

Etologia de *Polistes simillimus* Zikán, 1951 (Hymenoptera, Vespidae)

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Abstract. Ethology of *Polistes simillimus* Zikán, 1951 (Hymenoptera, Vespidae). The species of social wasp *Polistes simillimus* Zikán, 1951 has a wide distribution throughout Brazil, but there is little information available about its social organization. Part of this deficiency can be made good by an ethological study. In that way the present work sought to deepen the understanding of the basic behaviour of the species as well as its social and hierarchial organization. In order to elaborate the basic ethogran of the species and to classify its behavioural aspects 37 hours of recordings were made in the post-emergence phase of the biological cycle of the colony. The evaluation of the dominance hierarchy, of the position in the nest and of the behavioural frequency of dominant and subordinate females was developed in 40 hours of registers in the colony in the pre-emergence phase. The behavioural repertory of *P. simillimus* showed 43 behavioural acts including the unknown register of three behaviours. The individual tasks had a greater percentage (46,52%) than in the other categories: group (27,90%), partitioning (13,95%) and team (6,98%), suggesting that the species studied has a low degree of complexity in the division and organization of work. The hierarchy of dominance shows itself in a structure of the linear type, where the highest female of the ranking is responsible for most of the dominance interactions. The dominant female was registered on the front of the honeycomb during most of the time, while the subordinates spent more time outside of the colony. The behavioural traits directly linked to the activities of the dominance and subordination exhibited significant differences between the dominant and subordinate females. The results encountered in this study revealed that the social organization of *P. simillimus* during the pre-emergence phase was very similar to the social structure exhibited by the other species of *Polistes* studied. Accordingly, studies in greater depth should be carried out in the post-emergence phase, in which the growth of the population and of the nest could involve the presence of more than one dominant female.

Keywords: behavioural repertory, ethogran, behavioural, ranking, castes, subtasks, score, *Polistes*.