



Apinagia brejoagrestinensis (Podostemaceae): a new rheophyte from the Atlantic Forest of northeastern Brazil

ALDALÉA S. TAVARES¹ & MARCELO SOBRAL-LEITE^{2,3}

¹Universidade Federal de Santa Catarina, Centro de Ciências Biológicas, Departamento de Botânica, Campus Trindade, Caixa Postal 88040-900, Florianópolis, Santa Catarina, Brazil. asprada@ccb.ufsc.br

²Programa de Pós-Graduação em Biologia Vegetal, Universidade Federal de Pernambuco, Av. Prof. Moraes Rego, 1235, Cidade Universitária, Recife, Pernambuco, Brazil. msobralleite@yahoo.com.br

Actual address: ³Universidade Estadual do Piauí, Av. Joaquina Nogueira de Oliveira, s/n, Aeroporto, Corrente, Piauí, Brazil

Abstract

We describe and illustrate a new Podostemaceae species for the Atlantic Forest of northeastern Brazil: *Apinagia brejoagrestinensis*. Among the characteristics that separate this species from other congeners are: flower arrangement, shape and number of tepals, and presence of trichomes on spathe and tepals. The latter characteristic is reported for the first time in the genus *Apinagia*. The new species is known through a single and small population restricted to a short reach of a dammed river with deforested margins, and so it is assumed to be vulnerable to extinction.

Key words: Brejos de Altitude, endangered species, IUCN's Red List, Borborema Plateau, aquatic plants

Introduction

Podostemaceae are aquatic angiosperms that live predominantly in lotic ecosystems fixed to the rocky substrate of waterfalls and rapids (Cook 1990, Tavares *et al.* 2006, Philbrick *et al.* 2010). The family contains ca. 54 genera and 300 species (Koi *et al.* 2012), out of which 21 genera and 135 species are Neotropical (Tippery *et al.* 2011). Many Neotropical species are endemic (Tavares *et al.* 2006, Philbrick *et al.* 2010, Tippery *et al.* 2011; Sobral-Leite 2013). The family is considered *sui generis* morphologically and enigmatic from an ecologic and phylogenetic perspective (Mohan Ram & Sehgal 1992, Philbrick & Novelo 1995). Recently, there was an increase in the interest in this family, which improved our knowledge of its morphology, pollination (Sehgal *et al.* 2009 Sobral-Leite *et al.* 2011, Khanduri *et al.* 2014), and evolution (Kita & Kato 2004, Moline *et al.* 2007). However, there is a large gap of knowledge of its basic taxonomy, in particular in the Neotropics (Tavares *et al.* 2006, Mello *et al.* 2011, Tippery *et al.* 2011).

Apinagia Tulasne (1849: 97) counts currently with 51 taxa distributed in tropical and subtropical South America (Philbrick *et al.* 2010). Of the 28 species and three varieties recognized for Brazil, most occur in the Amazon (Tavares 1997, Tavares *et al.* 2006, Sobral-Leite 2013). Current estimates of the geographic distribution of Neotropical Podostemaceae show that *Apinagia* concentrates most endemic taxa (Tavares 1997, Tavares *et al.* 2006, Philbrick *et al.* 2010, Sobral-Leite 2013). Recent taxonomic studies on *Apinagia* have been carried out by Van Royen (1951), Hollander & Berg (1983), Tavares (1997), and Tavares *et al.* (2006). The taxonomy of the genus is simple, so that most species are easy to identify (Tavares 1997, Tavares *et al.* 2006). However, the type material of some species is dubious, because it is incomplete (e.g., lacking flowers) or poorly preserved (cf. Van Royen 1951, Philbrick & Novelo 1995). Additional material and data on geographic distribution may help in the identification (Tavares 1997, Mello *et al.* 2011).

In order to fill this gap, we started, since 2005, expeditions in the Atlantic Forest of northeast Brazil (Fig. 1), where Podostemaceae remains poorly known (see Van Royen, 1951, 1953, 1954). Some collected plants were morphologically unique and we recognize them as a new species, herein described and illustrated.