



***Salvia guaneorum* (Labiatae), a new species from the Chicamocha Canyon, Colombia**

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Abstract

A new species of *Salvia* subgen. *Calosphace* from the Chicamocha Canyon, in the Eastern Cordillera of Colombia is described and illustrated. The morphological affinities and putative relatives with other Colombian species of the sections *Angulatae* and *Longipes* are discussed.

Key words: Chicamocha, Neotropic, *Salvia* sect. *Angulatae*, *Salvia* sect. *Longipes*, *Salvia* subgen. *Calosphace*

Resumen

Se describe e ilustra una especie nueva de *Salvia* subgen. *Calosphace*, procedente del Cañón del Chicamocha, en la Cordillera Oriental de Colombia. Se discuten sus afinidades morfológicas y posible relación con otras especies colombianas de las secciones *Angulatae* y *Longipes*.

Palabras clave: Chicamocha, Neotrópico, *Salvia* sect. *Angulatae*, *Salvia* sect. *Longipes*, *Salvia* subgen. *Calosphace*

Introduction

The cosmopolitan genus *Salvia* L., with about 1000 species, is the largest of the family Labiatae. Of the four traditionally recognized subgenera in *Salvia* (Benth 1876), the largest, with about 540 species, is the subgenus *Calosphace* Benth. It is a predominantly tropical group, restricted to the New World, which according to some phylogenetic analyses this group seem to be monophyletic (Epling 1936, 1939, Harley *et al.* 2004, Walker *et al.* 2004, Walker & Systma 2007). In Colombia the genus *Salvia* is represented by at least 88 recognized taxa of herbs and shrubs, and is also the most diverse genus of Colombian Labiatae (Fernández-Alonso *et al.* 2003, 2009, Fernández-Alonso 2012b).

In the last decade some work was carried out on the Colombian species of *Salvia*, dealing with various taxonomic and chorological novelties and some cases of natural hybridization, mainly in the sections *Flexuosae* (Epling) Epling, *Longipes* Epling, *Rubescentes* (Epling) Epling, *Angulatae* (Epling) Epling, *Purpureae* (Epling) Epling, *Siphonantha* (Epling) Epling and *Tomentellae* (Epling) Epling of the subgenus *Calosphace* (Fernández-Alonso 1995, 2002, 2003a, b; 2006, 2008a, b). Recent specimen collections in some unexplored areas of the basin of the river Chicamocha (Chicamocha Canyon), included some undescribed taxa of Labiatae are currently being studied (Fernández-Alonso 2010, 2012a). In this work, I propose a new species of *Salvia* that is related to some Colombian taxa of the section *Longipes* and *Angulatae*.

Material examined

The material for this new species was collected in an unexplored region of Santander Department, Colombia during the course of bioprospecting for essential oils carried out with the National University of Colombia (Fernández-Alonso & Chacón 2012). This appears to be the first known collection of this plant and there is not similar

Discussion and affinities

On account of its herbaceous graceful habit, with long-stalked leaves, with cordate blades, membranous, sessile glands dotted on the underside and its flowers with 3-nerved upper lip, corolla with basal invagination into the tube and lower lip patent, clearly longer than the bottom, *S. guaneorum* has obvious affinities with the South American species of Section *Longipes*. The only exception would be *S. madreensis* Epling, Mexican species which has chartaceous leaves and yellow flowers with long tube without basal invagination, which probably warrants relocation to a different section. Moreover, the presence in *S. guaneorum* of pauciflorous verticillasters (2–3 flowers) and shortly pedicellate flowers, clearly distinguishes the plant described here, from the rest of the species of the section *Longipes*, and questions its allocation to it. Within this section, *S. erythrostoma*, would be the most similar species in terms of stem morphology and the presence of subtruncate upper calyx lip. *S. gracilipes* Epling, of Merida, Venezuela and *S. codazziana* Fern. Alonso from N Colombia differ by having long-lipped calyx subequal (Fernández-Alonso 1995). Moreover, the cordate leaves of *S. guaneorum* and morphology of the calyx and corolla (color and lips) resemble two species of *Angulatae* section: *S. tiliifolia* Vahl widely distributed and *S. chicamochae* Wood & Harley, also endemic to this same Chicamocha Canyon (Fernández-Alonso 2003a). However, the differences in habit, indumentum, some leaf traits and in the inflorescence are well marked and allow to clearly separate *S. guaneorum* of the species of *Angulatae* section.

The mucilage of the nutlet of *S. guaneorum*, cottony type (Fig. 4), consists of radial cords flexuous and corresponds to the type IIA, those set in Fernández-Alonso *et al.* (2009). This type of mucilage is also present in some species of the subgenus *Calosphace* previously studied as *S. coccinea* Etling. (Sect. *Subrotundae*) and *S. splendens* (sect. *Secundae*). The moistened nutlet of *S. guaneorum*, also shows a series of irregular folds on the dorsal surface of the nutlet, which is not present in the dry nutlet (Fig. 4a–c). This ornamentation had not been observed in other species of *Salvia*, may be similar to the conical structures embedded in mucilage, described in the nutlet of *Ocimum gratissimum* L. (subfam. Nepetoideae).

Additional specimens examined (Paratypes):—COLOMBIA. Santander: Vía Curos – Málaga, antes de la Hacienda La Tahona, flancos herbosos de la carretera, 06°56'N, 72°56'W, 2050 m, 26 June 2009. Hierba erecta, aspecto bianual, sin flores, *J. L. Fernández-Alonso & C.N. Díaz-Pérez 28102* (COL!, G!, MEDEL!, MA 858793, 858794, 858795!, MO!, P!); *Ibidem*, vía Curos–Málaga, desvío San Andrés–Molagavita, taludes húmedos junto al camino, 06°46'N, 72°50'W, 1680 m, 28 June 2009. fl, *J. L. Fernández-Alonso & C.N. Díaz-Pérez 28170* (B!, COL!, HUA!, MA 858791, 858792!, MO!, W!).

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