

Dendrolobium umbellatum

Horse bush

Shrub or small tree to c. 4m tall. Young stems covered with adpressed hairs, becoming hairless and developing corky spots. Stipules 6-10mm long, finely pointed, very deciduous. Petioles 20-60mm long, rachis 10-15mm long, both covered with adpressed silky hairs. Stipels 1.5-5mm long. Leaflets 50-140mm long, 35-70mm wide, the laterals a little smaller, broadest at or below the mid-point, the margins curving to the blunt tip and broadly angled base, with adpressed hairs on both surfaces when young, becoming hairless on the upper surface, the veins prominent on the lower surface.

Inflorescence an umbel of 10-20 flowers borne on a 3-15mm peduncle, the flowers borne on 3-7mm pedicels within axils of c. 2mm deciduous bracts. Bracteoles c. 2mm long, deciduous. Calyx 4-5mm long, densely covered with adpressed silky hairs, the two dorsal sepals joined almost to the tip, the sepals otherwise joined for c. $\frac{1}{2}$ their length, the teeth narrow and pointed. Standard white, c. 10mm tall, 8mm wide, indented at the tip. Wings white, 10-12mm long from base of calyx, much narrower than the 11-13mm long white keel.

Pod woody, usually 8-35mm long, 4-6mm wide, covered with short adpressed hairs, deeply indented along the lower margin between the 1-6 seeds, grey-brown when ripe and breaking up at



Dendrolobium umbellatum, Daintree, 16°09'S, 145°26'E.

maturity. Seeds c. 3.5mm long, 2mm wide, kidney-shaped, flattened, orange.

Distribution: Co., N.K., P.C. Also eastern Africa, South-East Asia, Indonesia, P.N.G. and Oceania. Occurs as a strand-line plant above tropical beaches. A related inland species is common in open eucalypt woodlands in the northern tropics; it has been described as *Desmodium arbuscula*.

Notes: Readily browsed by cattle and horses. Self-pollinating, nodulates. The common name and grazing characteristics appear to refer to the inland species.

References: 3, 112, 129, 137, 240, 255, 276, 301, 306; as *Desmodium umbellatum*, 16, 17, 141, 181.

Desmanthus

Shrub with bipinnate leaves, the primary rachis bearing glands between the lowermost 1-several pairs of pinnae. Inflorescence a small axillary head. Stamens 10. Pods long and narrow.

Desmanthus virgatus

Dwarf koa

Erect shrub to 1.3m tall. Stems covered with minute coarse hairs. Stipules 6-8mm long, narrow and hair-like, persistent. Leaves bipinnate, the petiole and primary rachis together 20-50mm long and bearing 2-7 pairs of pinnae. Axis of pinnae 20-60mm long. Leaflets 10-20 pairs on a pinna axis, 2-6mm long, c. 1mm wide, the margins more or less parallel, bluntly pointed.

Inflorescence a solitary head of 6-10 flowers at the end of a 15-30mm axillary peduncle. Calyx c. 2mm long, hairless, the sepals joined for $\frac{3}{5}$ their



Desmanthus virgatus, Cult., exotic.

length. Corolla 3-4mm long. Stamens 6-8mm long.

Pod 35-80mm long, 3-4mm wide, flat, the margins thickened, dark brown or almost black when ripe, with 10-20 obliquely arranged seeds. Seeds oval, flattened, c. 3mm long, 1.5mm wide, dark purple-brown.

Distribution: Mo., P.C. This species is native to tropical and subtropical America and possibly southern Asia and is occasionally found naturalized around Brisbane and near Yeppoon.

Notes: A palatable species tolerant of browsing, with high concentrations of protein and phosphorus, and of potential value as a species for sown pastures, especially on heavier soils. Not toxic to rats in laboratory tests. Self-pollinating, nodulates.

References: 3, 46, 287, 291; as *Acuan virgatum*, 183.

Desmodium

Herbs or shrubs with prostrate or erect stems. Leaves with 1 leaflet or pinnate with 3, very rarely 5 leaflets, with stipels. Flowers usually small, pink to purple, with or without bracteoles. Stamens 10, the filaments joined in a dorsally split tube or the upper one more or less free. Style hairless. Pod jointed, more or less indented along lower and sometimes upper margin, usually breaking up at maturity.

Key to species

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| 1. Articles of pod 17-20mm long, 4-5mm wide
Articles of pod much shorter and usually narrower | <i>D. ormocarpoides</i>
2 |
| 2. Pods 5-6mm wide; plants with short stems from a perennial crown
Pods less than 5mm wide; erect shrubs or prostrate to ascending herbs | <i>D. macrocarpum</i>
3 |
| 3. Leaves all with a single leaflet
All or at least some leaves with three leaflets | 4
7 |
| 4. Shrubs; pedicels 1-2mm long
Herbs or rarely shrubs; pedicels 3-20mm long | <i>D. nemorosum</i> var. <i>simplex</i>
5 |
| 5. Pod articles 3.5-4mm wide, not conspicuously reticulately veined
Pod articles 2-2.5mm wide | <i>D. muelleri</i>
6 |
| 6. Leaflets broadly rounded and indented at the tip; flowers single in bract axils
Leaflets rounded or broadly or narrowly pointed at the tip; flowers in clusters of 2-5 in bract axils | <i>D. trichostachyum</i>

<i>D. gangeticum</i> |
| 7. Articles of pod inflated, cream-coloured when ripe; trailing perennial
Articles of pod not inflated, usually brown when ripe | <i>D. campylocaulon</i>
8 |
| 8. Stipules very asymmetrical at base, ear-like on one edge
Stipules more or less symmetrical at base | 9
11 |
| 9. Articles of pod 3-4 times as long as broad
Articles of pod 1-2 times as long as broad | <i>D. scorpiurus</i>
10 |
| 10. Upper and lower margins of pod equally indented
Pods nearly straight along the upper margin | <i>D. tortuosum</i>
<i>D. brachypodium</i> |
| 11. Inflorescence an axillary or leaf-opposed cluster of 1-3 flowers and/or a raceme up to 60mm long
Inflorescence a long, usually slender raceme | 12
13 |
| 12. Leaflets heart-shaped, broadest towards the tip; pod articles 2-2.5mm long; flowers always clustered in leaf axils
Leaflets more or less oval; pod articles 3-4mm long; flowers in short racemes and/or leaf-opposed clusters | <i>D. triflorum</i>

<i>D. heterophyllum</i> |
| 13. Pods usually held erect, more or less adpressed to the rachis; inflorescence usually dense
Pods not held erect; inflorescence sparse | <i>D. heterocarpon</i>
14 |
| 14. Shrubs; pod articles often very asymmetrical
Herbs with trailing, twining or weakly ascending stems | <i>D. nemorosum</i>
15 |