



## **Vegetation history in southern Patagonia: first palynological results of the ICDP lake drilling project at Laguna Potrok Aike, Argentina**

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Laguna Potrok Aike located in southern Argentina is one of the very few locations that are suited to reconstruct the paleoenvironmental and climatic history of southern Patagonia. In the framework of the multinational ICDP deep drilling project PASADO several long sediment cores to a composite depth of more than 100 m were obtained. Here we present first results of pollen analyses from sediment material of the core catcher. Absolute time control is not yet available. Pollen spectra with a spatial resolution of three meters show that Laguna Potrok Aike was always surrounded by Patagonian Steppe vegetation. However, the species composition underwent some marked proportional changes through time. The uppermost pollen spectra show a high contribution of Andean forest and charcoal particles as it can be expected for Holocene times and the ending last glacial. The middle part shows no forest and relatively high amounts of pollen from steppe plants indicating cold and dry full glacial conditions. The lowermost samples are characterized by a significantly different species composition as steppe plants like Asteraceae, Caryophyllaceae, Ericaceae and Ephedra became more frequent. In combination with higher charcoal amounts and an algal species composition comparable to Holocene times we suggest that conditions during the formation of sediments at the base of the record were more humid and/or warmer causing a higher fuel availability for charcoal production compared to full glacial times.