

The tribe Spermacoceae (Rubiaceae) in the state of Ceará, northeastern Brazil

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Tribe Spermacoceae comprises more than 1000 species and about 80 genera, being the largest lineage of herbaceous plants within Rubiaceae. Historically, it is marked by taxonomic complexes. This study aims to investigate the diversity and geographical distribution of the tribe Spermacoceae in Ceará, in the Northeast region of Brazil. This state covers an area of 150,000 km² within the Caatinga domain and is divided into 11 phytoecological units, where the Crystalline Caatinga predominates. Specimens collected from 1990 to 2023, and collections from the EAC, HCDAL, HUEFS, HUVA, and PEUFR herbaria were analysed. The tribe is represented in Ceará by 31 species, of which *Borreria savannicola* and *Mitracarpus fernandesii* are endemic to the state, and seven genera, with *Borreria* being the most diverse (13 spp.), followed by *Mitracarpus* (six spp.), *Hexasepalum* (four spp.), *Richardia* and *Spermacoce* (three spp. each), and *Emmeorhiza* and *Staelia* (one sp. each). In total, 605 collections were verified. Morphological characteristics of fruit, seed, pollen, and internal indumentum of the corolla were diagnostic for taxonomic delimitation, with new species having been described for science in recent years (*B. apodiensis*, *B. savannicola*, and *H. nordestinum*). *Borreria scabiosoides* has the broadest geographic range, while *B. cupularis*, *B. savannicola*, *H. nordestinum*, and *M. polygonifolius* are the most restricted species. The northwest region of Ceará is the most diverse (with 22 to 26 species), followed by the south (with 17 to 21 species). The same pattern was verified for the distribution of records, with the northwest region having the highest numbers (232 to 289 records), whereas the south presents fewer records (59 to 116). Therefore, despite the northwest region having the highest number of species, the greatest diversity relative to the number of records is found in the southern region of Ceará.

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