

## **Differential Sedimentation of Palynomorphs in Lagoa de Cima Lake, Northern Rio de Janeiro State, Brazil**

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Fifteen superficial sediment samples were collected at Lagoa de Cima Lake bottom, in a NE-SW transect on the direction of the dominant winds. The palynological analysis of algae, pollen grains and spores of swamp plants were used to evaluate the current spatial variation of the palynomorphs. This was further compared to past variations at the lake's water level revealed by previous quaternary studies developed in this area.

The lake is located 50 km west from the coastline at an altitude of 30 m. The Evergreen Rainfall forest and the Tropical Seasonal Semi-deciduous forest were installed in this region before the definitive settlement of the Europeans in the area. The activities carried on by those were essentially of predatory character in relation to the native vegetation.

The results yield new information about the richness, concentration and distribution of palynomorphs along the lake, derived from the local and regional vegetation. High ratios of swamp plants pollen and spores occur in the lake's margin sediments. The algae occur at similar ratios everywhere in the basin.