

Hebejeebie* (Plantaginaceae), a new genus from the South Island, New Zealand, and Mt. Kosciusko, SE Australia.

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As a beginning Botany student at the University of Otago in the 1970s under Professors Geoff Baylis, Alan Mark and Bastow Wilson I found the generic placement of three beautiful alpine subshrubs particularly confusing. In Allan's (1961) *Flora of New Zealand* one was placed in *Pygmaea* Hook. f. (= *Chionohebe* Briggs et Ehrendorfer) as *P. tetragona*, and the other two in *Parahebe* W.R.B. Oliver (Moore in Allan 1961), as *P. trifida* and *P. birleyi*. However, while there are obvious differences between the three species and typical members of the genera they were allocated to in the *Flora*, the three are all similar in appearance (Heads 1994a; Wagstaff et al. 2002); they share decussate not bijugate phyllotaxis, leaves with glandular hairs, large flowers with more or less regular, 5-lobed corollas, and purple anthers. Lucy Moore revised most of the species of the *Hebe* complex for the *Flora* after Allan's untimely death but felt obliged to continue with his generic concepts, despite having some reservations (pers. comm. 1987).

The comparative morphology and biogeography of the three plants are discussed and illustrated elsewhere (Heads 1993, 1994a,b,c). Parsimony analysis of internal transcribed spacer (ITS) sequences (Wagstaff et al. 2002) confirmed that *P. tetragona* and *P. trifida* form a monophyletic group (these authors' '*Chionohebe* B clade') which branches from the remaining New Zealand hebes after the basal *Leonohebe* Heads s.s. and *Chionohebe* s.s. Wagstaff et al. (2002) suggested that 'There is little evidence from morphology to separate the *Chionohebe* A and B clades', but this is contradicted by the data on phyllotaxis and floral morphology presented in my earlier papers.

The position of *P. birleyi*, a Southern Alps vicariant of the Central Otago *P. trifida*, is less clear. The obvious phenetic similarity in the corollas has led most authors to treat it with *P. trifida* and this is followed here. The position of *P. birleyi* is unresolved in the strict consensus tree from the ITS studies (Wagstaff et al. 2002: Fig. 3), but the species is grouped with *P. trifida* and *P. tetragona* in the single maximum parsimony tree presented (Wagstaff et al. 2002: Fig. 4).

Wagstaff et al. (2002) showed that the *Hebe* complex is nested in *Veronica* s.l. The possible taxonomic alternatives are to accept either a very broad *Veronica*, or a smaller *Veronica* s.s. as well as *Hebe* and several smaller segregate genera. Wagstaff et al. favoured the latter approach and this is followed here.

Olmstead et al. (2001) showed that Scrophulariaceae in the traditional sense is not monophyletic. According to the ICBN the conserved name Plantaginaceae must be used for the clade including the *Hebe* complex (if it is accepted at family rank), although some authors are currently using the name Veronicaceae for the group.

Hebejeebie gen. nov.

Fruticuli alpini, foliis decussatis non bijugatis, foliorum trichomatibus longis glandularisque, inflorescentiis paucifloribus, floribus grandibus, et antheris purpureis.

Alpine shrubs with decussate, not bijugate, phyllotaxis, leaves with long glandular hairs, few-flowered inflorescences, large flowers, and purple anthers.

Type species: *Hebejeebie densifolia* (F. Muell.) Heads.

Etymology: The name refers to the anxiety these plants have often caused taxonomists.

Distribution: Southern South Island, New Zealand, and Mt. Kosciusko, SE Australia. All three species occur in Otago.

1. *Hebejeebie densifolia* (F. Muell.) Heads, comb. nov.
 - = *Leonohebe densifolia* (F. Muell.) Heads 1987.
 - = *Chionohebe densifolia* (F. Muell.) Briggs et Ehrendorfer 1976.
 - = *Paederota densifolia* F. Muell. Trans. Philos. Soc. Victoria 1:107. 1855.
 - = *Pygmea tetragona* (Hook. f.) Ashwin 1961.
 - = *Logania tetragona* Hook.f. 1864.
 - = *Hebe dasyphylla* (Kirk) Cockayne et Allan 1926.
 - = *Veronica dasyphylla* Kirk 1896.

Distribution: Southern South Island and Kosciusko.

2. *Hebejeebie birleyi* (N.E. Brown) Heads, comb. nov.
 - = *Parahebe birleyi* (N.E. Brown) W. R. B. Oliver 1944.
 - = *Veronica birleyi* N. E. Brown, Kew Bull 1911: 345. 1911.

Distribution: Southern South Island.

3. *Hebejeebie trifida* (Petrie) Heads, comb. nov.
 - = *Parahebe trifida* (Petrie) W. R. B. Oliver 1944.
 - = *Veronica trifida* Petrie, Trans. New Zealand Inst. 55: 437. 1924.

Distribution: Southern South Island.

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Brief Botanical Glossary and Etymology - Allison Knight

(bi)jugate: yoked together as a pair

decussate: leaves or other organs that are opposite, with successive pairs at right angles to each other, so forming 4 rows, as with leaves in the *Hebe* species.

phyllotaxis: arrangement of leaves or floral envelopes on a stem

vicariant(s): closely related taxa isolated geographically from one another by a vicariance event (natural biogeographical barrier)

heebie-jeebies: a state of nervousness or agitation. "It seems pretty certain that this term was invented about 1923 by the American cartoonist Billy De Beck. Its first appearance was in one of his *Barney Google* cartoons in the *New York American* on 26 October 1923, though there it was spelled *heeby-jeeby*. Where it came from, apart from his fevered imagination, is open to question. There was a dance at about the same time, and a song in 1926, both said to have originated from Native American witch-doctor chants before human sacrifices. But the dance and the song both seem to be later than the first appearance of the phrase." - from Michael Quinion, *World Wide Words*; Web page.

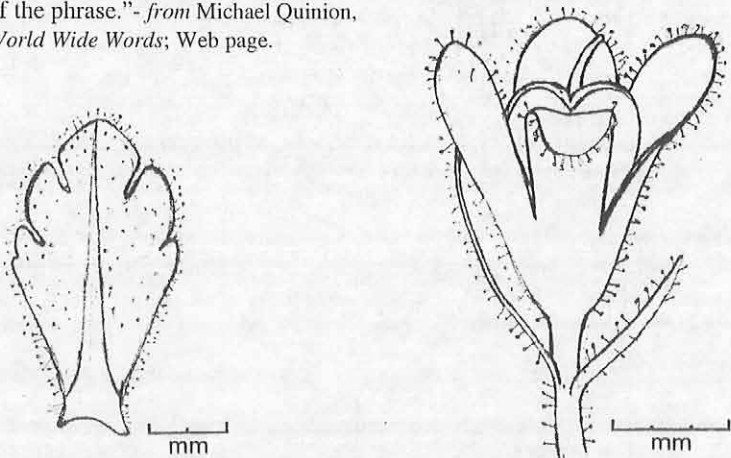


Fig: Details of 'three-cleft' leaf tip, left, and flower, right, of *Hebejeebie trifida* (= *Parahebe trifida*) by Nancy Adams. From *New Zealand Alpine Plants*, AF Mark & NM Adams, 1973, AH & AW Reed.