

Eutaxia

Low woody shrub. Leaves simple, lacking stipules or stipels, opposite, each pair at right angles to the pair above and below. Flowers small, yellow and red. Stamens 10, the filaments free to the base. Style hairless. Seeds strophiolate. An endemic Australian genus.

Eutaxia microphylla

Mallee bush pea

Dense woody shrub to 0.8m tall, 1.5m wide. Young stems usually hairless. Petiole minute. Leaf blade 1-6mm long, c. 1mm wide, broadest at or above the mid-point, slightly tapering towards the base, the tip bluntly pointed, usually hairless, the lower surface green, the upper lighter, blue-green, flat or with the margins rolled upwards.

Flowers solitary or paired in upper leaf axils, each on a c. 1mm pedicel with a pair of relatively broad bracteoles towards the tip. Calyx hairless or almost hairless, 2-3mm long, the sepals joined for c. $\frac{3}{4}$ their length. Standard yellow, strongly marked on the back with red, especially along the veins, and finely marked on the front with red along the veins, c. 5mm tall, 6mm wide, slightly indented at the tip. Wings yellow, c. 6mm long from base of calyx, the same length as the red-tipped keel.

Pod 4-5mm long, c. 2.5mm wide, hairy, plump, on a short stalk above the calyx, 2-seeded.



Eutaxia microphylla, Inglewood, 28°24'S, 151°17'E.

Distribution: D.D. Also N.S.W., Vic., S.A., W.A., Tas. In Queensland only known from around Inglewood.

Notes: Of no grazing significance in Queensland owing to its rarity; sparingly browsed in N.S.W. Nodulates.

References: 3, 111, 287, 298.

Flemingia

Herbs or shrubs with 1 leaflet or digitate with three leaflets. Stipels minute or none. Leaflets with yellow or red glandular dots on the lower surface. Flowers pink to red, white or greenish, lacking bracteoles. Stamens 10, 9 filaments joined for most of their length, 1 free. Style hairless. Pods 2-seeded.

Key to species

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|---|------------------------|
| 1. Leaves with 1 leaflet; leafy and overlapping bracts support single flowers | <i>F. strobilifera</i> |
| Leaves with 3 leaflets | 2 |
| 2. Flowers supported by leafy bracts | <i>F. involucreta</i> |
| Flowers not supported by leafy bracts | 3 |
| 3. Flowers many, in lax-branched panicles | <i>F. lineata</i> |
| Flowers in short, usually dense racemes | 4 |
| 4. Leaflets up to 150mm long; shrub to c. 2m tall | <i>F. macrophylla</i> |
| Leaflets less than 100mm long; plants to 0.6m tall | 5 |
| 5. Flowers 1-3 in a short axillary raceme; plants rhizomatous (northern) | <i>F. pauciflora</i> |
| Flowers many, in dense inflorescences to 80 mm long; plants 1-several stemmed from a thick tap-root | 6 |
| 6. Floral bracts c. 2mm long (common, widespread) | <i>F. parviflora</i> |
| Floral bracts c. 7mm long (rare, northern) | <i>F. schultzei</i> |

Flemingia involucrata (figure 11)

Shrubby annual to 1.8m tall. Stems densely hairy and with sparse glands. Stipules clasping the stem, up to 20mm long, 5mm wide, deciduous. Leaves digitate, with three leaflets. Petiole 10-35mm long, stipels 2-3mm long or lacking. Leaflets 35-100mm long, 5-57mm wide, broadest at or above the mid-point, the margins curving to the narrowly angled base and rounded tip which is often extended into a short point, minutely hairy on both surfaces and dotted with glands on the lower surface.

Flowers in terminal and axillary heads about 25mm long, 40mm broad, the flowers surrounded by 10-15mm long, stipule-like bracts. Calyx 15-20mm long, densely covered with long hairs, the teeth long and narrow. Corolla purple, pale blue or yellow, the standard c. 10mm wide, hairy on the back. Wings gland-dotted.

Pod oval, c. 7mm long, 3.5mm wide, hairy. Seeds oval, c. 4.5mm long, black.

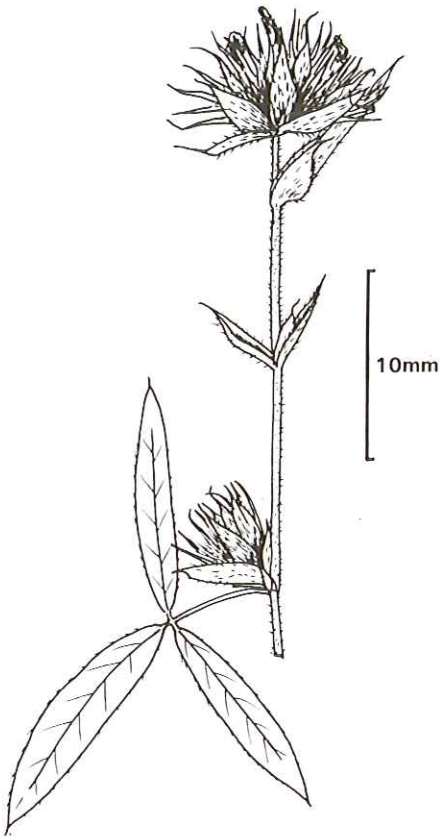


Figure 11. *Flemingia involucrata*.

Distribution: Co., N.K., S.K. Also N.T., W.A., southern Asia, South-East Asia, Indonesia, P.N.G.

Notes: Of no grazing significance.

References: 17, 306; as *Moghania involucrata*, 16, 227.

Flemingia lineata

Erect open shrub to 1m or more tall. Stems covered with adpressed hairs. Stipules joined to each other at the base, 2-3mm long, eventually deciduous. Leaves digitate, with three leaflets. Petiole 3-10mm long. Stipels lacking. Leaflets 20-100mm long, 6-45mm wide, broadest about the mid-point, the margins curving to the angled tip and base, hairy only along the mid-vein on the upper surface, on the undersurface slightly hairy along the veins and densely but minutely gland-dotted.



Flemingia lineata, Coen-Moreton, 12°35'S, 142°41'E.

Inflorescence a lax-branched terminal or axillary panicle to c. 100mm long. Flowers borne singly within the axils of c. 1mm bracts, each on a 1-2mm pedicel. Calyx c. 5mm long, glandular, hairy, the sepals joined for less than ½ their length. Standard 5-6mm long, pale green on the back, white marked with purple on the front. Wings pink to purple, c. 4mm long from base of calyx, shorter than the purple keel.

Pod 8-13mm long, 5-7mm wide, compressed, hairy, gland-dotted, light brown when ripe.

Distribution: Bk., Co., N.K., P.C., S.K., W.B. Also N.T., W.A., southern Asia, South-East Asia, Indonesia to the Philippines and P.N.G.

Notes: An unpalatable species. Of no grazing significance. Nodulates.

References: 3, 17, 287, 306, 309; as *Moghania lineata*, 16, 91, 132, 227.

Flemingia macrophylla

Erect shrubby plant to c. 2m tall. Stems covered with adpressed hairs. Stipules 10-15mm long, free, very deciduous. Leaves digitate, with three leaflets. Petiole 20-100mm long. Leaflets 80-150mm long, 40-70mm wide, broadest about the mid-point, the margins curving to the broadly angled or rounded base, the tip extended into a short point, hairy on the veins on the undersurface.

Inflorescence a dense axillary spike-like raceme 25-70mm long including the short peduncle. Flowers borne within axils of 8-20mm bracts, each on a 2-3mm pedicel. Calyx 7-13mm long. Standard 6-11mm tall, white to pink or yellowish, red-veined. Wings much shorter than the keel.

Pod 12-15mm long, c. 7mm wide, minutely hairy, gland-dotted. Seeds black, c. 3mm wide.

Distribution: Mo., W.B. Native to southern Asia, South-East Asia and Indonesia, introduced to P.N.G., tropical Africa and Australia.

Notes: An unpalatable species of no agricultural significance in Queensland, but in P.N.G. used to provide shelter for tea.

References: 2, 287, 306; as *Moghania macrophylla*, 16, 227.

Flemingia parviflora

Prostrate or ascending perennial herb usually less than 0.3m tall. Stems arising from a thick taproot, densely covered with short hairs. Stipules up to 13mm long, slightly spreading, deciduous.



Flemingia parviflora, Samford, 27°22'S, 152°53'E, Cult.

Leaves digitate, with three leaflets. Petiole 10-70mm long, minutely hairy. Stipels lacking. Leaflets thick, 10-100mm long, 6-40mm wide, broadest about the mid-point, the margins curving to the angled or rounded base and the pointed mucronate tip, minutely hairy on both surfaces and with scattered glands on the lower surface, often deeply furrowed along the veins on the upper surface.

Inflorescence a dense spike-like axillary raceme 15-40mm long, the peduncle up to 20mm long. Flowers borne singly within the axils of c. 2mm deciduous bracts, each on a c. 2mm pedicel. Calyx c. 7mm long, densely hairy, gland-dotted, the sepals joined for less than ½ their length, the lower tooth longer than the other four, exceeding the wings. Standard red, pink or greenish, c. 3mm tall, 4mm wide. Wings c. 6mm long from base of calyx, pink or greenish, the same length as the keel.

Pod 10-12mm long, c. 5mm wide, round in section, minutely hairy, gland-dotted, brown when ripe. Seeds round, plump, c. 4mm in diameter.

Distribution: Bk., Bur., Co., Mo., N.K., P.C., W.B. Also N.T., P.N.G. A common species in eucalypt woodland on sandy soils.

Notes: Not a very productive species and unpalatable to stock. Self-pollinating.

References: 17, 38, 154, 287, 306; as *Moghania parviflora*, 98, 132.

Flemingia pauciflora

Bushy, rhizomatous, herbaceous perennial to c. 0.6m tall. Stems densely covered with short white hairs. Stipules narrow, 3-5mm long, adpressed and later spreading, eventually deciduous. Leaves



Flemingia pauciflora, Burketown, 18°26'S, 139°17'E.

digitate, with three leaflets. Petioles 10-25mm long, densely hairy. Stipules lacking. Leaflets very thick, silver-grey, 20-40mm long, 10-20mm wide, broadest at or above the mid-point, usually tapering to the base, rounded or slightly pointed at the tip, the margins rather wavy, densely covered with soft hairs on both surfaces, prominently ridged on the undersurface and furrowed on the upper surface along the veins.

Flowers axillary, single or in 2-3 flowered racemes, borne singly on c. 5mm pedicels within the axils of c. 1mm deciduous bracts. Calyx 5-7mm long, densely covered with short hairs, the sepals similarly joined for $\frac{1}{3}$ their length, the teeth long and finely pointed. Standard dark pink, c. 5mm tall, 6mm wide. Wings c. 7mm long from base of calyx, dark pink, 1mm shorter than the red-tipped keel.

Pod 8-10mm long, c. 5mm wide, round in section, brown when ripe.

Distribution: Bk. Also N.T., W.A. A locally abundant species in grasslands on heavy clay soils near the Gulf of Carpentaria.

Notes: Apparently grazed but unlikely to be very palatable. Probably cross-pollinating but sets seed when flowers are tripped.

References: 17; as *Moghania pauciflora*, 132.

Flemingia schultzei

Shrubby perennial herb to 1m tall with a thickened woody vertical rootstock. Stems at first hairy, at length almost hairless. Stipules c. 5mm long, deciduous. Leaves digitate, with three leaflets, the petioles 10-50mm long. Leaflets greyish green, up to 80mm long, 45mm wide, broadest at or above the mid-point, more or less pointed or rounded at the tip, with soft adpressed hairs on the upper surface or almost hairless, the lower surface clearly wrinkled and sparsely hairy.

Inflorescence an axillary 50-80mm raceme. Flowers greenish yellow, borne on slender 6-8mm pedicels within the axils of prominent strongly overlapping narrow c. 7mm bracts which are eventually deciduous. Calyx hairy, 6-8mm long, the sepals joined for less than half their length, the lower tooth incurved and conspicuously longer than the others. Standard exceeding the calyx. Keel greatly incurved.

Pod c. 10mm long, 6mm wide, shortly hairy, plump.

Distribution: Co. Also N.T.

Notes: A rare species from Cape York. Tolerant of fire.

References: 211; as *F. racemosa*, 119.

Flemingia strobilifera

Shrub up to 3m tall. Upper stems slender, densely covered with adpressed hairs. Stipules 5-13mm long, narrow and pointed, very deciduous. Leaves with a single leaflet. Petiole 2-25mm long. Stipules lacking. Leaflet 30-200mm long, 15-120mm wide, broadest below the mid-point, the margins curving to the broadly rounded and indented base and tip which is extended into a short, broad point, almost hairless and gland-dotted on the upper surface, hairy and densely gland-dotted on the prominently veined lower surface.

Inflorescences axillary, up to 150mm long, these combining to give an extensive terminal panicle, each flower supported by a broad 12-35mm green to pale pink bract. Calyx hairless, c. 7mm long, the sepals joined for less than $\frac{1}{2}$ their length, the teeth narrow and pointed, the lower tooth longer than the other four. Standard 6-7mm tall, c. 10mm wide, cream-coloured, the veins pink towards the base. Wings c. 7mm long from base of calyx, about 2mm shorter than the greenish keel.

Pod oval, 7-13mm long, 6-7mm wide, round in section, minutely hairy, dark brown when ripe. Seeds 2.5-4mm long and wide, almost circular, plump, grey flecked with black.

Distribution: S.K. Also South-East Asia, Indonesia and P.N.G.

Notes: Of no agricultural significance but grown as an ornamental and for decoration in P.N.G. Nodulates.

References: 3, 16, 306; as *Moghania strobilifera*, 227.



Flemingia strobilifera, P.N.G., Cult.