



Weeding the nettles I: Clarifying species limits in perennial, rhizomatous *Urtica* (Urticaceae) from southern and central Chile and Argentina.

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Abstract

Several taxa of perennial, rhizomatous *Urtica* have been described from Chile and Argentina but recent floristic treatments treat these inconsistently. Rhizomatous taxa of *Urtica* from southern and central Chile and Argentina are here revised based on field and cultivation studies, together with a revision of herbarium material, including the type collections. The application of names to the herbarium material revised, indicates the need for clear morphological species limits within these taxa. These we provide here. A total of three species of perennial, rhizomatous *Urtica* are recognised for southern and central Chile and Argentina, *Urtica magellanica*, *U. mollis* and *U. dioica* subsp. *dioica*. *Urtica magellanica* is here defined to include both *U. pseudodioica* and *U. bracteata* [\equiv *U. magellanica* subsp. *bracteata*] which are here placed in synonymy. A lectotype for *U. buchtienii* is designated and *U. mollis* is here defined to include *U. buchtienii* which we believe to represent an early season, high-altitude form of the same taxon. *Urtica dioica* subsp. *dioica* has been confused with *U. magellanica* and *U. bracteata* in the past and we here report it for the first time from Chile and Argentina. Diagnostic characters are tabulated and illustrated, and a key for identifying the three species is provided.

Key words: fruit morphology, indument, *Urtica bracteata*, *Urtica dioica*, *Urtica buchtienii*, *Urtica pseudodioica*, *Urtica magellanica*, *Urtica mollis*, Argentina, Chile, South America

Introduction

The genus *Urtica* Linnaeus (1753), Urticaceae, is a morphologically well-defined entity of nearly world-wide distribution (Friis 1993). Estimates of species numbers vary widely and the taxonomy is extremely difficult. For example, more than 20 infraspecific taxa of perennial *Urtica dioica* Linnaeus (1753) from Eurasia (Geltman 1982; Edmondson 1992; Jiarui *et al.* 2003; Weigend 2005, 2006), Africa (Friis & Immelman 2001), the Americas (Navas 1961; Soraru 1972; Woodland 1982; Juárez 1991; Boufford *et al.* 1997; Zuloaga *et al.* 2008) and New Zealand (Cheeseman 1925) are currently recognised. A critical biosystematic study by Woodland in 1982 of 14 North American taxon names (species and infraspecific) reduced these to three clearly defined, infraspecific taxa. The taxa of southern South America (Chile and Argentina), where eight species have been reported (Navas 1961; Soraru 1972), is particularly confusing and in need of critical study. Several taxa superficially resembling *Urtica dioica* have been described from southern Chile and Argentina, four of which are still recognised in the most recent treatments (Taylor 2003; Zuloaga *et al.* 2008). Confusion centres around the delimitation of three species described by Steudel (1850) based on several collections by Bertero from Chile, *Urtica bracteata* Steudel (1850), *U. pseudodioica* Steudel (1850) and *U. mollis* Steudel (1850). These species supposedly differ in leaf shape, free versus united stipules, monoecy versus dioecy, and pubescence. Typification of these three species was undertaken by Geltman (1994, 1998), with the types of *U. bracteata* and *U. pseudodioica* corresponding to different specimens of the same collection (Bertero 737).