

wide, indented at the tip. Wings and keel c. 6mm long from base of calyx.

Pod c. 20mm long, 6mm wide, rather inflated, covered with short spreading hairs.

Distribution: Co. Also N.T.

Notes: Of no grazing significance.

References: 17, 132.

Isotropis wheeleri

Wheeler's lamb-poison

Low-growing perennial shrub, with many erect stems to c. 0.6m tall. Stems densely covered with soft, minute, often rust-coloured hairs. Stipules minute. Leaves simple, not articulate on petiole. Petiole 0-3mm long. Leaf lamina 10-30mm long, c. 1mm wide, folded inwards, the point bent downwards, the margins almost parallel, densely covered with short hairs.

Inflorescence a few-flowered terminal raceme

30-100mm long, including the peduncle. Flowers borne singly within the axils of c. 1mm persistent bracts, each on a 4-8mm pedicel which bears a pair of bracteoles in the upper half. Calyx 5-7mm long, densely but minutely hairy, the two dorsal sepals joined almost to the tip, the sepals otherwise joined for a little under $\frac{1}{2}$ their length. Corolla brownish red to dark purple, yellowish towards the base of the petals, the standard c. 6mm tall, 8mm wide, indented at the tip, the wings and keel c. 8mm long from base of calyx.

Pod 8-18mm long, c. 6mm wide, very inflated, densely covered with short spreading silky hairs, grey when ripe, containing c. 5 seeds. Seeds c. 3mm long, 2mm wide, kidney-shaped, prominently reticulately ridged, ginger-brown.

Distribution: G.N., G.S., Mi., Wa. Also N.T., S.A., N.S.W. Occurs on spinifex sand plains.

Notes: Suspected of toxicity to stock.

References: 53, 65, 111, 130, 172, 260, 298.

Jacksonia

Tall or low-growing woody shrubs, with young stems cylindrical or angled, rarely flattened and leaf-like, the leaves reduced to scales. Flowers small, yellow, often marked with red, or pink. Stamens 10, the filaments free. Pod compressed or inflated, usually containing 2 seeds. An endemic Australian genus. Three species tested are reported to be self-pollinating (Kalin Arroyo 1981).

Key to species

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| 1. Branchlets flat, leaf-like | <i>J. dilatata</i> |
| Branchlets not leaf-like | 2 |
| 2. Branchlets angular in section | 3 |
| Branchlets round in section, sometimes furrowed | 6 |
| 3. Calyx 4-6mm long | 4 |
| Calyx 8-10mm long | 5 |
| 4. Calyx tube c. $\frac{1}{2}$ length of calyx; flowers yellow (southern) | <i>J. scoparia</i> |
| Calyx tube c. $\frac{1}{2}$ length of calyx; flowers pink to purple (northern) | <i>J. thesioides</i> |
| 5. Flowers in dense terminal heads; young stems densely covered with short spreading hairs | <i>J. odontoclada</i> |
| Flowers in short terminal or axillary racemes; young stems hairless or with sparse adpressed hairs | <i>J. ramosissima</i> |
| 6. Sepals joined for about $\frac{1}{2}$ their length | 7 |
| Sepals joined close to the base | 8 |
| 7. Flowers 4-5mm long, standard deeply notched (rare, north-western) | <i>J. aculeata</i> |
| Flowers 6-8mm long, rarely less, the standard slightly notched | <i>J. vernicosa</i> |
| 8. Pod on a c. 1mm stalk above the calyx (inland) | <i>J. turnerana</i> |
| Pod not stalked above the calyx (coastal) | <i>J. stackhousii</i> |

Jacksonia aculeata

Densely branched woody shrub to c. 1m tall. Branchlets cylindrical, prominently longitudinally furrowed and densely covered with spreading or adpressed white hairs. Scale leaves 1-1.5mm long, triangular, sharply pointed, curving outwards, hairless.

Flowers solitary and almost sessile in upper leaf axils, each flower borne on a c. 0.5mm pedicel, a pair of pointed bracteoles below the calyx. Calyx 4-5mm long, the two upper sepals joined for c. $\frac{3}{4}$ their length, the sepals otherwise joined for c. $\frac{1}{2}$ their length, the teeth curving outwards. Corolla yellow, 4-5mm long from base of calyx, the standard deeply notched at the tip.

Pod plump.

Distribution: Bk. Also N.T., W.A. Sandy soils, shrublands.

Notes: Of no grazing significance. The two Queensland collections seen differ from N.T. and W.A. collections in that they have very short scale leaves and short, broad bracteoles.

Reference: 172.

Jacksonia dilatata

Cladode pea

Dense erect leafless grey shrub to c. 3m tall with flat leaf-like silky-hairy branchlets 30-100mm long, 5-10mm wide, tapering to either end, the nodes forming minute tooth-like notches.

Inflorescence a dense oblong spike 5-50mm or more long, 7-20mm wide, borne at the tip of a leaf-like branchlet. Flowers sessile in axils of 2-3mm deciduous bracts, the bracteoles longer, also deciduous. Calyx much exceeding the corolla, densely covered with long brown hairs, the sepals joined for c. $\frac{1}{2}$ their length. Corolla yellow, the standard broadly 2-lobed, c. 6mm long, the wings and keel shorter.

Pod less than 6mm long, oval, silky-hairy, plump, containing a single black seed.

Distribution: Bk. Also N.T. Sandy soils.

Notes: Unlikely to be of grazing significance.

References: 17, 57, 132.

Jacksonia odontoclada

Woody leafless densely branched shrub to c. 1m tall. Branchlets short, spreading, angular, the

internodes very short, c. 2-4mm, covered with stiff short spreading hairs, slightly sticky. Scale leaves 1.5-3mm long, laterally compressed, usually curved outwards, rigid and sharply pointed.

Inflorescence a dense terminal raceme 10-15mm long, the flowers borne singly within the axils of 2-3mm bracts, each on a 1-2mm pedicel with two c. 3mm bracteoles immediately below the calyx. Calyx 8-10mm long, densely covered with spreading hairs, the upper two sepals joined for up to $\frac{2}{3}$ their length, the sepals otherwise joined for c. $\frac{1}{4}$ their length. Standard orange-yellow not notched at the tip, c. 5mm tall. Wings 8-10mm long from base of calyx.

Pod densely hairy, plump.

Distribution: Bk., Co. Also N.T. and W.A. Occurs on clay or skeletal soils in shrubland.

Notes: Of no grazing significance.

References: 17, 132, 172.

Jacksonia ramosissima

Densely branched woody shrub to 2m tall, with spreading branches. Stems hairless or minutely hairy. Branchlets crowded, angular or somewhat flattened, the internodes short, usually 2-5mm long. Scale leaves rigid and spreading, 0.5-1mm long.



Jacksonia ramosissima, Burra Range, 20°52'S, 144°22'E.

Inflorescence a 5-20mm raceme borne terminally or at the tips of branchlets. Flowers borne singly within the axils of c. 1mm bracts, each on a c. 2mm pedicel, which bears a pair of c. 2mm bracteoles at the tip. Calyx sparsely hairy, 8-9mm long, the two upper sepals joined for c. $\frac{3}{4}$ their length, the sepals otherwise joined for c. $\frac{1}{2}$ their length. Standard yellow, c. 5mm

tall, shorter than the calyx. Wings and keel yellow, the keel c. 9mm long from base of calyx.

Pod c. 6mm long, 4mm wide, inflated, the tip extended into a c. 3mm point, covered with adpressed silvery hairs, purple-brown when ripe.

Distribution: Bk., Co., Lei., Mi., N.K., S.K. Also N.T.

Notes: Of no grazing significance.

References: 17, 132, 137, 147, 148, 333.

Jacksonia scoparia

Dogwood

Leafless erect shrub or small tree to 4m tall. Stems strongly angled or winged, the internodes 5-10mm or more long, minutely hairy. Leaves reduced to scales c. 0.2mm long, not sharp-pointed, or occasionally on young plants to 50mm long.

Inflorescence a short few-flowered raceme produced terminally or from upper nodes. Flowers produced singly within the axils of c. 0.2mm bracts, each on a 3-5mm pedicel which bears minute (c. 0.3mm) bracteoles below the calyx. Calyx 4-6mm long, silky-hairy, the two dorsal sepals joined for c. $\frac{1}{2}$ their length, the sepals otherwise joined for c. $\frac{1}{3}$ their length. Standard yellow, c. 8mm tall, 10mm wide, indented at the tip, longer than the calyx. Wings yellow, c. 10mm long from base of calyx, the same length as the yellow keel.

Pod oval, c. 7mm long (excluding the 2-4mm stalk above the calyx and the fine long-extended tip), c. 3mm wide, flattened, covered with adpressed whitish hairs, dark brown when ripe.

Distribution: Bur., D.D., Lei., Ma., Mo., P.C., W.B. Also N.S.W.



Jacksonia scoparia, Ipswich, 27°31'S, 152°31'E.

Notes: A valuable source of pollen and nectar for honey bees. Nodulates.

References: 3, 17, 23, 25, 26, 35, 38, 44, 50, 96, 98, 111, 120, 138, 154, 158, 189, 196, 225, 287, 298, 313, 316, 331.

Jacksonia stackhousii

Wallum dogwood

Leafless shrub with usually more or less prostrate to ascending stems, rarely more than 0.5m tall. Stems cylindrical, not or barely furrowed, hairless or minutely hairy. Scale leaves c. 0.5mm long, adpressed or curved inwards.

Flowers paired or single from nodes along upper stems, each on a c. 1mm pedicel which bears a pair of bracteoles beneath the calyx. Calyx densely covered with adpressed silky hairs, 6-9mm long (rarely less) the two dorsal sepals joined for $\frac{3}{4}$ their length, the sepals otherwise joined for c. $\frac{1}{4}$ their length. Corolla yellow, shorter than the calyx.

Pod c. 4mm long, concealed within and not stalked above the calyx, oval, flattened, silky-hairy.

Distribution: D.D., Mo., P.C., W.B. Also N.S.W. Found in subcoastal situations on sandy soils.

Notes: Of no grazing significance.

References: 17, 23, 26, 97, 100, 154, 189, 196, 287, 298, 319, 332.

Jacksonia thesioides

Leafless shrub from 0.2-3m tall, often dense. Stems prominently 2-3 angled, hairless or minutely hairy. Scale leaves c. 1-2mm long.

Inflorescence a sparse terminal or axillary raceme 10-50mm long, the flowers borne singly, sessile or on a c. 1mm pedicel, a pair of minute bracteoles just below the calyx. Calyx minutely silky-hairy, c. 4mm long, the sepals joined for a little under half their length, the teeth narrow and pointed. Standard c. 3mm tall, 4mm wide, pink, markedly indented at the tip. Wings pink, c. 5.5mm long from base of calyx, spreading, slightly longer than the pink keel.

Pod oblong, plump, 4-5mm long.

Distribution: Co., N.K. Yellow-flowered shrubs attributed to this species occur in N.T. and W.A. A plant of sandy soils in northern woodlands and coastal heaths.



Jacksonia thesioides, Mt Garnet, 17°55'S, 145°54'E.



Jacksonia turnerana, Pentland, 20°40'S, 145°14'E.



Jacksonia thesioides, Cooktown, 15°51'S, 145°13'E.

Notes: Of no grazing significance.

References: 17, 70, 132, 137, 184, 224, 255, 257, 262, 276, 333.

Jacksonia turnerana

Leafless shrub, the stems prostrate or erect to 1m tall. Stems cylindrical, furrowed, densely covered with adpressed silvery hairs when young. Scale leaves 0.5-1mm long, straight or curved inwards.

Flowers borne singly, scattered along the stems, each on a c. 1mm pedicel which bears a pair of bracteoles below the calyx. Calyx 6-8mm long, silky-hairy, the sepals similarly joined for c. $\frac{1}{4}$ their length. Standard yellow, slightly indented at the tip, red at the base, c. 5-6mm tall and wide, shorter than the calyx. Keel dark red.

Pod 4-5mm long, c. 4mm wide, almost spherical, borne on a c. 1mm stalk above the calyx, densely covered with silky adpressed hairs.

Distribution: D.D., Lei., Ma., Mi., S.K., Wa. Also N.S.W. Occurs on sandy soils in open woodlands or shrublands.

Notes: Lightly grazed by sheep.

References: 27, 111, 158, 287, 332.

Jacksonia vernicosa

Woody shrub to 2.5m tall. Stems numerous, slender, prominently furrowed, usually hairless. Scale leaves c. 0.3mm long, curved upwards, inconspicuous.



Jacksonia vernicosa, Laura, 15°38'S, 144°30'E.

Inflorescence a few-flowered terminal raceme. Flowers borne singly on c. 1mm pedicels, which bear minute bracteoles at the tip. Calyx 7-8mm long, slightly hairy, the sepals similarly joined for a little under $\frac{1}{2}$ their length. Corolla yellow to orange, 5-6mm long, shorter than the calyx.

Pod 5-6mm long, c. 3mm wide, plump, covered with long fine hairs, not stalked above the calyx.

Distribution: Bk., Co. Also N.T. Found on rocky sandstone hillsides.

Notes: Of no grazing significance.

References: 17, 132, 165.