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DIVERSITY OF CANOPY ARTHROPODS ASSOCIATED TO *QUERCUS LAURINA* ALONG A GRADIENT OF OAK SPECIES DIVERSITY

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Arthropods are one of the most diverse animal groups on the planet and are fundamental in the functioning of terrestrial ecosystems. This group of animals can be found on different habitats from subsoil to upper canopy. Regarding the arborous arthropods, abiotic factors such as temperature and humidity and biotic factors, as the genetic diversity of their host plants, directly affect its community structure. The genus *Quercus* (oak) presents a high frequency of hybridization between species of the same section of the genera under conditions of sympatry and when the phenology overlaps. Little is known about the effects of interspecific gene flow among oaks on the structure of the canopy arthropod community. Our objective was to evaluate changes in the structure and composition of canopy arthropods associated with *Quercus laurina* along a diversity gradient of oak species. Five study sites with different oak diversity were selected. One site with only *Q. laurina*, and the other sites with 2, 3, 5 and 7 oak species respectively. In each site, 5 individuals of *Q. laurina*, (25 in total) were selected and the canopy was fumigated for the collection and identification of arthropods at the lowest possible taxonomic level. Significant differences were found between the five populations of *Q. laurina*, with a greater diversity of arthropod species in the site of greater oak richness. The populations with greater presence of red oaks presented greater abundance and richness of arthropods in comparison to the populations of smaller proportion of red oaks. Our results show that the structure and composition of the oak community is the main factor that influences the structure and composition of canopy arthropods in *Q. laurina*. However, other factors such as the microclimatic variation of the canopy, the nutritional quality and chemical defense of the plants can potentially affect the arthropod diversity.

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