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AQUATIC FUNGI β DIVERSITY IN NEOTROPICAL STREAMS: IMPLICATIONS FOR CONSERVATION AND ECOSYSTEM FUNCTIONING

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Aquatic hyphomycetes are the main decomposers in streams because they act in nutrient cycling and processing of allochthonous organic matter. Changes in leaf composition of the riparian vegetation may alter hyphomycetes structure and activity, influencing either associated communities and ecosystem functioning. Nonetheless, hyphomycetes community composition and distribution in the environment is unknown. Therefore, we tested the hypothesis that β diversity of this community is more similar within a stream (where we suppose there is more similar leaf species among leaf packs) than between streams. We sampled 12 streams, in October/16, in Campos Gerais National Park, Atlantic Forest. For each stream we selected a 30 m reach and collected approximately 10 leaves in five leaf packs randomly. In the laboratory, we took five disks of each sampled leaf pack and stimulated sporulation for later identification according to specific methodology. We calculated β diversity for each stream (among leaf packs) and the mean (12 streams) was compared to the β diversity among streams. We found a total of 57 species, with mean and standard deviation of 14.17 ± 4.61 by stream. We highlight that the mean β of streams (0.790) was lower than β among streams (0.996), hence, hyphomycetes community was more similar within each stream than between them. Only three species were registered in all streams, *Anguillospora longissima*, *Anguillospora pseudolongissima* e *Newawia dendroides*. We conclude that hyphomycetes richness in the park is high and that dissimilarity between environments suggests that conservation actions should consider the maximum number of streams as possible to maintain ecosystem processes and ensure hyphomycetes richness.

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