Conservation News

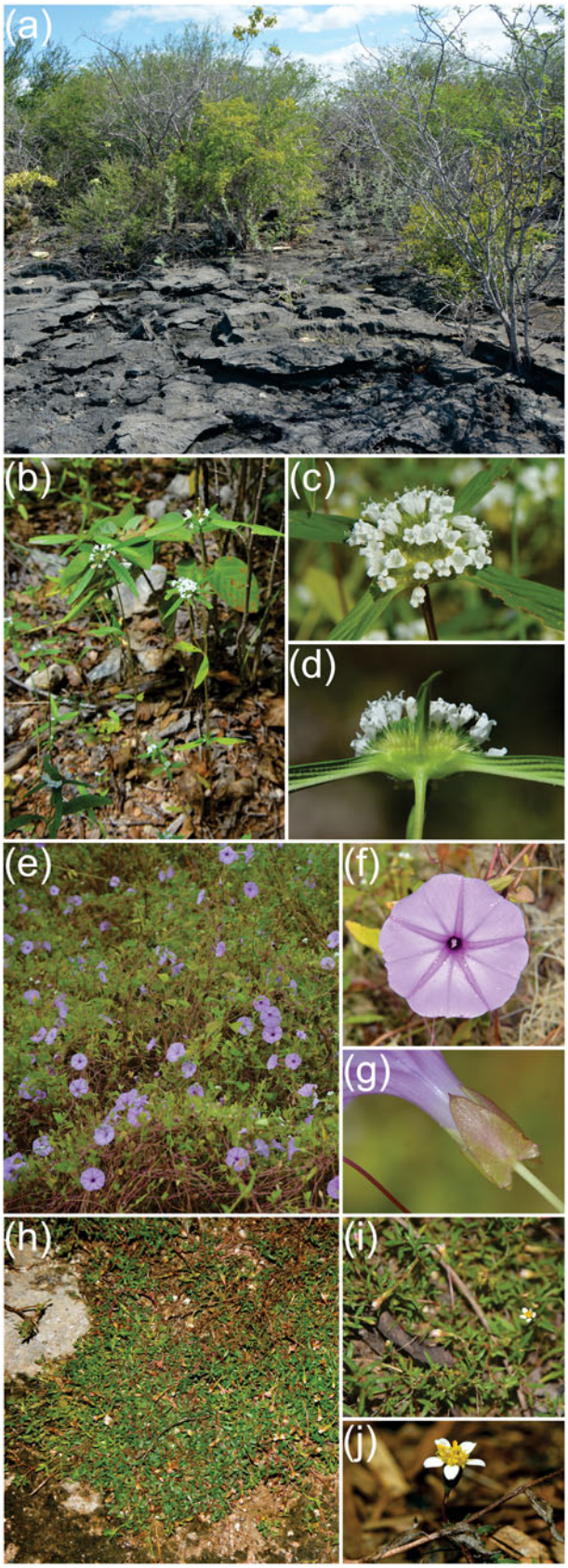
New subpopulations of three threatened plant species endemic to the karstic areas of the Potiguar Basin, Brazil

The flora of the karstic areas discontinuously exposed in the Potiguar Basin in north-east Brazil is poorly studied. However, three annual herbaceous flowering plant species have recently been described as endemic to these areas: *Borreria apodiensis* (Souza et al., 2016, *Acta Botanica Brasilica*, 30, 283–289), *Ipomoea apodiensis* (Wood et al., 2020, *PhytoKeys*, 143, 1–823) and *Pectis loiolae* (Rebouças et al., 2021, *Systematic Botany*, 46, 486–492), known from five, two and one locations, respectively. *Ipomoea apodiensis* is categorized as Endangered on the IUCN Red List, and recommendations have been made to categorize *B. apodiensis* and *P. loiolae* as Endangered and Data Deficient, respectively.

During February–July 2024, as part of project no. PIA10010-2022, we surveyed for new subpopulations of these species. We discovered three additional locations, on limestone outcrops of 220–8,500 ha, of *B. apodiensis* and *I. apodiensis*, and two of *P. loiolae*, which was previously known only from the type locality, increasing the extent of occurrence (EOO) and area of occupancy (AOO) of all three species. We recorded *B. apodiensis* and *I. apodiensis* near the municipality of Jandaíra (in Rio Grande do Norte), c. 200 km from their previously known range in the Chapada do Apodi. The two new locations of *P. loiolae* were in the Chapada do Apodi. We also examined herbarium specimens from the local MOSS herbarium in Rio Grande do Norte, expanding our knowledge of the species' distributions and providing new insights into flowering and fruiting periods.

Based on their increased EOO, both *B. apodiensis* and *I. apodiensis* could be recategorized as Vulnerable, but their discontinuous distribution along the limestone outcrops justifies their Endangered status, as is the case for the rare *P. loiolae*. All three species could face declines in EOO, AOO and habitat quality, primarily because of rock extraction for paving, gypsum production, and the installation of wind and solar power plants. The Parque Nacional da Furna Feia, the only legally protected area containing limestone outcrops in the Potiguar Basin, is crucial for conserving these species.

Currently, the team at the Laboratório de Sistemática e Evolução de Plantas, Universidade Federal Rural do Semi-Árido, is using species distribution models to identify potential new areas of occurrence. We are also establishing a germplasm bank for ex situ conservation and studying germination and vegetative propagation to support future species restoration. We plan to collaborate with managers



(a) Limestone outcrop in the municipality of Felipe Guerra, Rio Grande do Norte, where we recorded (b-d) *Borreria apodiensis*, (e-g) *Ipomoea apodiensis* and (h-j) *Pectis loiolae*. Photos: E.C.O. Chagas.

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of protected areas and private reserves to promote these species as umbrella or flagship species for conservation.

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