

COMPOSITION OF THE EPILITHIC DIATOM FLORA FROM A SUBTROPICAL RIVER, SOUTHERN BRAZIL

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The diatom biodiversity investigations in lotic system from Southern Brazil have been carried out mainly on the plankton. Epilithic diatoms are considered more useful for analysis of environmental conditions in the rivers due to their sessile lifestyle, short life cycles and efficient responses to changes occurred in the environment. The knowledge of the composition of this community is therefore necessary for increasing the accuracy of the taxonomical basis of the water quality indices proposed regionally, like the BWQI (Biological Water Quality Index). This study aims to present the flora composition of the Pardinho river, located between coordinates 53°28'48" to 53°30'49" W and 29°14'10" to 29°47'32" S, from 719 to 17 m altitude, in a subtropical region where the average yearly precipitation is 1,500 mm, and the rainfall is distributed along the year. The samplings were carried out seasonally from August 2001 to July 2002, in five sites along the Pardinho river. The material was scrubbed off the upper surfaces of submerged pebbles of 10-15 cm of diameter using a toothbrush. Samples were fixed with formalin, oxidized and cleaned to observations in light (LM) and scanning electronic microscopes (SEM). The epilithic diatom flora of Pardinho River was represented by 97 taxa, which were distributed among 22 families and 41 genera. The most representative families were *Naviculaceae* (14 taxa), *Gomphonemataceae* (11 taxa) and *Bacillariaceae* (10 taxa). The richest genera in species were *Gomphonema*, *Navicula*, *Eunotia* and *Nitzschia*. Amongst the taxa studied, *Encyonema sprechmanii*, *Fallacia omissa*, *Gomphonema lujanense*, *G. lippertii*, *G. affine* var. *rhombicum* and *Luticola aequatorialis* are new records for the subtropical region of Brazil. News species of *Nupela* and *Surirella* are proposed. 238 LM and SEM photomicrographs are presented.