

## UPDATED DISTRIBUTION OF SOME *SOLENOPSIS* (HYMENOPTERA: FORMICIDAE) SPECIES IN BRAZIL, BASED ON MITOCHONDRIAL DNA SEQUENCES ANALYSIS

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*Solenopsis* species have a worldwide distribution; some species of the *S. saevissima* species group, native from South America and popularly known as fire ants, had been introduced accidentally in several countries worldwide. This species group is widely distributed in Brazil, including in urban areas. They are highly aggressive and responsible for accidents that can lead to anaphylactic shock and death. In this study, samples of the genus *Solenopsis* were collected from places with human interference from Brazilian territory. In order to confirm species identification we used the barcoding proposal: samples of *Solenopsis* genus were subjected to molecular studies by means of partial cytochrome oxidase I sequences gene and compared with data from DNA sequences data bank. The obtained data were used to reconstruct distribution maps of species found and which were subsequently compared with the distribution proposed by Tschinkel (2006). Our data indicated a similar distribution but with the inclusion of some new regions. For *S. saevissima* species it was possible to infer that there is an expansion towards the west of the country and near to rivers of the region and towards the state of Tocantins. The *S. invicta* species showed a wide distribution in the South and Southeast country regions, expanding the originally proposed area. The *S. geminata* species was found in Manaus (AM), also extending its original distribution. Based on such results we can infer that the distribution of *Solenopsis* species in Brazil is expanding to new areas probably due to transport by human activities in South and Southeast regions and also by natural dispersal events, as in the North through rivers.

**Key Words** Fire ants, distribution maps, cytochrome oxidase I