



Philcoxia rhizomatosa (Gratioleae, Plantaginaceae): a new carnivorous species from Minas Gerais, Brazil

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Abstract

Philcoxia rhizomatosa, a new species of the carnivorous genus *Philcoxia* from tribe Gratioleae (Plantaginaceae), is here described and illustrated. The species has larger leaves than the other members of the genus, presents a conspicuous and branched rhizome and is the only one with entirely glabrous inflorescence, pedicel and calyx. This taxon is possibly endemic to a sandy outcrop in the transition vegetation between the Cerrado and the Caatinga in the municipality of Botumirim, Minas Gerais, Brazil. Preliminary tests for carnivory were performed and showed the presence of nematodes and activity of phosphatase on leaf surfaces, suggesting that *P. rhizomatosa* is a carnivorous plant.

Resumo

Philcoxia rhizomatosa é descrita e ilustrada como uma nova espécie do gênero de plantas carnívoras *Philcoxia* da tribo Gratioleae (Plantaginaceae). A espécie possui folhas maiores que outras espécies do gênero, apresenta um rizoma conspícuo e ramificado e é a única com inflorescência, pedicelo e cálice completamente glabros. Esta nova espécie é, aparentemente, endêmica de um areal em vegetação de transição entre Cerrado e Caatinga, no município de Botumirim, Minas Gerais, Brasil. Testes de carnivoria evidenciaram presença de nematódeos e atividade de fosfatase na superfície das folhas, o que sugere que *P. rhizomatosa* é uma planta carnívora.

Key words: Endemic, Carnivory, Espinhaço Range, Quartzite, Nematodes

Introduction

Philcoxia P.Taylor & V.C.Souza in Taylor *et al.* (2000: 159) is a small genus of the tribe Gratioleae Benth (1846: 340) of the Plantaginaceae Jussieu (1789: 89). It comprises four species—*P. bahiensis* V.C.Souza & Harley in Taylor *et al.* (2000: 160), *P. goiasensis* P.Taylor in Taylor *et al.* (2000: 160), *P. minensis* V.C.Souza & Giul. in Taylor *et al.* (2000: 161) and *P. tuberosa* Carvalho & Queiroz (2014: 15). Species of *Philcoxia* have a narrow distribution, occurring only in small patches of sandy soil in the Brazilian Cerrado and Caatinga (Taylor *et al.* 2000, Carvalho & Queiroz 2014). The genus is characterized by underground stems, peltate leaves at or below the soil surface, flowers arranged in a helicoid cyme and androecium with two stamens and monothealous anthers (Fritsch *et al.* 2007, Souza & Giulietti 2009), rare features among angiosperms and some unique within Plantaginaceae. Another special feature found in this genus is the carnivory, recently described in *Philcoxia minensis* (Guilherme Pereira *et al.* 2012). Representatives of *Philcoxia* are found in areas of sandy soil in the Brazilian Cerrado and Caatinga, highly threatened formations, vulnerable to criminal fire and the human activities such as mining for diamonds and crystals, livestock and *Eucalyptus* and soya