HEBE PIMELEOIDES VAR. *RUPESTRIS* IN CANTERBURY

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Hebe presents arguably the most severe taxonomic challenge offered by the New Zealand flora. The non-specialist can be forgiven for concluding that the taxonomy of the genus is seemingly always in a state of flux. However, notable advances have been made in recent years, thanks principally to the efforts of Tony Druce, building on the framework left by Lucy Moore (in Allan 1961). Druce's latest compilation (1989) totals 98 species.

The complexities of the genus *Hebe* are such that the addition of another variety to the Provincial list may well seem to be of little moment, but in fact there is little room for doubt that Cockayne & Allan's var. *rupestris* (1926) of *H. pimeleoides* Hook f. is really a distinct natural species and in due course will be formally recognised as such. It is already so regarded informally, as 'Hebe rupestris' (Druce, 1989).

Hebe pimeleoides is certainly a polymorphic species complex. It is best known as a diminutive glaucous-leaved plant, easily overlooked when not in flower, and then indeed difficult to distinguish from *Pimelea*. However, when in flower it is notable for purple-blue flowers of an intensity of hue surpassed in the genus only by *Hebe benthamii* of the Subantarctic Islands. Plants of this general type are familiar in the Canterbury back-country (e.g., at Cass). In particularly exposed sites, the plant is almost prostrate, apart from the inflorescences, and then corresponds to var. *minor* Hook. f., which is typified by a collection from the population on the flats about Lake Heron.

In contrast, var. *rupestris* Ckn. & Allan is a very much larger shrub, of a quite different order of size, seemingly always growing on rock outcrops. It is also markedly distinguished by pale lilac-mauve flowers. No one, encountering var. *minor* and var. *rupestris* for the first time, without prior knowledge of the taxonomy, would take them to belong to the same species.

Hebe pimeleoides var. *rupestris* is principally a plant of Central Otago. One location where it can be very readily accessed is roadside rocks in the Kawerau Gorge, southwest of Cromwell. A pinpoint locality is the site of the Goldfields Monument plaque at the west end of the Cromwell Gorge, adjacent to Eugenie's Nursery. The *Hebe* grows on the rocks below the plaque and is easily accessible from the east side. In October 1989 I noticed it on rocks near the beginning of the Clear Stream track, off the north shore of Lake Aviemore. It was also present on nearby rocks along the lake shore. This is a substantial increase of the known range of this taxon, extending northwards into Canterbury, although admittedly only by the barest of margins. For an obvious reason (too early), it was not seen in flower, but

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the plant is sufficiently characteristic in appearance for its identity not to be in doubt.

Hebe pimeleoides var. *rupestris* was first recognised and so named by Cockayne and Allan in 1926. They stated (p. 39) that the "specific description of the Manual ed. 2 [Cheeseman's] applies to this, probably compound, variety." I cannot accept that this can be entirely true. To make the most obvious point, Cheeseman describes the flowers as 'dark purplish-blue', whereas as currently understood, this plant has distinctively pale flowers, scarcely at all blue in hue. Cockayne & Allan make it plain (p. 38) that their new variety is the Central Otago plant, but make no mention of flower colour.

Different forms within the *Hebe pimeleoides* aggregate are excellently and accurately illustrated (figs. 361-4) in Eagle (1982). These include, as well as the type variety (var. *pimeleoides*), var. *minor* and var. *rupestris*, one of the major mysteries of Canterbury botany in var. *glauco-caerulea* (Armstrong) Cheeseman, a plant of stature approaching var. *rupestris*, but with clear blue flowers. This plant was collected by the Armstrongs in the 1860s, and described by J.B. Armstrong in 1879 as a species, *Veronica glauca-caerulea*, later (1881) corrected to *glauco-caerulea*.

There is some confusion as well as mystery associated with *glauco-caerulea*. Lucy Moore (in Allan 1961, p. 923) gave a very precise but complicated appreciation which I think Audrey Eagle may have in part misinterpreted. Lucy Moore distinguished two groups of Armstrong specimens; one group of four labelled as *'glauco-caerulea'*, the other not. She found these two suites to differ, *inter alia*, by a curiously opposed pair of indumentum characters; the *glauco-caerulea* specimens have branchlets hairy-pubescent but ovary and capsule glabrous, whereas the second suite have branchlets almost or quite glabrous and ovary/capsule pubescent! The comment "Similar plants were collected near Lake Tekapo by Cheeseman, and also by Wall..." (cf. Eagle, 1982, p. 354) is made by Moore in relation to the second group of Armstrong collections.

Confusion is also generated by the circumstance that it seems Armstrong may have interpreted *glauco-caerulea* quite liberally. Thus, in 1881 he gives the distribution as "Nelson, Canterbury and North Otago". Furthermore, he then distinguished *glauco-caerulea* from *pimeleoides* by various aspects of size, and by its "much darker flowers". Yet, as is well shown by Audrey Eagle, the flowers of var. *minor*, as present in the Upper Rangitata and Ashburton drainage areas, are, in the wild at least, as dark and intense as any other member of the complex.

Two points do, however, seem clear. Firstly, plants identical to the form represented by the original suite of specimens, as defined by Lucy Moore, have never again been collected. Secondly, the problem is a central Canterbury one. The localities of the Armstrong specimens are Upper Rangitata, Mt Arrowsmith and Upper Rakaia. Armstrong also indicated, in

1879, that he had himself found the plant in the Waimakariri. As Cockayne (1929[2]) commented, it "possibly may never be matched again by a wild form", but one has to wonder whether this most attractive Canterbury plant still survives somewhere in our remote back-country, awaiting rediscovery by someone with sufficient stamina and persistence. It would be very well worthwhile refinding.

Apart from the mystery of *glauco-caerulea*, there is another incompletely resolved complication in this complex. Recent cytological study, not yet formally published, indicates the existence of a tetraploid form, noticed by Druce as 'Hebe aff. pimeleoides'. But that is another complication, of which at present I know no more than I have already told.

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[2] This short publication by Cockayne deserves to be cherished for one quite remarkable footnote (p. 466)..." So even in New Zealand where the official name of the State Forest Service is Pinus radiata". [I kid you not. JDL]