



Genetic variability in *Melipona scutellaris* from Recôncavo, Bahia, Brazil

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ABSTRACT. Bees play a key role in pollination and thereby help maintain plant diversity. The stingless bee *Melipona scutellaris* is an important pollinator in northeastern Brazil because it is endemic to this region. Both deforestation and timber harvesting have reduced the nesting sites for this species, thus reducing its population and range. Genetic studies may help reverse this process by providing important tools for their proper management with a view to conservation of this species. Microsatellite markers have proven to be ideal for mapping genes and population genetic studies. Our aim was to study, using microsatellite markers, the interpopulation genetic variability of *M. scutellaris* in different parts of the Recôncavo region in Bahia State, Brazil. In all, 95 adult workers from 11 localities in Recôncavo Baiano (Amargosa, Cabaceiras do Paraguaçu, Conceição da Feira, Conceição do Almeida, Domingos Macedo Costa, Governador Mangabeira, Jaguaripe, Jiquiriça, Maragojipe, São Felipe, and Vera Cruz) were analyzed using 10 pairs of microsatellite primers developed for different Meliponini species. The total number of alleles, allele richness, and genetic diversity ranged from 2 to 7 per locus (average = 4.4), 1.00 to 4.88, and 0.0 to 0.850, respectively. The expected and observed

heterozygosities varied from 0.0 to 0.76 and 0.0 to 0.84, respectively. No locus showed deviation from the expected frequencies in the chi-square test or linkage disequilibrium. The fixation index, analysis of molecular variance, and unweighted pair-group method using the arithmetic average revealed the effects of human activities on the populations of *M. scutellaris*, as little genetic structure was detected.

Key words: Recôncavo Baiano; Meliponini tribe; Pollinators; Microsatellite markers; Genetic diversity; Conservation