

New species of *Plectranthus* and *Westringia* (Labiatae) from New South Wales

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Abstract

Conn, Barry J. (National Herbarium of New South Wales, Royal Botanic Gardens, Sydney, Australia 2000). New species of *Plectranthus* and *Westringia* (Labiatae) from New South Wales. *Telopea* 4(4): 643–648. *Plectranthus cremnus* and *Westringia kydrensis* from eastern New South Wales are described.

Introduction

During the preparation of an account of the labiates (Lamiaceae) for the 'Flora of New South Wales' project, two undescribed species were discovered. Although the conservation status is unknown, both appear to be rare and possibly vulnerable. The publication of these two names will enable the species to be formally recognized by the appropriate management authorities.

Terminology and presentation follows that used in Conn (1984 & 1987).

Taxonomy

Plectranthus cremnus Conn, sp. nov.

TYPE: NEW SOUTH WALES: Sawtell area, Conn 3478, 20 February 1990 (holo NSW 224791; iso MEL).

Herba prostrata usque decumbens. *Rami et ramuli* basi subteretes, apicem versus quadrangulatum, moderate usque dense tomentosi, pilis albis brevibus etiam pilis longissimis multicellularibus patentibus eglanduligeris. *Folia* decussata, moderate usque dense tomentosa; *petiolus* 15–20 mm longus; *lamina* depresso ovata usque latissime ovata, 35–40 mm longa, 45–50 mm lata, basi subtruncata, margine bicrenata, apice obtuso usque rotundato. *Verticillastri* quinqueflori. *Bractenae* late ovatae, 1.5–1.6 mm longae, 1.5–1.6 mm latae, deciduae. *Pedicellus floris* 3.5–5 mm longus. *Calyx* marroninus vel in partibus viridis, extra sparsim usque moderate tomentosus, intra glaber; *tubus* circa 0.4 mm longus; *lobus abaxiali–medianus* circa 1 mm longis, apice profunde diviso; *lobi laterales* late deltoidei, 0.6–0.8 mm longi; *par lorum adaxiali–medianorum* latissime obovatum usque transverse late ellipticum, circa 0.6 mm longum. *Corolla* 6 mm longa, lobis indicis, extra in partibus sparsim tomentosa, intra glaber; *tubus* 4.4 mm longus, leviter curvus; *lobus abaxiali–medianus* transverse late ellipticus usque circularis, circa 4.5 mm longus; *lobi laterales* oblique deltoidei, 1–1.3 mm longi; *par lorum adaxiali–medianum* transverse truncato-ellipticum, circa 2 mm longum, apice profunde diviso. *Filamenta staminum* 3.5–4.5 mm longa; *antherae* circa 0.4 mm longae. *Ovarium* 0.2–0.3 mm longum; *stylus* 7.5–8.2 mm longus; *stigma* 0.6–0.8 mm longa. *Mericalypia* compresso–globularia, 0.8–1 mm diametro, latitudine non nisi 0.5–0.6 mm lata; *calyx* fructifer accrescens.

Prostrate to decumbent herb, pleasantly aromatic with a *Geranium*-like odour. *Branches* basally subterete, distally ridged and appearing quadrangular, moderately to densely hairy [65–80 hairs/mm²]; indumentum consisting of short (to c. 0.6 mm long) and long (to 6 mm long) hairs; hairs multicellular, patent, white, with shorter hairs slightly curved with apex directed antrorsely; glandular hairs absent. *Leaves* green, decussate, in pairs, moderately to densely hairy [as for branches]; hairs [as for branches]; *petiole* 15–25 mm long; *lamina* depressed to very broadly ovate, 35–40 mm long, 45–50 mm wide [lamina length to width ratio 0.7–0.8, length of maximum width from base to total lamina length ratio 0.3–0.4], base subtruncate, margin bicrenate with 7–10 rounded teeth (each with 1 or 2 secondary teeth), apex obtuse to rounded; venation strongly raised abaxially, sunken adaxially. *Inflorescence* an open spike-like conflorescence, moderately to densely hairy [as for branches]; uniflorescences appearing verticillate, with each uniflorescence a reduced 5-flowered dichasium. *Bracts* broadly ovate, 1.5–1.6 mm long, 1.5–1.6 mm wide [length to width ratio 1], soon deciduous. *Pedicel* (anthopodium+ a₂ axis [ultimate internode basal to anthopodium]) 3.5–5 mm long. *Calyx* with outer surface maroon throughout, or lateral and abaxial lobes green (at least in part), inner surface ± green; outer surface sparsely to moderately hairy [c. 30 hairs/mm²]; inner surface glabrous; *tube* c. 0.4 mm long; *abaxial median lobes* c. 1 mm long, c. 1.1 mm wide [length to width ratio 0.9], deeply divided (sinus 0.8 mm long, 0.9 mm wide distally) with each lobe narrowly triangular and apex acute; *lateral lobes* broadly triangular, 0.6–0.8 mm long, 0.6–0.8 mm wide [length to width ratio 1], apex acute; *adaxial median lobe-pair* very broadly obovate to transversely broad-elliptic, 0.6 mm long, 0.8 mm wide [length to width ratio 0.7–0.8], apex rounded. *Corolla* 6 mm long, with tube white and lobes bright blue with purple tinge; outer surface glabrous basally, sparsely hairy on lobes; inner surface glabrous; *tube* 4.4 mm long, tubular, slightly inflated adaxially, slightly curved at c. 2 mm from base at an angle of c. 30°; *abaxial median lobe* transversely broad-elliptic to circular, c. 4.5 mm long, 4.5–5 mm wide, with apex rounded; *lateral lobes* obliquely triangular, 1–1.3 mm long, 1–1.5 mm wide [length to width ratio 1–1.5], with apex obtuse; *adaxial median lobe-pair* transversely truncate-elliptic, c. 2 mm long, 3.7 mm wide distally [length to width ratio 0.4–0.5], deeply bilobed (sinus 1 mm long, 0.3 mm wide distally, each lobe transversely broad-elliptic, c. 1.5 mm long, c. 2 mm wide). *Staminal filaments* with purple tinge, inserted c. 2 mm above base of corolla, 3.5–4.5 mm long, glabrous; *anthers* c. 0.4 mm long, c. 0.3 mm wide. *Disk* 0.5 mm long. *Gynoecium* glabrous; ovary 0.2–0.3 mm long; style 7.5–8.2 mm long; stigma lobes 0.6–0.8 mm long. *Mericarps* compressed-spherical, 0.8–1 × 0.8–1 × 0.5–0.6 mm, smooth, glossy dark brown; calyx enlarging in fruit and lobes ± enclosing developing seed, with abaxial lobes incurved, c. 2.2 mm long, 1.5 mm wide, lateral lobes incurved, c. 1.7 mm long, c. 1 mm wide, adaxial lobe-pairs c. 2.1 mm long, c. 2.6 mm wide. Fig. 1 (a–c).

DISTRIBUTION: Only known from Evans Head, Lennox Head and Sawtell, North Coast, New South Wales.

HABITAT: A rare herb growing in shallow sandy soil that has been deposited by wind into the crevices of the bare basaltic outcrops of coastal headlands.

AFFINITIES: The affinities of this species are not known and must await the conclusions of a detailed phylogenetic evaluation of the genus. Unfortunately, the most recent account of the Australian species (Blake 1971) does not comment on infrageneric relationships. It is superficially similar to *P. graveolens*, however it can be distinguished from this latter species by having 3–5 pairs of teeth (total of 7–10 teeth) on the margin of the leaf (cf. 10–23 pairs of teeth in *P. graveolens*), being pleasantly aromatic (cf. *P. graveolens*, which is strongly and unpleasantly aromatic) and this species is prostrate (cf. the latter, which is suberect to erect). It can be distinguished from the

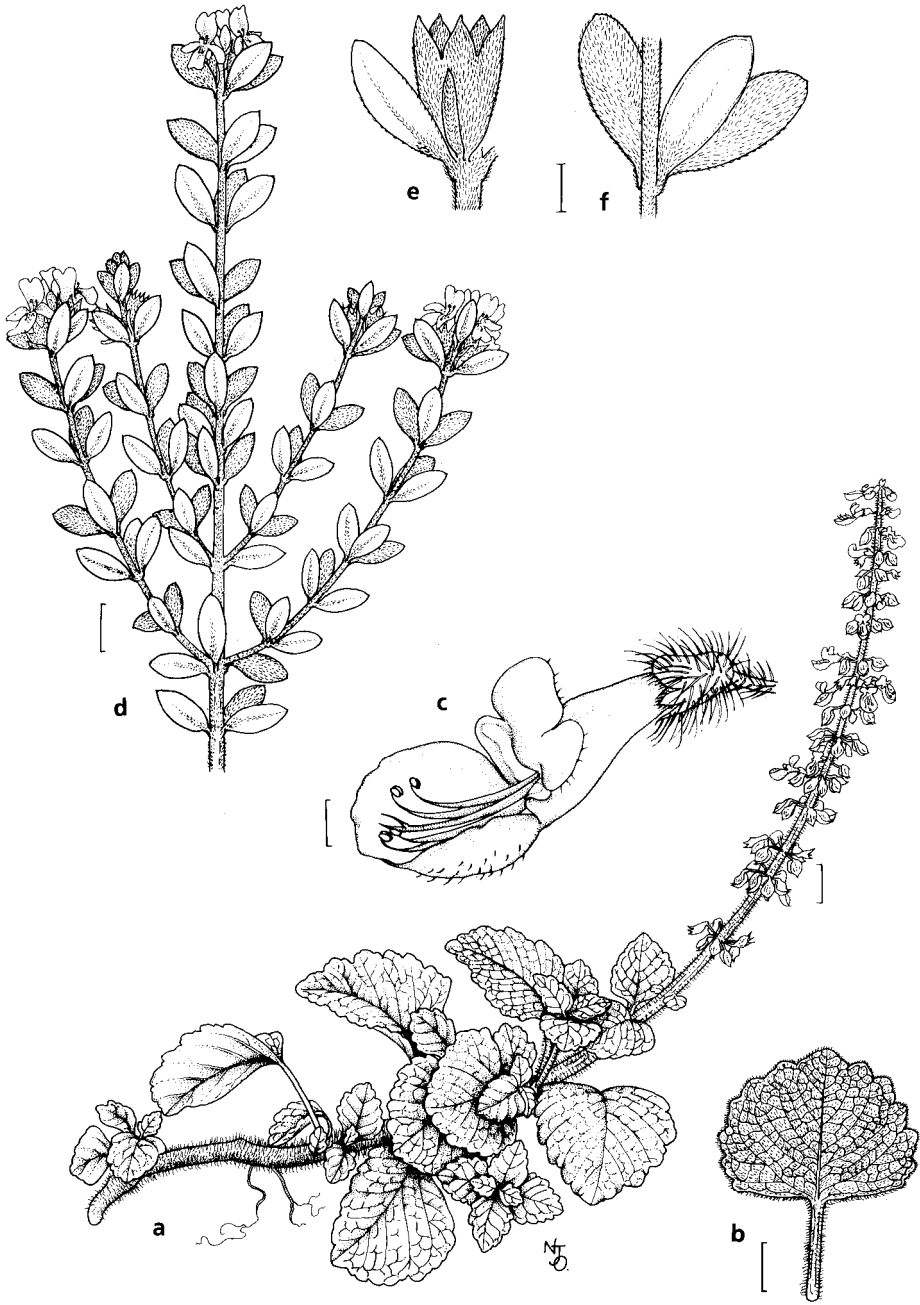


Figure 1. *Plectranthus cremnus*. **a**, branch and inflorescence; **b**, leaf; **c**, flower (all from Conn 3478). *Westringia kydrensis*. **d** flowering branchlet; **e** calyx and prophyll in leaf axil; **f** whorl of three leaves (all from Rodd 2652). Scale bar: a = 5 mm; b, c = 2 mm; d, e = 1 cm; f = 1 mm.

P. parviflorus/*P. suaveolens* group by the absence of glands and by the presence of \pm patent hairs (cf. the latter group, which has \pm appressed, retrorse hairs).

ETYMOLOGY: The specific epithet refers to the occurrence of this species on coastal rocky cliffs.

CONSERVATION STATUS: Although the conservation status of this species is uncertain, it is very rare at Evans Head and Sawtell (Conn 3478). At Lennox Head it is relatively common locally (R. Miller, pers. comm.). However, this species is vulnerable at all known localities. Risk Code = 3V (*sensu* Briggs & Leigh 1988).

NOTES: In horticulture, this species is a vigorously growing ground cover, which flowers throughout the year. It has been successfully cultivated at the Royal Botanic Gardens, Sydney and is commonly referred to as *Plectranthus graveolens* 'Headland Form'.

OTHER SPECIMENS EXAMINED: NEW SOUTH WALES:(NORTH COAST): Kendall, F.M. Bailey s.n., Sep 1929 (NSW 31978); Lennox Head, R. Miller s.n., 11 June 1991 (MEL, NSW 240476); Sawtell Headland, P. Wilson s.n., - (NSW 241355); (cultivated at Frenchs Forest) ex Sawtell, D. Blaxell s.n., 15 Jan 1969 (NSW).

***Westringia kydrensis* Conn, sp. nov.**

TYPE: NEW SOUTH WALES: Kydra Reefs, Rodd 2652, 22 Mar 1974 (holo NSW 216148; iso CANB, MEL).

Frutices usque ad circa 0.4 m. alti. *Rami et ramuli* subteretes, dense tomentosi usque glabrescenti. *Folia* verticillata terna, moderate usque sparsim tomentosa; *petiolus* 1–1.5 mm longus; *lamina* obovata usque elliptica, 5.5–7 mm longa, 2.2–3 mm lata, basi cuneata, margine integro et plano, apice obtuso. *Pedicellus floris* circa 0.5 mm longus, dense tomentosus; *prophyllis* anguste ellipticis usque anguste oblongis, 3–4 mm longis, 0.5–0.7 mm latis, dense tomentosus. *Calyx* probabiliter viridis, extra moderate usque dense tomentosus; *tubus* 2.5–3.2 mm longus, intra glaber; *lobi* deltoidei, 2.5–4.8 mm longi, 1.2–1.7 mm lati, intra moderate tomentosi, apice acuto. *Corolla* 8–10 mm longa, alba, extra in partibus distalibus moderate tomentosa, intra sparsim usque moderate tomentosa; *tubus* 3.5–4.5 mm longus; *lobus abaxiali-medianus* late usque latissime spatulatus, 3.5–4 mm longus, 3–5 mm latus; *lobi laterales* oblongi, 3 mm longi, 1.5 mm lati; *par lorum adaxiali-medianorum* late oblongum usque latissime obovatum, 4.5–6 mm longum, 4–8.5 mm latum. *Androecium* in ore corollae insertum; filamenta staminum 0.8–1 mm longa; antherae circa 1 mm longae; filamenta staminodiorum 0.8–1 mm longa; *lobi staminodiorum* 0.2–0.3 mm longi. *Pistillum* 8.4–9.5 mm longum; ovarium circa 1 mm longum; stylus 7–8 mm longus; stigma 0.4–0.6 mm longa. *Mericarpia* incognita.

Erect shrub to c. 0.4 m high. *Branches* subterete (internodes with slightly raised undulate ridge-pairs from axil of leaf to next more distal node), moderately to densely hairy distally and between ridge-pairs [to c. 70 hairs/mm²], otherwise sparsely hairy to glabrescent; hairs simple, \pm straight, subappressed, antrorse, 0.1–0.2 mm long, white. *Leaves* in 3-leafed whorls, spreading to ascending, sparsely to moderately hairy [to 25 hairs/mm²], soon glabrescent with the hair bases persistent; hairs simple, \pm straight, appressed, antrorse; *petiole* 1–1.5 mm long; *lamina* obovate to elliptic, 5–8 mm long, 2.2–3 mm wide [lamina length to width ratio 2–2.5, length of maximum width from base to total lamina length ratio 0.5–0.7], base cuneate, margin entire and flat, apex obtuse; venation not visible, midrib with only basal part slightly raised on abaxial surface. *Inflorescence* a frondose racemiform confluence, uniflorescence monadic, up to c. 6 flowers per confluence. *Pedicel* c. 0.5 mm long,

densely hairy [as for distal parts of branches]; *prophylls* inserted at base of calyx, narrowly elliptic to narrowly oblong, 3–4 mm long, 0.5–0.7 mm wide [length to width ratio 4.3–6.7, length of maximum width from base to total lamina length ratio 0.5–0.6], densely hairy [90–96 hairs/mm²], base cuneate, margin incurved, apex tapering. *Calyx* ? green; outer surface moderately to densely hairy [70–80 hairs/mm²], often glabrescent basally; *tube* 2.5–3.2 mm long, inner surface glabrous; *lobes* triangular, 1.6–2 mm long, 1.2–1.7 mm wide [length to width ratio 1.2–1.3], inner surface moderately hairy, apex acute; [calyx lobes to tube ratio 0.6–0.7]. *Corolla* 8–10 mm long, white, with a few small reddish dots at base of abaxial lobes; outer surface glabrous basally, moderately hairy on distal part of tube and on lobes [45–55 hairs/mm²], with hairs 0.2–0.4 mm long, \pm appressed; inner surface sparsely to moderately hairy [20–40 hairs/mm²], 0.2–0.4 mm long, appressed to subpatent, straight to variously bent; *tube* 3.5–4.5 mm long, tubular, diameter at mouth 2–3 mm; *abaxial median lobe* broadly to very broadly spatulate, 3.5–4 mm long, 3–5 mm wide distally, deeply bilobed (sinus to 3 mm long), with apex irregularly truncate and/or lobed; *lateral lobes* oblong, sometimes narrowly so, 3–3.5 mm long, 0.7–2 mm wide [length to width ratio 1.7–4], with apex rounded and slightly irregular, often shortly bilobed; *adaxial median lobe-pair* broadly oblong to very broadly obovate, 4.5–6 mm long, 4–8.5 mm wide distally (length to width ratio 0.7–1.1), with apex \pm irregularly subtruncate, deeply bilobed (sinus 2–3.5 mm long). *Androecium* inserted in mouth of corolla. *Staminal filaments* 1.8–2 mm long, glabrous or hairy at base; anthers c. 1 mm long. *Staminodal filaments* 0.8–1 mm long, glabrous; staminodal lobes white, 0.2–0.3 mm long. *Disc* 0.4–0.5 mm high. *Pistil* 8.4–9.5 mm long; ovary c. 1 mm long; style 7–8 mm long, glabrous; stigma lobes 0.4–0.6 mm long. *Mericarps* immature. Fig. 1 (d–f).

DISTRIBUTION: Kydra Reefs, c. 23 km SE of Cooma, Southern Tablelands, New South Wales.

HABITAT: Frequent in heath, amongst larger shrubs of *Allocasuarina nana* and *Banksia canei*. Occurring on rocky granite or quartzite hillside (Rodd 2652).

AFFINITIES: The affinities of this species are not fully understood; however, it appears to belong to the group that has relatively large prophylls. Of this group, it is most similar to *W. davidii* from which it can be distinguished by its appressed antrorse indumentum (cf. *W. davidii*, which has subpatent and more or less tangled hairs).

ETYMOLOGY: The specific epithet refers to the occurrence of this species in the Kydra Reefs area of New South Wales.

CONSERVATION STATUS: This new species of *Westringia* is only known from the type collection, from the Kydra Reefs area of New South Wales. Since the distribution of this species is not known, it is difficult to comment on its conservation status. However, the only known population does not occur in a conservation reserve. Risk Code = 2K (Briggs & Leigh 1988).

Acknowledgments

Thanks go to Nicola Oram for the illustration. This study was in part supported by an Australian Biological Resources Study Grant.

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Manuscript received 17 June 1991

Manuscript accepted 5 September 1991