

(2587) Proposal to conserve the name *Parakeelya* against *Rumicastrum* (*Montiaceae*)

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(2587) *Parakeelya* Hershk. in *Phytologia* 84: 101. 26 Feb 1999 [*Portulac./Mont.*] nom. cons. prop.

Typus: *P. tychosperma* (F. Muell.) Hershk. (*Calandrinia tychosperma* F. Muell.).

(=) *Rumicastrum* Ulbr. in Engler & Prantl, *Nat. Pflanzenfam.*, ed. 2, 16c: 519. Jan–Apr 1934, nom. rej. prop.

Typus: *R. chamaecladum* (Diels) Ulbr. (*Atriplex chamaecladum* Diels).

Calandrinia Kunth (in Humboldt & al., *Nov. Gen. Sp.* 6, ed. fol.: 62. 14 Apr 1823) (*Montiaceae*, formerly *Portulacaceae*) has long been regarded as a genus with two centres of species diversity, one in the New World along the western cordillera from British Columbia to Chile, and one in Australia where it is widespread particularly in arid areas.

Carolyn (in *Austral. J. Bot.* 35: 383–412. 1987) first proposed, based on an early morphological cladistic analysis, that *Calandrinia* as then recognised was not monophyletic, and recommended that it be segregated into five genera, most of which had available names. He did not formalise this by making new combinations. Two of Carolyn's segregates (*Schreiteria* Carolyn, *Cistanthe* Spach) have since been widely accepted and their species recombined or reinstated, while *Baitaria* Ruiz & Pav. remains in synonymy under *Calandrinia*. Carolyn postulated that the New World and Australian species of *Calandrinia* were not monophyletic, and proposed that the name *Rumicastrum* Ulbr. should be used for the latter.

Rumicastrum was erected by Ulbrich (l.c.) as a monotypic genus to accommodate *Atriplex chamaecladum* Diels, a rare and unusual

fire ephemeral from southern Western Australia. Diels misinterpreted the two sepals (typical of *Portulacaceae*) of this species as the bract-oles of an *Atriplex* flower. Ulbrich correctly discerned that *A. chamaecladum* was not an *Atriplex*, but accepted Diels's interpretation that it belonged in *Chenopodiaceae*. Wilson (in *Fl. Australia* 4: 316. 1984) excluded it from *Chenopodiaceae* and correctly interpreted the flower as indicating its membership in *Portulacaceae*.

Hershkovitz (in *Phytologia* 84: 101. 1999 (“1998”)) erected *Parakeelya* Hershk. to give effect to Carolyn's proposal to segregate Australian *Calandrinia* from those in the New World. He rejected *Rumicastrum* as the first available name for the Australian *Calandrinia* clade based on advice received from W. Greuter and B. Zimmer, who examined a specimen of *R. chamaecladum* at B and concluded that it did indeed belong in the *Chenopodiaceae*. Hershkovitz recombined all Australian species accepted at that time into *Parakeelya*.

The genus name *Parakeelya* is derived from a widespread Australian Indigenous name (e.g., *parkilja* in the Wangkangurru language from the Simpson Desert; *baragilya* in the Guyani language from the Flinders Ranges in South Australia), for one or more species in the genus, and as such has been in use for millennia. Its first recorded published European usage was by Lindsay (Adelaide Observer, 30 Oct 1886: 42), reporting on an 1885–1886 exploring expedition in Central Australia. Lindsay used the term as a vernacular without explanation, indicating that it was probably in common use at that time. It was used as a vernacular name for the genus by Black (*Fl. S. Austral.*, ed. 2, 2: 346–350. 1948) and in numerous subsequent Australian floras.

Despite Hershkovitz's combinations, *Parakeelya* was not adopted as a generic name in Australia, principally because Australian botanists continued to correctly ascribe *Rumicastrum* to *Portulacaceae* with a likely affinity to *Calandrinia*. Nevertheless, it has been frequently used, either alone or parenthetically with *Calandrinia*, in extra-Australian literature on the genus, in phylogenetic, biochemical and photosynthesis studies of *Portulacaceae* s.l., e.g., Hershkovitz & Zimmer (in *Molec. Phylogen. Evol.* 15: 419–439. 2000), Applequist & Wallace (in *Syst. Bot.* 26: 406–419. 2001), Applequist & al. (in *Syst. Bot.* 31: 310–319. 2006), Nyffeler (in *Amer. J. Bot.* 94: 89–101. 2007), Nyffeler & Eggli (in *Taxon* 59: 227–240. 2010), Ogburn & Edwards (in *Advances Bot. Res.* 55: 179–225. 2010 & in *Molec. Phylogen. Evol.* 92: 181–192. 2015), Winter & Holtum (in *J. Exp. Bot.* 65: 3425–3441. 2014), Chung & al. (in *Frontiers Pl. Sci. (Lausanne)* 6(499): 1–16. 2015), Schwinn (in *New Phytol.* 210: 6–9. 2016), and in popular literature, e.g., Hershkovitz (in *Eggli, Ill. Handb. Succ. Pl.: Dicot.*: 394–399. 2002), Eggli & Newton (*Etymol. Dict. Succ. Pl. Names*: 177. 2004).

By contrast, *Rumicastrum* has been used only rarely and informally to refer to the Australian *Calandrinia* clade following Carolin, and no combinations under that generic name have been made.

Hancock & al. (in press) now provide strong molecular evidence to support Carolin's original proposal that Australian *Calandrinia* species are not monophyletic with the New World ones (thus necessitating a new name), and show that *R. chamaecladum* is deeply nested within the Australian *Calandrinia* clade.

Accepting *Rumicastrum* as the name for the Australian clade would require 46 new combinations and add 82 synonyms (Hershkovitz's 35 *Parakeelya* names plus the combinations in *Calandrinia*) to this genus of 47 accepted species. If the name *Parakeelya* were to be conserved, only 16 new combinations would be required, with only the *Calandrinia* names and *Rumicastrum chamaecladum* becoming synonyms.

We propose that *Parakeelya* Hershk. be conserved against *Rumicastrum* Ulbr. for the following reasons:

(1) *Parakeelya* is a well-known name in Australia, having been used as a European vernacular since the mid-Nineteenth Century, and recognises the name of the plant used for millennia by the earliest Australians;

(2) *Parakeelya* has been used extensively in taxonomic literature for the Australian clade, while *Rumicastrum* has not; and

(3) Conservation of *Parakeelya* against *Rumicastrum* would minimise disadvantageous nomenclatural changes (Art. 14.1).