

**FIRST RECORD OF LA PLATE RIVER GOLDENROD  
*SOLIDAGO CHILENSIS* MEYEN (ASTERACEAE),  
IN THE ISLAND OF MADEIRA (PORTUGAL)**

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With 2 figures

*ABSTRACT.* The La Plate River Goldenrod *Solidago chilensis* Meyen is reported for the first time from the Island of Madeira. The genus *Solidago* L. (Asteraceae) includes about 100 species found in North America, Mexico, South America and Eurasia. Three species have been recorded in Portugal, two of them from the archipelago of Azores [*Solidago gigantea* Aiton subsp. *serotina* (Kuntze) McNeill, *Solidago sempervirens* L.] and one from mainland Portugal (*Solidago virgaurea* L.).

KEY WORDS: *Solidago*, Asteraceae, new record, Madeira.

*RESUMO.* Pela primeira vez é assinalada a ocorrência da espécie *Solidago chilensis* Meyen na ilha da Madeira. O género *Solidago* L. (Asteraceae) conta com cerca de 100 espécies distribuídas pela América do Norte, México, América do Sul e Eurásia. Em território português são conhecidas 3 espécies, 2 no arquipélago dos Açores [*Solidago gigantea* Aiton subsp. *serotina* (Kuntze) McNeill, *Solidago sempervirens* L.] e 1 espécie em Portugal Continental (*Solidago virgaurea* L.).

PALAVRAS-CHAVE: *Solidago*, Asteraceae, novo registo, Madeira.

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## INTRODUCTION

The Aster family (Asteraceae) totals 132 *taxa* on the Island of Madeira. Among these, 50 are naturalized *taxa* (48 introduced and 2 possible introduced) (JARDIM & SEQUEIRA, 2008).

According to SEMPLE & COOK (2006) the genus *Solidago* has about 100 species and is found primarily in North America with some species in South America and Eurasia (eight in Mexico, four in South America, six to ten in Europe and Asia).

In Portugal, three species of *Solidago* are known: *Solidago virgaurea* L. (mainland Portugal), *Solidago sempervirens* L. (Azores: all the islands) and *Solidago gigantea* Aiton subsp. *serotina* (Kuntze) McNeill (Azores: São Miguel, Pico, São Jorge and Terceira) (FRANCO, 1984).

Among the Macaronesian region the genus *Solidago* is found only in the archipelago of Azores (HANSEN & SUNDING, 1993; ACEBES GINOVÉS *et al.*, 2004; SÁNCHEZ-PINTO *et al.*, 2005; SILVA *et al.*, 2005).

PALHINHA (1966) refers to *Solidago sempervirens* L. as being part of the primitive flora of Azores but SJÖGREN (1973), referring to CEDERCREUTZ (1941), states this *taxon* as probably deliberately introduced from America. Recently SILVA *et al.* (2005) stated that *Solidago sempervirens* L. has, in the archipelago of Azores, a doubtful colonization status whereas *Solidago gigantea* Aiton subsp. *serotina* (Kuntze) McNeill is an introduced *taxon*.

The specimens of *Solidago chilensis* Meyen reported herein are deposited in the herbarium of Museu Municipal do Funchal (Natural History) (MADM) and were found on the north coast of the Island of Madeira on a cultivated terrace (Fig. 1).



Fig. 1 - *Solidago chilensis*'s habitat.

## STUDIED MATERIAL

Portugal, Madeira: Cabo da Vargem, Rosário, São Vicente, 28S309831 3627648, 15.XI.2007, Juan Silva, 417 m a. s. l. (MADM 416, 417, 418). Lopez Laphitz (2009) included MADM 1847 and 1848 in a study of the *S. chilensis* complex and the specimens were placed with high probability in *S. chilensis* in a discriminant analysis including *S. chilensis* and *S. microglossa* from South America and *S. juliae*, *S. leavenworthii* and *S. tortifolia* from North America.

### *Solidago chilensis* Meyen

*Plants*: 7-170 cm.

*Stems*: erect from a branching rhizome, glabrate to moderately short canescent, hairs less than 0.4 mm long.

*Leaves*: margins ciliate. Basal and lower stem: oblanceolate, in most of the cases the biggest ones on the shoot, sometimes twisted after senescing, nearly always withering well before flowering; proximal: persisting, smaller than basal, sessile, blades linear to lanceolate, 13-130 x 2-32 mm, with 0-12 serrations, abaxial and adaxial faces glabrous or sparsely strigose; distal: linear-lanceolate, 10-80 x 1-27 mm, with 0-10 serrations.

*Heads*: pyramidal paniculiform arrays, branches recurved, secund (Fig. 2A).

*Involucre*: campanulate.

*Phyllaries*: in 3-4 series, outer ovate, inner oblanceolate, 1-3 nerves.

*Ray florets*: 7-21; laminae 0.4-3.1 x 0.1-0.9 mm, yellow (Fig. 2B).

*Disc florets*: 2-30; corollas 2.4-4.9 mm, yellow, lobes 1-3.9 mm (Fig. 2B).

*Cypselae*: body length at anthesis, 0.3-3.3 mm; longest pappus bristles 1.9-5.1 mm.  
 $2n = 18$ .

*Flowering*: October-December.

## CONCLUSIONS

*Solidago chilensis* Meyen was found in Madeira in only one population, possibly as an accidental introduction or as an ornamental escape. In fact the Madeira flora includes 35.7 % of introduced plants (JARDIM & SEQUEIRA, 2008) many of them introduced only recently (VIEIRA, 2002).

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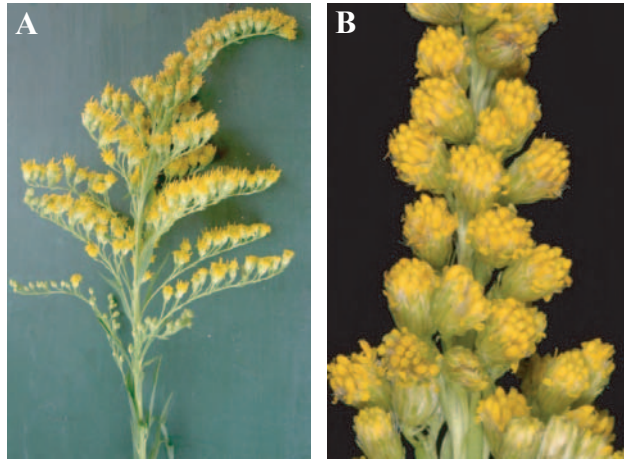


Fig. 2 - A) *Solidago chilensis*'s inflorescence; B) *Solidago chilensis*'s capitula.

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