



Adesmia sessilifolia (Fabaceae), a new species from a relictual landscape in southern Brazil

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Abstract

In the context of a taxonomic study of *Adesmia* ser. *Psoraleoides*, an endemic group from grasslands in southern Brazil, the new species *Adesmia sessilifolia* was discovered. This species occurs in a restricted area that represents relictual connections in geomorphology in the South-Brazilian highlands. *Adesmia sessilifolia* resembles *A. paranensis* in having glabrous branches and leaves, pilose inflorescences, and arillate seeds, but differs in plant size and in having sessile leaves with apparent veins in both surfaces, as well as in its flowering and fruiting periods and geographic distribution. A description and illustration are provided together with a key for identification of the species of *Adesmia* ser. *Psoraleoides*.

Key words: *Adesmia* ser. *Psoraleoides*, grasslands, Leguminosae, taxonomy

Introduction

The genus *Adesmia* DC. was circumscribed in the monogeneric tribe *Adesmieae* (Polhill 1981a), based on diagnostic characters such as the free stamen filaments and lomentaceous pods. The genus was placed in an isolated position, distant from the tribe Dalbergieae (*sensu* Polhill 1981b), but the most recent circumscription of Dalbergieae *s.l.*, based on analyses of molecular and morphological data, supports an *Adesmia* clade—containing the genera *Adesmia*, *Amicia* Kunth, *Zornia* J.F.Gmel., *Poiretia* Vent., *Nissolia* Jacq. and *Chaetocalyx* DC. with about 360 species in total—as a sister to the *Pterocarpus* and *Dalbergia* clades (Lavin *et al.* 2001, Klitgaard & Lavin 2005). The *Adesmia* clade is defined by the following synapomorphies: presence of herbaceous species (modified in some taxa), leaves with few opposite leaflets and pedicel confluent with the calyx (modified only in some species of *Nissolia*) (Lavin *et al.* 2001).

The genus *Adesmia* is endemic to South America, comprises about 230 species, and is widespread in Central Chile, South and West Argentina, extending through the Andean valleys into Bolivia and southern Peru, as well as Uruguay and southern Brazil (Burkart 1967a). The basal *Adesmia* lineages contain the high-Andean and temperate species, with an estimated divergence time around 34.5 ± 2.4 Mya (Schrire *et al.* 2005). The temperate taxa from the Southern Hemisphere (as the *Adesmia* clade in dalbergioid legumes) probably had a secondary diversification in the grass biome of tropical regions, occupying mainly higher elevations in tropical areas (Schrire *et al.* 2005).

In southern Brazil, the genus *Adesmia* is represented by 17 species, belonging to subgenus *Adesmia* and is divided into four series (Burkart 1967b): *Muricatae*, *Subnuda*, *Bicolores* and *Psoraleoides* (Miotto 1993, Miotto & Leitão Filho 1993). *Adesmia* ser. *Psoraleoides* comprises eleven species with a distribution restricted to the highlands of southern Brazil, mainly in patches of grasslands and rock outcrops amongst