

ANALYSIS OF THE DIFFERENT STAGES OF *CAATINGA* VEGETATION DEVELOPMENT IN SOBRAL, CEARÁ, BRASIL

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Abstract

The present study aimed to identify the flora of several stages of the *caatinga* changed by human activities. It's a xerophytic vegetation type, low and seasonally dry, which occurs in the region of semi-arid climate in the Northeast of Brazil. The vegetation is sparse, well distributed by the mountains and plateaus, and separated by streams, mostly intermittent. From bibliography about different particularities of *caatinga*, it was possible to identify the main characteristics. Vegetation covers large areas presenting more or less continuity, surrounded by areas of humid climate. The vegetation is composed by species with specific adaptations related to water deficiency, such as deciduous, succulent and spiny species (with spines and thorns). Regarding the composition and structure, it is common the presence of annual herbaceous, and the dominance of shrubs and small trees, presenting discontinuous canopy cover and richness in endemic species. We analyzed the flora of the eight stations in the municipalities of Sobral, Groaíras and Massapê, in Sobral microregion of the Brazilian state of Ceará, through floristic relevés carried out in March 2014. Catena's vegetation were also made, consisting in extending a measuring tape on the ground, and creating an alignment of about 60 meters along which were identified all trees, shrubs, vines and herbaceous species who crossed the line. It was performed the identification of taxa through analysis of morphological structures, specialized bibliography and through comparison with specimens of the Herbarium Prof. Francisco José de Abreu Matos (HUVA) Acaraú Valley State University (UVA) in Sobral (Ceará). 175 species were found, distributed in 134 genera and 52 families, and 33 Brazilian endemics have been identified. *Fabaceae* was the most representative family with the highest number of species (33), followed by *Poaceae* (24), *Euphorbiaceae* (16), *Convolvulaceae* (11), *Malvaceae* (10) and *Asteraceae* (7). The dominant life forms were the phanerophytes (33%), therophytes (24%) and chamaephytes (21%). In order to consider the human effect on vegetation in all eight stations, three dominant stages were selected: "*mata raleada*" (Fazenda da UVA, 03 ° 37 '03" S and 40 ° 18' 20" W, 40 m high); "*mata aberta*" (Fazenda da UVA, 03 ° 37 '05" S and 40 ° 18' 29" W, 200m high) and "*mata pouco alterada*" (Lagoa do Peixe, 03 ° 56 '18" S and 40 ° 23' 00" W, 11m high). All species were characterized according to growth forms, life forms and origin. The species richness and families was higher in "*mata raleada*" (39 and 29), which is a very open structure through thinning, than in "*mata pouco alterada*" (30 and 19) and "*mata aberta*" (27 and 17). 9 Brazilian endemics were also identified in open woodlands ("*mata aberta*"), while in "*mata raleada*" we identified 7 endemic species.

Keywords: human activities, vascular flora, *caatinga*, semi-arid climate, Brazil.