid, 2-valved. Seeds crowded and mostly or all horizontal.—*C. schinifolia*, A. DC. 7th Not. Pl. Rar. Hort. Gen. 35; *C. Barclayana*, Sweet, Fl. Austral. t. 32; *Vog. Syn. Cass.* 45; F. Muell. *Fragm.* iv. 17.

Queensland. Burdekin river, F. Mueller; near Fort Cooper, Thozet; Moreton Bay, Dallachy, C. Stuart; Ipswich, Nernst.

N. S. Wales. Hunter's River, R. Brown; New England, C. Stuart; Hastings river, Tozer.

Var. *pubescens*. Branches petioles and inflorescence more or less pubescent. Petiolar gland occasionally disappearing.—Broad Sound, R. Brown, Bowman; Ottery's Station, Leichhardt; Paramatta, Woolls.

The species, in its glabrous form, is common in E. India and the Archipelago and in tropical Africa. It is there often confounded with *C. occidentalis*, of which I had formerly considered it a variety, and under which it is included in Hooker and Thomson's Indian distributions. The latter species is, however, annual, with the few leaflets of *C. laevigata*, but with the petiolar gland of *C. Sophera*, and the pod remains flat, although thick when ripe.

19. **C. Sturtii**, *R. Br. in App. Sturt Exped.* 14. A bushy shrub, glabrous or more frequently glaucous hoary or white with a close tomentum. Leaflets usually 3 to 5 pairs, linear, lanceolate, cuneate, elliptical or almost obovate, $\frac{1}{2}$ to 1 in. long, thick, flat or concave, sometimes all small and almost ovate, the lower leaves rarely with only 2 pairs; glands small between the leaflets of the lowest 1 or 2 pairs. Stipules small and deciduous as in all the allied species. Flowers in short axillary dense racemes as in *C. eremophila*, but usually more numerous on a longer peduncle. Sepals obtuse, 2 to 3 lines long, frequently tomentose. Petals twice as long. Pod when perfect fully $\frac{1}{2}$ in. broad, straight or slightly curved and very obtuse.

Queensland, Bowen; Suttor river, *F. Mueller*.

N. S. Wales. Darling river to the Barrier Range and Cooper's Creek, *Victorian Exploring Expedition*, *Howitt's Expedition*, etc.

Victoria. Murray scrub and Wimmera, *Dallachy*.

S. Australia. Near Cudnaka, *F. Mueller*.

W. Australia, *Drummond*.

Var. (?) *coriacea*. Leaflets usually 4 or 5 pairs, small oblong or obovate, very obtuse, thick and green or glaucous.—S. coast, *R. Brown*; Mount Flinders, *A. Cunningham*; Darling and Murray desert and S. Australia.

Var. (?) *tomentosa*. Leaflets oblong or narrow-obovate, very white. Sepals much longer and tomentose.—Mount Murchison and Barrier Range. This may be a variety of *C. desolata*. The specimens of these forms, although numerous, are often fragmentary, and rarely have good fruit, or show at once the foliage of the barren and of the flowering branches.

NIB

CAESALPINIACEAE

Cassia timoriensis

6. **C. venusta**, *F. Muell. Fragm.*: i. 165. A tall shrub or small tree, the young parts softly silky-pubescent or villous, becoming at length nearly glabrous. Leaflets 10 to 15 pairs; or in smaller specimens 7 to 10 pairs, oblong or ovate-oblong, obtuse and finely mucronate, 1 to 2 in. long, very obliquely rounded at the base, rather coriaceous; glands very small between the leaflets of most pairs. Stipules ovate-cordate, acuminate, rigid and persistent, especially at the base of the peduncles, the margins usually revolute at the base. Peduncles in the upper axils $\frac{1}{2}$ to 1 ft. long, rigid, bearing in their upper portion a raceme of flowers on short pedicels. Bracts membranous, orbicular, imbricate before flowering, but soon falling off. Sepals 5 to nearly 6 lines long. Petals rather longer. Perfect anthers 7 on short filaments, 2 of them nearly twice as large as the others, 3 small imperfect stamens. Ovary villous. Pod very flat, about 3 in. long and $\frac{1}{2}$ in. broad. Seeds flat, rather distant.

N. Australia. Cambridge Gulf and Dampier's Archipelago, *A. Cunningham*; granite hills, Nichol Bay, and Hammersley Range, *F. Gregory's Expedition*; sandstone table-land, Arnhem's Land, *F. Mueller*; Atiak Creek, *M' Douall Stuart's Expedition*; raised also in the Melbourne garden from seeds gathered in *M' Kinlay's Expedition*.

85. **ERYTHROPHLEUM**, Afzel.

(*Fillæa*, *Guillen. and Perr.*; *Laboucheria*, *F. Muell.*)

Calyx-teeth 5, valvate in the bud. Petals 5, small, very slightly imbricate. Stamens 10, inserted with the petals on a perigynous disk, free, longer than the petals, all equal and perfect; anthers ovate, without glands. Ovary stipitate, with several ovules; style short, with a terminal stigma. Pod oblong, linear, flat, coriaceous, 2-valved. Seeds ovate, compressed, transverse; funicle filiform; testa pulpy outside; albumen thin; radicle short, straight. Trees. Leaves bipinnate. Flowers small, almost sessile in long cylindrical spikes, forming a terminal panicle. Bracts inconspicuous.

A small genus, containing, besides the Australian species, which is endemic, two or three from tropical Africa. In the slight imbrication of the petals it approaches *Casalpinia*, and especially *Mora*, and may be considered, with *Parkia*, as intermediate between that suborder and true *Mimoseæ*.

NIB

CAESALPINIACEAE

Lysiphyllum cunninghamii

Sepals 5, much imbricate, somewhat unequal, scarcely connected at the base. Petals 5, spreading, nearly equal. Stamens 3 perfect; filaments very short; anthers linear, the cells opening inwardly in longitudinal slits; 2 small staminodia, with acuminate imperfect anthers. Ovary nearly sessile, with several ovules; style large and petal-like, saccate immediately above the ovary, with 3 erect lobes, 2 short ones in front, the other much longer, concave, the midrib prominent inside and terminating at the top in a small stigma. Pod flat, oblong-linear, oblique, 2-valved. Seeds ovate-oblong, compressed; testa shining; funicle expanded into a fleshy appendage distinct from the seed; albumen copious; cotyledons flat.—Shrubs. Leaves simply pinnate. Flowers yellow, on axillary peduncles.

The genus is limited to a single species, endemic in Australia, very nearly allied to *Cassia* (sect. *Chamaecrista*) and to *Labichea*, but distinguished especially by the very singular style.

1. **P. labicheoides**, *R. Br. in App. Sturt Exped.* 17. An erect, bushy, nearly glabrous, somewhat glaucous shrub of several feet, the young shoots minutely silky. Leaflets from about 11 to above 30, mostly alternate along the rachis with an odd terminal one, narrow-oblong, mucronate, $\frac{1}{4}$ to $\frac{3}{4}$ in. long, narrowed at the base, but not oblique, thick, somewhat concave, the midrib only conspicuous underneath. Stipules narrow and very deciduous. Peduncles axillary, 1-flowered, with 2 small very deciduous bracteoles. Sepals acute, $\frac{1}{2}$ in. long, green and glabrous. Petals obovate, nearly $\frac{3}{4}$ in. long. Ovules 4 to 6. Style deep-yellow, like the petals, and not much shorter. Pod 1 to $1\frac{1}{2}$ in. long.

N. Australia. Dampier's Archipelago, *Bynoe*; Nichol Bay, *F. Gregory's Expedition*.

Queensland. Suttor Range, rare, *F. Mueller*.

N. S. Wales. Barrier Range, *Victorian Exploring Expedition*.

S. Australia. Akava river, *F. Mueller*; Mount Serle and towards Spencer's Gulf, *Warburton*.

Var. *cassioides*. Leaflets smaller, numerous, obovate or oblong, obtuse or retuse.—Sturt's Creek and Gulf of Carpentaria, *F. Mueller*.

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CAESALPINIACEAE

Petalostylis millefolium

NSD

CAESALPINIACEAE

Pilostigma malabaricum