

TEMPORAL VARIATION IN A SEED RAIN OF AN ATLANTIC MONTANE TROPICAL FOREST OF BRAZIL

Daniella Vinha¹, Julia Caram Sfair², Flavio A. M. Santos¹, Carlos A. Joly¹

¹Plant Biology Department, State University of Campinas/UNICAMP, Campinas, Brazil
(dvinha@gmail.com)

²Department of Botany, Federal University of Pernambuco/UFPE, Recife, Brazil

Tropical montane forests exhibit high frequency of fog, clouds and low seasonality in rainfall and temperatures throughout the year. In such areas, phenological studies have revealed the existence of low interspecific synchrony in fruiting which could result in lower seasonality in seed rain. While much research effort has been carried out in seasonal forests, less is known about seed rain in aseasonal forests. Our aim was to evaluate seasonality in seed rain within a 2-years temporal series in order to test the hypothesis that there is no temporal variation in abundance and species richness. We installed 100 seed traps (summed up 29 m² at 0.5 m height) and collected monthly all diaspores in 2-ha of Montane Atlantic forest. We used circular statistics to test seasonality of data that included environment variables. Contrary to expected our results revealed that abundance and species richness of seed rain showed seasonality with two or more peaks throughout the year. The occurrence of these peaks is related to small variations of environment variables, such as air moisture and temperatures and wind speed. Other factors like seed disperser activity and plant phylogenetic relationship may also play important roles in the pattern observed. Therefore future studies should evaluate the relative contribution of these biotic processes in temporal variation of seed rain abundance and species richness in Montane tropical forests.

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