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Typification of *Pascalia glauca* (Heliantheae, Asteraceae), with historical notes on that name

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Abstract

Pascalia glauca (*Wedelia glauca*) is a member of the Heliantheae-Ecliptinae (Asteraceae) native to South America, which however has become naturalized and invasive around the globe. After studying the protologue and the historical materials kept at Real Jardín Botánico de Madrid (Spain), both a lectotype and an epitype are designated for *P. glauca*. Illustrations of living plants and the type material are presented, and some historical aspects involving the provenance of the original material are discussed to justify the type selection.

Key words: Compositae, Ecliptinae, epitype, Heliantheae, lectotype, nomenclature, typification, *Wedelia glauca*

Introduction

Tribe Heliantheae (sensu Panero 2007) includes about 113 genera and ca. 1500 species mostly native to the New World, in Central and South America. Members of this group are in many cases nitrophilous plants, usually growing on the ground disturbed by human activities. Consequently, a great number of taxa in the tribe have been introduced around the world, and many of them became invasive and noxious weeds (cfr. Holm *et al.* 1979; Panero 2007; Mabberley 2008; Boy & Witt 2013; EPPO 2014).

Pascalia glauca Gómez-Ortega (1797: 39) is said to be native to southern South America, where it is currently widespread from northern Chile and Paraguay through the Argentinian 'pampas' to southern Brasil and Uruguay (Burkart & Carera 1953; Hurrell *et al.* 2006: 68−69; Troiani & Steibel 1998). It was introduced in North America, southwestern Europe, India, southeastern Australia, New Zealand and South Africa (cfr. Carretero 1988; Mujawar 2013; Randall 2007), and it is regarded as an invasive weed (Freire *et al.* 2005: 63), very dangerous for grazing livestock, which causes acute lethal hepatotoxicosis when ingested (cfr. Giannitti *et al.* 2013). It belongs to tribe Heliantheae subtribe Ecliptinae (cfr. Panero 2007), and is often included in *Wedelia* Jacquin (1760: 8) (cfr. Greuter 2006; Randall 2007, among others). However, according to Strother (1991: 40) and Panero (2007), we accept this species in *Pascalia* Gómez-Ortega (1797: 39), a genus endemic to South America which includes only two species.

As part of the revision of some genera of Asteraceae for the 'Flora iberica' project, in the present contribution the name *P. glauca* is typified.

Material and methods

Personal collections of C. Gómez-Ortega, which are preserved at MA (acronym according to Thiers 2014), were searched. The protologue and additional historical information in the archives of Real Jardín Botánico de Madrid were also studied to facilitate type selection. Typification accords the International Code of Nomenclature of algae, fungi and plants (ICN; McNeill *et al.* 2012).

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The provenance of the original material

Some authors (cfr. Burkhart & Carera 1953: 116–117; Hooker & Arnott 1841: 311−312; Reiche 1903: 141) have questioned the Chilean provenance of the original material of *P. glauca*.

Reiche (1905: 14) and Blake (1917: 39) suggested that most probably Neé's seeds were collected not in Chillán (Chile) but in Mendoza (Argentina). These authors were based on the fact that most of known records by that time came from the latter country, and no additional Chilean localities were reported by previous authors after that in the protologue. Although *P. glauca* in Chile is currently known to occur but only in the Copiapó area (Atacama, northern Chile), it was collected there in January of 1886 by Johannes Ostornol and later named *Helianthus copiapinus* by Philippi (1895: 37), but probably these plants were introduced from Argentina (cfr. Burkhart & Carera 1953: 117−119). No evidence exists about collections of Neé from such a northern area, because he travelled from Talcahuano to Santiago de Chile and then crossed the Andes east to Mendoza (cfr. Cavanilles 1800: 53−54; Muñoz Garmendia 1992: 97−190). Furthermore, it is also well known among Iberian botanists that C. Gómez-Ortega was not very much rigorous in citation of materials and collection sites of his newly described plants (Muñoz Garmendia, pers. comm.).

Therefore, since historical vouchers are preserved at MA, including flowering and fruiting fragments of *P. glauca* collected by Neé himself in the 'pampas' between San Luis and Buenos Aires in central Argentina (MA-244277 and MA-244278), this area should be regarded as the most probable true type locality of *P. glauca*, which Neé visited during April and May of 1794. Moreover, this period of the year is perhaps more suitable to collect ripe seeds of *P. glauca* than January, the time when Neé stayed in Chillán.

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The curators and staff of the herbarium MA (Real Jardín Botánico de Madrid, CSIC) are kindly thanked. In particular, José Luis Fernández-Alonso and Charo Noya helped with some historical collections of *Pascalia glauca* at MA. Félix Muñoz Garmendia (Real Jardín Botánico de Madrid, CSIC) kindly contributed with data on some Luis Neé's collections. Carlos Aedo kindly supplied photographs of living plants from flowerbeds of Real Jardín Botánico de Madrid. The present contribution was partly supported by the research project 'Flora iberica' part IX, CGL-2011−28613-C03−01, from MICINN (Mº de Economía y Competitividad, Gobierno de España).

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