

**The reproductive system of *Cordia multispicata* (Boraginaceae) in Igarapé Açu (PA),
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Cordia multispicata as well as other species of the genus, presents heterostyly, and occurs frequently in the initial stages of secondary vegetation. The objectives of this paper are to understand the reproductive biology and the genetic aspects of reproduction as well as to verify how the distribution of two morphologically distinct plant types (short-styled and long-styled flowers) occurs and determine the density of the species in the study area. The study was carried out in Igarapé-Açu (Pará). The study was limited to an area of 900 m², divided into 36 plots of 25 m² each. In each plot the number of existing individuals of the species were counted, identified and marked. The height and crown diameter of each plant was then measured. For the study of flower biology daily observations were made during the month of February 1993. Floral morphology, the blooming period and duration were observed in the field. A study of the receptivity of the stigma and the viability of pollen at different times of the day, and observations of the opening of the anthers was realized. Natural pollination methods of the species were studied by observation and collection of insects which visited the plant. Autogamy/allogamy was studied by controlled fertilization, isolating the buds and verifying the fecundation of the fruit. Besides this, controlled auto-pollination between flowers of the same plant (geitonogamy) and auto-pollination with the same flower were undertaken. The genetic system of reproduction was also studied by the method of controlled cross fertilization. Combinations of cross fertilization between the two morphologically distinct types and between plants with the same flower morphology were realized. The possible sites of incompatibility and the time required for the germination of the pollen tubes was studied.

This species is a shrub with racemose inflorescences and has about 80 blossoms. The plants may be one of two types, mainly due to the differences in style length: long style and short style. The flowers have a calice and corolla divided into five parts, forming an sympetalae campanulate structure. The anthesis begins between 8:00 and 9:00 a.m. and the flower lasts for a period of 9-11 hours. The stigma is receptive throughout the flowering period, and the same can be said for the viability of the pollen grains. The opening of the anthers occurs between 7:00 and 9:00 a.m. Pollination is done by different kinds of insects (flies, wasps and bees) that visit the flowers in search of nectar. The nectar is found inside the corolla, on the nectariferous hairs of the flower.

Preliminary conclusions are that the species is outcrossing, entomophilous, and the distribution of the morphological types is about the same ratio (1:1) short and long-styled flowers.