



Ludwigia litoranea (Onagraceae), a new species from coastal southern Brazil

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Abstract

Ludwigia litoranea (Onagraceae) is recognized as a new species from coastal southern Brazil. The new species has close morphological affinities to *L. grandiflora* and *L. hookeri*, from which it is distinguished by the narrowly linear stipules and bracteoles with a glandular ovoid apex. Herein are provided the description and illustration together with habitat information and conservation assessment.

Key words: taxonomy, wetland, coastal plain

Introduction

Ludwigia Linnaeus (1753:118) is a pantropical genus that comprises about 82 species grouped in 23 sections, and is the only member of the subfamily Ludwigioideae of the family Onagraceae (Wagner *et al.* 2007). *Ludwigia* is easily distinguished from other Onagraceae by the combination of floral tube absent, persistence of the sepals on the mature capsules, pollen shed in tetrads or polyads, nectary at base of stamen (Eyde 1981), ovule archesporium single-celled, and outer integument dermal (Tobe & Raven 1986).

The diversity of *Ludwigia* is geographically most concentrated in South America (Wagner *et al.* 2007), where nearly all species occur in Brazil. Nevertheless, the number of species may be underestimated because taxonomic studies in Brazilian *Ludwigia* are scarce, except for treatments of the family Onagraceae by Munz (1942, 1947).

During a taxonomic and floristic study of the genus *Ludwigia* in the state of Rio Grande do Sul, southern Brazil, we recognized a new species. This species is here described and illustrated, its affinities are discussed and its area of occupancy is evaluated.

Material and methods

The description of *Ludwigia litoranea* as well as the comparison with others species of the genus was carried out based on field observations, analysis of herbarium material and literature review. The examination of herbarium specimens based on collections in Brazil (FLOR, HAS, HUCS, HURG, ICN, MBM, PACA, PEL, SMDB), Argentina (CTES) and consulted national and international virtual herbaria. Herbarium acronyms are cited according to Thiers (2015).

The conservation status of species was assessed using the IUCN (2014) criteria based on the GeoCat analysis. The area of occupancy (AOO) was estimated using GeoCat (Bachman *et al.* 2011) that consist in a grid size of 1 km². That seems to be an appropriate scale to the area of occupancy thresholds according field knowledge.

Results

Ludwigia litoranea Cocco & Boldrini, *sp. nov.* (Figures 1 and 2)

Ludwigia litoranea differs from *L. grandiflora*, by its narrowly linear stipules (versus ovate), and from *L. hookeri* by its stipules and bracteoles narrowly linear with a glandular ovoid, apex (vs. fusiform) and by stipules that are similar to bracteoles (vs. deltate).