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ECOLOGICAL SUCCESSION OF BENTHIC MACROINVERTEBRATES ON ARTIFICIAL SUBSTRATE OF A URBAN LAKE

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Ecological succession is defined as the replacement of a community by another throughout time and it consists on an important tool for environmental characterization. This research evaluated the ecological succession on artificial substrate in a lake with strong urban pressure in the municipality of Aquidauana/MS (Lagoa Comprida), a subbasin of the upper Paraguay river. The experiment was conducted for a period of 42 days by installing 45 concrete slabs in the benthic region of the lake on three points of this lake (P1, P2, P3). The slabs were after withdrawn in triplicates at the 5th, 10th, 21st, 30th, and 42nd day, and the taxonomic groups present on the samples were identified. On each point and day of collection, the physicochemical and pluviometric data were analysed to be compared with the community data. From the taxonomic groups present in the sample, Diptera was the most abundant (43%), followed by Oligochaeta (41%), Ostracoda (7%), and nine other groups. The three points of collection presented low similarity among themselves (28%) regarding the taxonomic groups present in the samples, and in all points of collection, there were populational fluctuations that interfere on setting a trend line on the values of Shannon diversity index and throughout the experiment. The macroinvertebrates benthic community of the Lagoa Comprida didn't show stability either to abundance or richness throughout the experiment. The results did show a spatial difference when compared the points P1, P2, and P3, where the P3 distances more from P1 in terms of similarity. This fluctuation, both in the biotic and in the physicochemical, on the data can be explained by the inconstancy on the weather of the region on this period of the year and by the impact caused by the lack of urban infrastructure in the surroundings of the lake.