



# Bee communities (Hymenoptera: Anthophila) of the “Cerrado” ecosystem in São Paulo State, Brazil

S.R. Andena<sup>1</sup>, F.S. Nascimento<sup>2</sup>, P.C. Bispo<sup>3</sup>, M.R. Mechi<sup>1</sup>,  
S. Mateus<sup>1</sup> and L.R. Bego<sup>1</sup>

<sup>1</sup>Departamento de Biologia, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, SP, Brasil

<sup>2</sup>Departamento de Biologia, Laboratório de Entomologia, Centro de Ciências Biológicas e da Saúde, Universidade Federal de Sergipe, Campus Universitário “Prof. José Aloísio de Campos”, São Cristóvão, SE, Brasil

<sup>3</sup>Departamento de Ciências Biológicas, Faculdade de Ciências e Letras de Assis, Universidade Estadual Paulista, Assis, SP, Brasil

Corresponding author: S.E. Andena  
E-mail: sergioricardoandena@gmail.com; sandena@usp.br

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**ABSTRACT.** Five surveys of the bee communities in four “Cerrado” ecosystem reserves in São Paulo State were compared for species richness and similarity. These areas are fragment vegetation reserves located in the Cerrado Corumbataí Reserve (Corumbataí), Jataí Ecological Park (Luiz Antônio), Cajuru (Cajuru), and Vassununga State Park - “Gleba de Cerrado de Pé-de-Gigante” (Santa Rita do Passa Quatro). The methodology consisted of capturing bees foraging on flowers along transects, though with small differences be-

tween surveys. These “cerrado” areas have a large number of species of native bees, which are important pollinators in several Brazilian ecosystems. The community of bees varied among these different fragments. Based on 500 individuals (standardized by rarefaction), Cajuru, Corumbataí 1 and Corumbataí 2 were the areas with highest species richness, and Jataí and Pé-de-Gigante had the lowest species richness in the bee communities. The bee faunas of Corumbataí 2 and Pé-de-Gigante had the highest similarity, forming a group with the bee fauna of Cajuru. The bee faunas of Corumbataí 1 and Jataí were isolated from this group. We found that the bee species richness and similarity found in these “cerrado” areas cannot be explained by general factors such as the size of the fragment, the species richness of plants and the distance between the areas. Therefore, we suppose that local factors that differ among areas, such as interactions between populations, and competition and interference from surrounding areas influence and determine bee species richness and similarity in these reserves.

**Key words:** Hymenoptera; Anthophila; “Cerrado”; Community ecology