



The genus *Balbisia* (Vivianiaceae, Geraniales) in Peru, Bolivia and northern Chile

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Abstract

Four species of *Balbisia* (Vivianiaceae, Geraniales) are currently recognized for Peru, but these taxa are exceedingly difficult to key out with the available literature. The type specimens of some were lost in the Berlin fire and extant literature does not indicate any geographical differentiation between the taxa recognized. Based on extensive field studies in central and southern Peru, herbarium studies and observations in cultivation it is concluded that there really are only two, weakly differentiated and apparently allopatric taxa present in Peru, namely *B. meyeniana* and *B. verticillata*. *Balbisia verticillata* is widespread along the western flanks of the Andes from Lima to northern Moquegua and is replaced by *B. meyeniana* in northern Moquegua and Tacna. *Balbisia weberbaueri*, described from Arequipa, is just a seasonal variant of *B. verticillata* and is therefore here synonymized. *Balbisia meyeniana* and *B. verticillata* show no consistent differences in flower or fruit, but are quite readily separable: *B. verticillata* has narrowly elliptical-acuminate leaflets (often linear in dried material) with recurved margins and dense, sericeous to villous pubescence. Leaves are whitish in the living state and greyish in the herbarium. *Balbisia meyeniana* has flat, narrowly obovate-acuminate to elliptical leaflets, which are finely puberulent to subglabrous and often slightly glaucous (in the living state) or fresh green (in dried material). Both species apparently also occur in Bolivia, but neither has been so far reported from Chile. Conversely, the fourth species reported for Peru, *B. peduncularis*, is apparently not present there, but is endemic to Chile. A neotype is selected for *Balbisia meyeniana*, lectotypes are designated for *B. peduncularis*, *B. integrifolia*, *B. verticillata*, *B. weberbaueri* and *Cruckshanksia cistiflora* Hook.

Introduction

Balbisia belongs to the Vivianiaceae (Weigend 2006, APG III 2009) and is characterized by sessile flowers subtended by an epicalyx and bowl-shaped corollas. It comprises a total of 10 species. All species of *Balbisia* are evergreen or semi-evergreen, densely branched shrubs of semiarid habitats. *Balbisia* is found on both sides of the Andes and in some inner-Andean valleys in Peru, Chile, Argentina and Bolivia. In Peru and neighbouring regions of Chile and Bolivia there are only *Balbisia* species with trifoliolate leaves, which would be assigned to *Balbisia* sect. *Balbisia* according to Hunziker & Ariza Espinar (1973).

The most recent complete revision of *Balbisia* was provided by Knuth (1912); since then regional revisions have been published for Chile (Ricardi 1957) and Argentina (Ariza Espinar 1995), and these data are summarized in Zuloaga *et al.* (2008). The *Catalogue of the Flowering Plants and Gymnosperms of Peru* (Brako & Zarucchi 1993) based on Macbride (1949) reports a total of four species of this genus from Peru, namely *B. meyeniana* Klotzsch, *B. peduncularis* (Lindley) D. Don, *B. verticillata* Cavanilles and *B. weberbaueri* R. Knuth. Macbride (1949) in turn based his key and diagnoses on Knuth (1912), who differentiated the species reported from Peru solely on the basis of pedicel length and flower size. Moreover, Knuth (1912) described these features in relative terms (“*flores magni*” versus “*flores media magnitudine*” respectively “*pedunculi foliis multiplo longiore*” versus “*pedunculi sub flore foliis fere aequilongi*”), Knuth