Eucalyptus castrensis (Myrtaceae), a new species from New South Wales

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Abstract

Hill, K.D. and L.C. Stanberg (National Herbarium of New South Wales, Royal Botanic Gardens, Mrs Macquaries Road, Sydney, NSW 2000, Australia) 2002. Eucalyptus castrensis *(Myrtaceae), a new species from New South Wales.* Telopea *9(4): 773–776*. A new species, **Eucalyptus castrensis** from New South Wales, is described and illustrated. A comparison with *E. aenea* is provided, and conservation status is discussed. This species is regarded as vulnerable.

Introduction

Recent vegetation surveys of defence forces land near Singleton, New South Wales, have revealed a number of rare and unusual occurrences. One of these, a new species of *Eucalyptus* in the grey box group (Series *Subbuxeales* Blakely, sensu Chippendale 1988) allied to *E. aenea* is described here. It is classed as vulnerable, and a formal name is required in order to facilitate appropriate listing and action for conservation purposes.

Eucalyptus castrensis *K.D.Hill*, **sp. nov**.

E. aenea affinis sed foliis adultis longioribus latioribusque, foliis juvenilibus latioribus, fructibus alabastrisque majoribus, calyptra constricto differt.

Type: New South Wales: North Coast: Singleton Army Base, 1.5 km NE of Broken Back repeater station, block on S side of Pokolbin-Broke road, *K.D. Hill 5632 & L.C. Stanberg*, 31 Oct 2000 (holo NSW; iso BRI, CANB, MEL, AD, UNE, DNA, K).

Mallee to 8 m tall. Bark smooth, bronze-grey, shedding in ribbons, with thin dark grey box bark on lower parts of largest stems. Juvenile leaves blue-green, dull, disjunct-opposite, ovate to lanceolate, 60–115 mm long, 15–40 mm wide; petioles 2–12 mm long. Adult leaves glossy green, disjunct-opposite, similifacial, lanceolate, acute or apiculate, 60–130 mm long, 8–22 mm wide; petioles 4–15 mm long. Inflorescences axillary and single; umbellasters 7-flowered. Peduncles terete, 7–10 mm long. Pedicels terete, 1–5 mm long. Mature buds ovoid, 5–6 mm long, 2–4 mm diam. Calyptra conical, acute, apically rounded, medially constricted and broadly beaked, up to $^3/_4$ as long as long as hypanthium. Outer calyptra persistent to anthesis. Stamens all fertile, filaments irregularly arranged in bud. Anthers adnate, basifixed, cuboid to globoid, opening by lateral pores. Fruits cup-shaped, 4-locular, 4–5 mm long, 4–6 mm diam. Calyptra scar and stemonophore flat, <0.2 mm wide. Disc steeply depressed, 1–1.5 mm wide. Valves broadly triangular, obtuse, deeply enclosed, strongly raised and appressed against disc. Fig. 1.

Notes: the mallee habit, the broad juvenile leaves, the axillary inflorescences and the persistent outer calyptra place *E. castrensis* nearest to *E. aenea* K.D. Hill (Hill 1997). It is distinguished from *E. aenea* by longer and wider adult leaves, broader juvenile leaves, larger fruit, and larger buds with conical, medially constricted calyptras (Fig. 1, Table 1). *Eucalyptus castrensis* also grows into a taller tree than *E. aenea* and retains a little persistent box bark near the base of the trunk in larger trees (not seen in *E. aenea*).

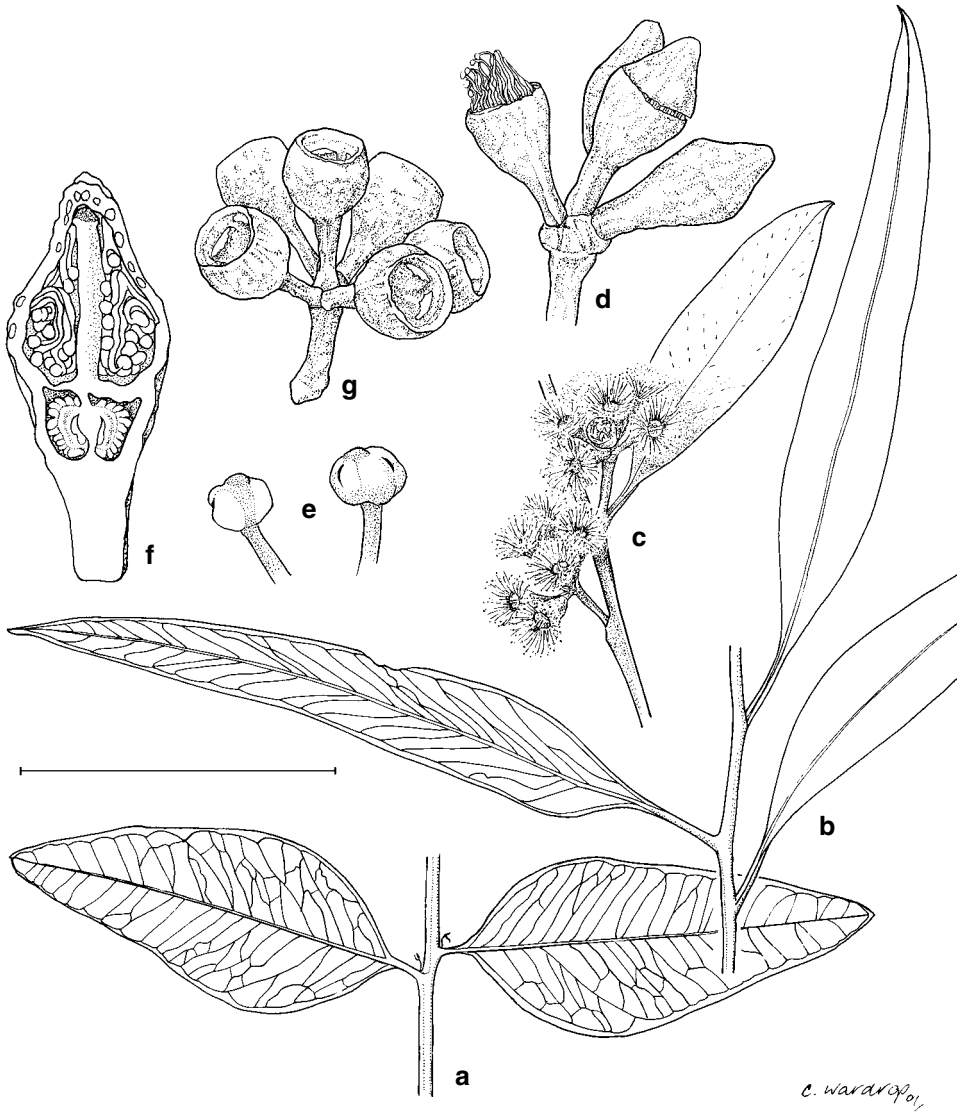

Fig. 1. *E castrensis.* **a**, juvenile leaves; **b**, adult leaves; **c**, inflorescence; **d**, buds; **e**, anther; **f**, transverse section of bud; **g**, fruit. (a,b,g, from *Hill 5632 et al.*, c-f from *NSW 444861*). Scale bar: a, b = 60 mm; c = 40 mm; d = 12.5 mm; e = 2 mm; f = 6 mm.

Table 1. Comparison of *E. castrensis* and *E. aenea.*

	E. castrensis	***E. aenea***
Adult leaf	lanceolate	lanceolate
Length mm	60–130	50–110
Width mm	8–22	9–18
Juvenile leaf	ovate to lanceolate	lanceolate
Length mm	12–115	5–80
Width mm	5–40	7–18
Petiole (L mm)	4–15	6–10
Buds (L × W mm)	5–6 × 2–4	4–6 × 2–3
Fruit (L × W mm)	4–5 × 4–6	3–5 × 3–5
Peduncle (L mm)	7–10	4–7
Pedicel (L mm)	1–5	1–3
Calyptra shape	conical, constricted about the middle	hemispherical, sometimes shortly apiculate

Distribution: known only from a single stand in Singleton Army Base near Broken Back repeater station (32°45′S 151°14′E). This occurrence is about 100 km east from the nearest occurrence of the closely related *E. aenea* in the Goulburn River National Park.

Ecology: locally dominant but restricted, occurring as a dense single stand over c. 3 ha. on a low broad ridge top on loam over sandstone. Understore consists of grasses and scattered shrubs, with bare ground and litter. *Eucalyptus fibrosa* and *Corymbia maculata* are growing adjacent to, but not within, the mallee stand.

Conservation status: known from the single population at the type locality. It is on Commonwealth defence forces land, with an informal commitment from the defence forces to preserve the site. In the absence of formal reservation, the site remains potentially vulnerable. The appropriate ROTAP code is 2V (Briggs & Leigh 1996).

Etymology: the epithet is from the Latin *castra*, an encampment, usually of a military nature and the Latin termination *-ensis*, pertaining to, from the occurrence of this species in the grounds of the Singleton Army Base.

Selected specimens (from 5 examined): New South Wales: North Coast: Singleton Army Base, 1.5 km NE of Broken Back repeater station, block on S side of Pokolbin - Broke rd, *Hill 5633, 5634 & 5635 & Stanberg*, 31 Oct 2000 (CANB, BRI, MEL), *Bell s.n.*, 23 Aug 2000 (NSW444861).

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