Veronica tetrasticha

COMMON NAME
Hebe

SYNONYMS
Hebe tetrasticha (Hook.f.) Andersen, Hebe tetrasticha (Hook.f.) Cockayne et Allan nom. illeg., Leonohebe tetrasticha (Hook.f.) Heads

FAMILY
Plantaginaceae

AUTHORITY
Veronica tetrasticha Hook.f.

FLORA CATEGORY
Vascular – Native

ENDEMIC TAXON
Yes

ENDEMIC GENUS
Yes

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Dicotyledonous Trees & Shrubs

NVS CODE
LEOTET

CHROMOSOME NUMBER
2n = 42

CURRENT CONSERVATION STATUS
2012 | At Risk – Naturally Uncommon | Qualifiers: Sp

PREVIOUS CONSERVATION STATUSES
2009 | At Risk – Naturally Uncommon
2004 | Not Threatened

BRIEF DESCRIPTION
Low growing green leafless nearly cross-shaped (in cross section) twigs inhabiting Canterbury mountains. Leaves overlapping, scale-like, triangular, tapering out to a base that clasps the stem, margin with pale hairs (lens needed). Flowers white, in clusters of 2-6 towards tips of twigs.

DISTRIBUTION
Mountains of Canterbury (mostly) and Westland, from the Otira Valley in the northwest and Puketeraki Range in the northeast to Mt Somers in the south.

HABITAT
Grows on alpine rocks and scree.
FEATURES
Subshrub to 0.2 m tall, or semiwhipcord form. Branches decumbent; internodes (0.15-) 0.25-0.5 mm; branchlets, including leaves, (1.5-) 2-3.5 (-4) mm wide, cruciform in transverse section; connate leaf-bases glabrous; leaves not readily abscising, persistent along the stem for some distance. Leaf bud tightly surrounded by recently diverged leaves. Leaves connate, appressed; lamina deltoid; venation not evident in fresh leaves; margin ciliate; lower surface light to dark green. Juvenile leaves entire, pubescent (with eglandular hook-shaped hairs). Inflorescences with 2-6 flowers, lateral (obscuring vegetative tip when numerous), unbranched, (0.2-) 0.3-0.7 cm; peduncle 0.05-0.2 cm. Bracts opposite and decussate, connate or free (lowest usually free, but sometimes shortly connate; upper often shortly connate), deltoid, obtuse. Flowers male or female (on different plants). Pedicels absent or if evident then always shorter than bracts, 0-0.7 mm. Calyx 1.3-2 mm; lobes ovate or deltoid, obtuse, with mixed glandular and eglandular cilia (but glandular hairs may be obscure). Corolla tube glabrous; tube of male flowers approximately 1.5 x approximately 1.5 mm, contracted at base, equalling calyx; tube of female flowers approximately 1 x approximately 1 mm, contracted at base, shorter than calyx; lobes white at anthesis, ovate or rhomboid (male flowers only), obtuse, suberect to patent, longer than or approximately equalling corolla tube. Stamen filaments remaining erect, 0.7-1.5 mm (Male approximately 1.5 mm; female 0.7-1 mm); anthers purple or violet to magenta, 1-1.2 mm; sterile anthers of female flowers approximately 0.5 mm. Ovary 0.5-0.6 mm; ovules 3-6 per locule, in 2 vertical rows on placenta; style 0.8-1.5 mm (often longer in male flowers than female flowers); stigma more prominent in female flowers. Capsules angustiseptate, obtuse, 2-3 mm long, 1.5-2.5 mm thick. Seeds flattened, ellipsoid to oblong, smooth or finely papillate, pale brown (to orange), 0.8-1 x 0.5-0.7 mm, micropylar rim 0.1-0.3 mm.

SIMILAR TAXA
Differences from *V. cheesemanii* require clarification. The two species are distinguished primarily on differences in the profile of branchlets in transverse section (square, at least on older branchlets, in *V. cheesemanii* cruciform in *V. tetrasticha*). However, branchlet profiles vary between the two extremes, and differences are not always clear-cut.

FLOWERING
(October-) December-January

FRUITING
December-February

LIFE CYCLE
Seeds are wind dispersed (Thorsen et al., 2009).

ETYMOLOGY
*veronica*: Named after Saint Veronica, who gave Jesus her veil to wipe his brow as he carried the cross through Jerusalem, perhaps because the common name of this plant is ‘speedwell’. The name Veronica is often believed to derive from the Latin vera ‘truth’ and iconica ‘image’, but it is actually derived from the Macedonian name Berenice which means ‘bearer of victory’.
*tetrasticha*: From Latin, tetra ‘four’ and stichos ‘row, line’, refers to the leaf arrangement.

IC NOTES
Plants identified as *V. cheesemanii*, but with features approaching *V. tetrasticha*, occur as far north as the Amuri District, as far west as the Leibig Range (Aoraki/Mt Cook National Park), and as far south as the Kirkliston Range. Some of these plants have branchlets that are prominently cruciform near the apex (where leaves are still expanding) but become more or less square with age. Whether some of these plants are better placed under *V. tetrasticha* is debatable, and at least some have been treated as such by Wilson (1978, 1996), Macdonald (1980) and Heads (1994).

From the distributions given here (see Bayly & Kellow, 2006), *V. tetrasticha* effectively “replaces” *V. cheesemanii* in parts or mid-Canterbury. A possible explanation for such a pattern is that *V. tetrasticha* has differentiated in this area from an historically more widespread, *V. cheesemanii* like ancestor. Of course, other scenarios are possible (different interpretations of the limits of the species might contradict this one), and whether *V. tetrasticha* and *V. cheesemanii* are most closely related is also not known. Analysis of ITS sequences (Wagstaff et al. 2002) does not support a sister relationship, but similarity or flavonoid profiles (Markham et al. 2005) might.

ATTRIBUTION