

## NOTE ON THE DISTRIBUTION OF *POLYCARPAEA CORYMBOSA* (CARYOPHYLLACEAE) IN BRAZIL

ARYANA VASQUE FROTA GUTERRES,<sup>1,2</sup> INGRID FABIANA FONSECA AMORIM,<sup>3</sup>  
JAILSON FERREIRA MOREIRA,<sup>4</sup> AND EDUARDO BEZERRA DE ALMEIDA JR.<sup>5</sup>

**Abstract.** This paper presents the distribution of *Polycarpea corymbosa* in Brazil with particular attention to the state of Maranhão. *Polycarpea corymbosa* is an herb with lanceolate leaves and capsular fruits. This paper provides data on area of distribution and taxonomy of the species.

**Keywords:** Cerrado, herbaceous, taxonomy, plant diversity

The family Caryophyllaceae has a cosmopolitan distribution (Bittrich, 1993; Harbaugh et al., 2010). It is common in Mediterranean and Asian regions and found less frequently in Africa, America, and Oceania (Dequan et al., 2001). It includes three subfamilies (Alsinoideae, Caryophylloideae, and Paronychioideae) with about 3,000 species and 88 genera (Rabeler and Hartman, 2005); ca. 42 species distributed among 17 genera are found in Brazil (Flora do Brasil, 2020).

*Polycarpea* Lam. (Caryophyllaceae) has ca. 50 species that occur predominantly in the Old World (Dequan et al., 2001). *Polycarpea corymbosa* (L.) Lam. is the only species found in Brazil (Flora do Brasil, 2020). This species is characterized by its herbaceous habit and opposite

leaves, apparently verticillate, cymose inflorescences, and capsular fruits (Dequan et al., 2001). It is rare in Brazil and there are few collections from the Brazilian Northeast; the goal of this article is to increase knowledge of its distribution.

We wish to highlight the need to understand extinction threat levels in rare species located in critically endangered biomes like Cerrado. We also aim to reinforce the importance of floristic studies that contribute to the identification and distribution of species in forest fragments that need targeted actions for their conservation (Almeida et al., 2012). This paper contributes to expansion and reproductive phenology records for species in Brazil, mainly in the state of Maranhão in the Northeast region.

### MATERIALS AND METHODS

Our study was based on field collections in the main herbaria of Maranhão state (MAR, Herbarium of the Federal University of Maranhão), Bahia state (HUEFS, Herbarium of the State University of Feira de Santana), and Brasília (CEN, Herbarium of EMBRAPA) (acronyms follow Thiers, continuously updated) and websites (Flora do Brasil, 2020; Tropicos, 2020). The websites for Flora do Brasil (2020) and Tropicos (2020) were consulted for geographic distributions and phytogeographic domains. Data on reproductive phenology were obtained from labels of the exsiccatae consulted. Two new occurrences of *Polycarpea corymbosa* were detected for Maranhão state—in the city of Alto Parnaíba (09°11'39"S, 45°54'27"W) in southern Maranhão in the Cerrado biome, and in Tutoia (42°11'01"S, 2°43'55"W) in the northeast—and are reported for the first time. The collected specimens were deposited in the herbarium of Maranhão (MAR) in the Federal University of Maranhão.

The study of Dequan et al. (2001), together with the images of exsiccates in the database SpeciesLink (<http://inct.splink.org.br/>), were consulted to confirm the species. We used data from online records of 135 exsiccates, including records collected in Maranhão state, to draw up the distribution map (Fig. 1). The map was prepared using QGIS format and software (version 2.14) obtained from the Brazilian Institute of Geography and Statistics (IBGE, 2016).

*Polycarpea corymbosa* (L.) Lam., Tabl. Encycl. 2: 129 (1797). Fig. 2A–D.

Annual herb, 0.4–0.5 m tall. Stems erect, cylindrical, branched from the base, pilose. Leaves 3.4–4.6 × 0.1–0.2 mm, filiform, apparently verticillate, chartaceous, attenuate base, acute apex, margin entire, pilose. Bracts 2.4–3.4 × 0.5–0.7 mm, paleaceous, hyaline, narrowly elliptic to

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<sup>1</sup> Departamento de Ciências Biológicas, Universidade Estadual de Feira de Santana, Pós-Graduação em Botânica, Av. Transnordestina s/n, Novo Horizonte, CEP 44036-900, Feira de Santana, Bahia, Brasil.

<sup>2</sup> Corresponding author: aryanavasque2008@hotmail.com

<sup>3</sup> Departamento de Biologia, Universidade Federal do Maranhão, Pós-Graduação em Biodiversidade e Biotecnologia da Amazônia legal (BIONORTE), Avenida dos Portugueses, 1966, Bacanga, CEP 65080-805, São Luís, MA, Brasil.

<sup>4</sup> Departamento de Ciências Agrárias, Universidade Estadual do Maranhão, Pós-Graduação em Agroecologia, Cidade Universitária Paulo VI, s/n, Tirirical, São Luís, Maranhão, Brasil; jaiilsongeo32@gmail.com

<sup>5</sup> Universidade Federal do Maranhão, Pós-Graduação em Biodiversidade e Conservação, Departamento de Biologia, Avenida dos Portugueses, 1966, Bacanga, CEP 65080-805, São Luís, MA, Brasil.

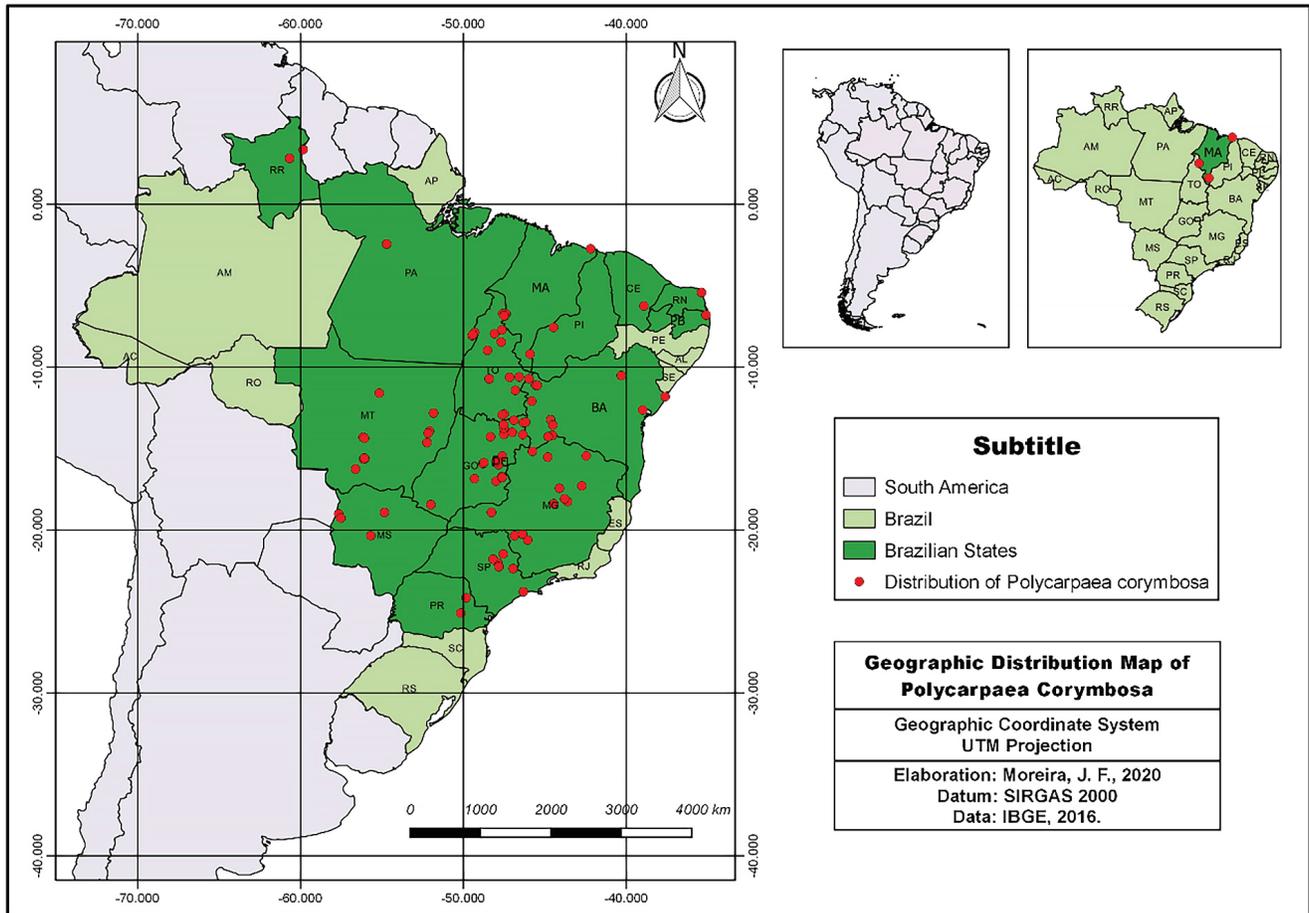


FIGURE 1. Map of the distribution of *Polycarpaea corymbosa* (L.) Lam in Brazil.

lanceolate, enfolding the inflorescence. *Inflorescence* axillary, pedunculate cymes (4–5 × 3.2–6.7 mm); paleaceous bracts 4–5 around at the base. Flowers translucent, 2.9–3.0 × 0.6–0.8 mm long. *Calyx* with bracts, *Calyx* with hyaline bracts, *sepals* hyaline, glabrous, lanceolate, acuminate, 2.2–3.2 × 0.4–0.9 mm, acute apex. *Corolla* with lobes slightly shorter than the calyx; petals 5, free, 0.36–0.57 × 0.18–0.36 mm, rose to red-brown, ovate. *Stamens* usually 5–6, free, 0.44 mm, *anthers* 0.08 mm, yellow. *Ovary* 0.5–1.2 × 0.1–0.7 mm long, super, 1-locular, ovoid, glabrous, undivided style, *ovules* 3.

**Distribution and habitat:** Asia, Africa, and America. In Brazil, this species is located in Amazônia, caatinga, cerrado, Mata Atlântica, pampa, and Pantanal domains (Flora do Brasil, 2020), where it is found growing in humid, sandy soils (Dequan et al., 2001), mainly in campo de altitude, campo limpo, campo rupestre, savanna Amazonica, and rock fields (Flora do Brasil, 2020).

It occurs in the midwestern and southeastern regions of Brazil. There were few collections from the northeastern region, augmented with the ones reported herein from the state of Maranhão.

**Phenology:** flowering in and fruiting between January and July.

**Additional specimens examined:** BRAZIL. Maranhão: Alto do Parnaíba, 24 May 2014, fl., fr., *E. B. Almeida Jr. 1256* (MAR); BRAZIL. Bahia: Formosa do Rio Preto, 02 May 2009, fl., fr., *L. P. Queiroz. 14457* (HUEFS); BRAZIL. Bahia: Inhaúmas, 28 April 1980, fl., fr., *Harley et al. 21899* (UEC); BRAZIL. Mato Grosso: Várzea Grande, 23 June 1995, fl., fr., *M. Macêdo 4253* (INPA); BRAZIL. Pará: Santarém, 11 July 1952, fl., fr., *G. A. Black 52-15625* (INPA); BRAZIL. Paraíba: Rio Tinto, 22 August 2002, *A. C. Sevilha 2335* (CEN 55359); BRAZIL. São Paulo: Mogi Guaçu, 09 January 2001, fl., fr., *M. C. E. Amaral, MCE and Bittrich V2001/05* (UEC).

This species is easily distinguished by its filiform leaves, paleaceous and hyaline bracts enfolding a set of flowers, short style (0.1 mm long), and long ovary. Popularly known as “pallipoondu” in Tamil Nadu, it has ornamental and, in African communities, medicinal uses (Balamurugan et al., 2012).

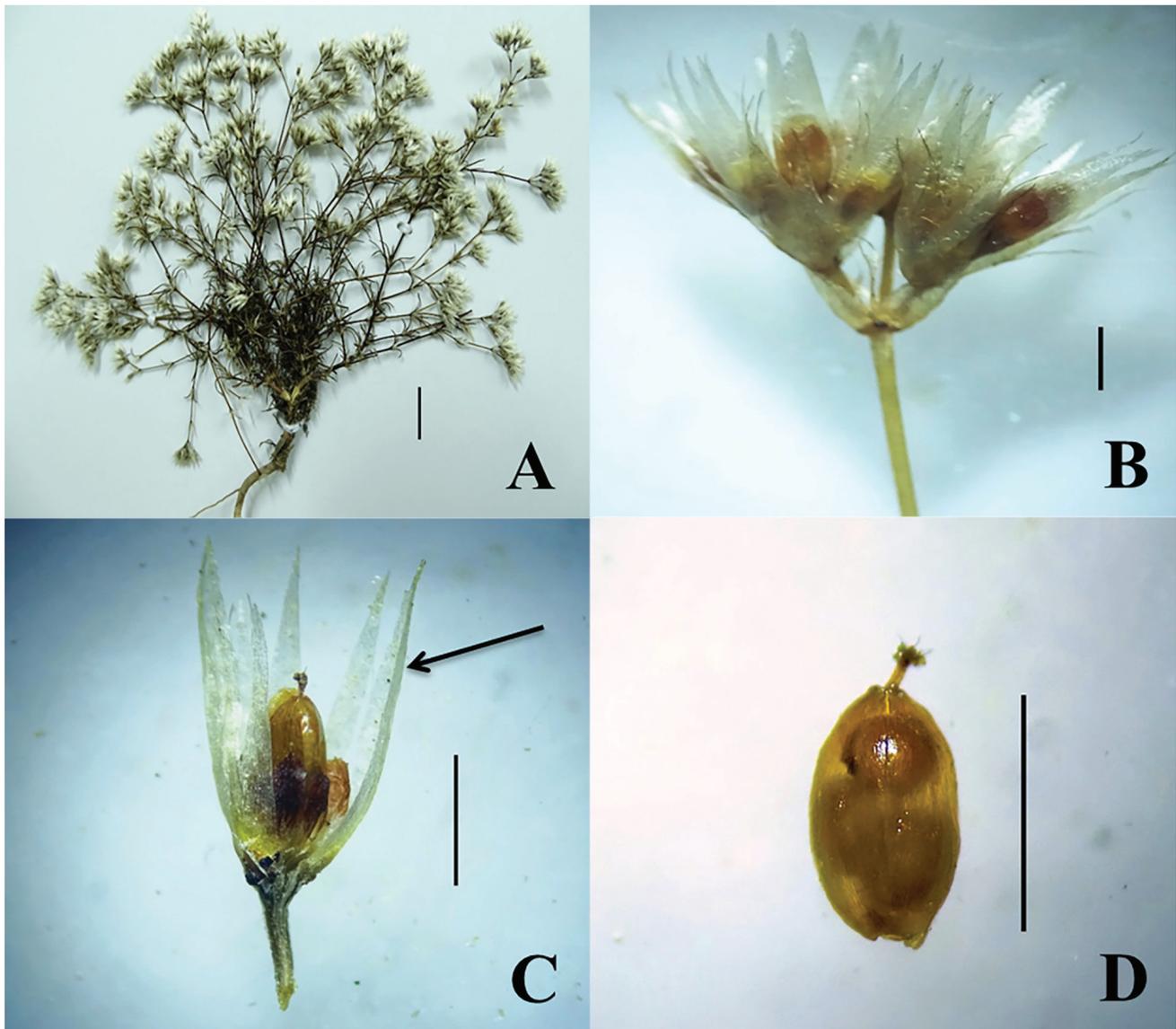


FIGURE 2. *Polycarphaea corymbosa* (L) Lam. **A**, habit (scale bar = 1 cm); **B**, inflorescence, general view (scale bar = 1 mm); **C**, bracts, lateral view (scale bar = 1 mm); **D**, ovary and style, frontal view (scale bar = 1 mm). Based on *E. B. Almeida Jr. 1256* (MAR).

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