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Lagos, Memorias del Territorio

Lakes, Memories of the Landscape

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Donde nacen las aguas (DNLA): building new local collective practices for the defense of a common good

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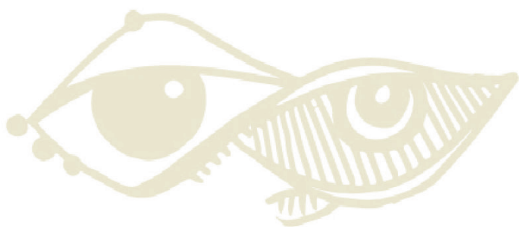
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The community of El Chaltén (Santa Cruz, Patagonia Argentina) is located within a water landscape and surrounded by Los Glaciares National Park (LGNP), which constitute the third world freshwater reserve and a UNESCO World Heritage site. The town's main economic activity is tourism. In recent years, the exponential growth of these activities without planification or reinvestment, is leading to negative environmental impacts such as: degradation of water supplies and generation of a greater volume of wastewater. In this context, several stakeholders joined efforts to defend their hydro-social territory by implementing participatory strategies. "Donde Nacen Las Aguas" is a collaborative research project for monitoring surface waters in the North Zone of the Los Glaciares National Park. It is entirely led by women belonging to different organizations and institutions. The participatory process allowed getting financial support, fieldwork assistance, and laboratory analysis cooperation. DNLA's objectives are: (a) the creation of the first environmental baseline of surface waters, (b) the definition of a participatory methodology for monitoring water quality and (c) an analysis of the current governance from a gender perspective. During the spring summer of 2021-2022, DNLA mobilized more than 30 people who sampled 80 sites over an area of approximately 850 km². This study included the evaluation of physicochemical, microbiological, biological and isotopic parameters in different aquatic ecosystems. The systematization of the participatory approach through the project promotes the creation of inclusive and equitable citizen research practices. In this process, the diversity of knowledge about aquatic ecosystems is legitimized, valuing personal skills to strengthen collective action. In addition, informal support and solidarity networks were created to carry out the project's objectives.



First approach to the description of phytoplankton and periphytic communities in freshwater bodies of South Patagonia (49°S), Argentina

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The limnological and ecological information of water bodies located on the eastern slope of South Patagonian Andes (49°S) is scarce. Particularly, understanding the phytoplankton and periphyton algae components will enrich the interpretation and discussion of the evolution of these water bodies from the Late Holocene to the present. The algae remains presented in the fossil record as well as in lake sediment samples are known as non-pollen palynomorphs (NPPs), and their identification constitutes an important paleoenvironmental contribution to environmental reconstructions. Thus, the aim of this work is to characterize the phytoplankton and periphyton community present in water bodies and the NPPs in surface sedimentary samples, with emphasis on the diversity of cyanobacteria and chlorophyta algae. Three freshwater bodies (Laguna Gemela Este, Laguna Gemela Oeste and Laguna Chiquita) located between 400 and 1100 m.a.s.l. at Los Glaciares National Park, were sampled during the 2020 and 2022 summer fieldwork. At each lake, phytoplankton samples were obtained with plankton net whereas periphyton was removed by scraping off the predominant littoral vegetation. Both samples were observed under an optical microscope. The water-sediment interface samples were taken with a gravity corer and received a conventional palynological treatment. The limnological measurements were registered *in situ*: water temperature, pH, electrical conductivity, maximum depth and transparency. Phytoplankton and periphyton communities presented similar taxonomic composition and despite the low counts, the diversity of chlorophyta algae was significant. Dominant taxa were different among water bodies and communities sampled, including Desmidiaceae genera (*Cosmarium* and *Closterium*) and volvocine chlorophytes in phytoplankton; filamentous chlorophytes and cyanobacteria in periphyton; and *Pediastrum* and zygospores of Desmidiaceae and Zygnematales in water-sediment samples. These data constitute the first approach to the description of phytoplankton and periphyton communities in water bodies of the region.

