

RELATION BETWEEN HIGH AT NEST ENTRANCE AND DIAMETER OF TREES WHICH SERVE AS NESTING SITES FOR *MELIPONA MANDACAIA* (APIDAE, MELIPONINI)

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Stingless bees usually build their nests in cavities of trees, although there are other possible substrates. In the semiarid region of Petrolina (PE) one of the most abundant stingless bee is *Melipona mandacaia* ('mandacaia') which prefers to nest in *Commiphora leptophloeos* ('umburana-de-cambão') trees. The aim of this study was to investigate details on natural nesting sites as the high of the nests' entrance and relation of this and the Diameter at Breast Height (DBH). Seven localities around Petrolina were investigated and georeferenced with a GPS, for nesting sites of *M. mandacaia* in trees. The tree species, which had a nest, was registered as well the high at nest entrance and the DBH. The relation between these variables was determined by a Spearman Correlation test. The results showed that most of trees (77.7%) that contained *M. mandacaia* nests were indeed *C. leptophloeos*. The second tree most used by the bees was *Spondias tuberosa* ('umbuzeiro'), with 16.1%, and four other species, as *Prosopis juliflora* ('algarobeira'), *Schinopsis brasiliensis* ('baraúna'), *Hymenae courbaril* ('jatobá') and *Myracrodruon urundeuva* ('aroeira') represented 6.8%. The entrance of nests were in average at $1.42 \pm 0.59\text{m}$ (N= 193 trees) and the DBH was $1.22 \pm 0.60\text{m}$ (N= 193 trees). There was a significant negative correlation between the high of nest entrance and the DBH ($\rho = -0.25$, $P = 0,004$, N= 193 trees). Thus, the entrance of nests is inversely related to DBH because the diameter of the tree is probably related to the size of the cavity inside the tree. *C. leptophloeos* was the tree that presented wide cavities and a large amount of them, and thus, is preferred by the bees. Therefore, the close relationship between the bee and the nesting tree must be considered in future programs of stingless bees' conservation as well the conservation of the Caatinga Bioma.

Keywords: stingless bees, nesting sites, *Melipona mandacaia*, diameter of trees.

Financial support: EMBRAPA; PROBIO II.