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SEDIMENT CHARACTERISTICS AND THE EUTROPHICATION HISTORY OF SIX VOLCANIC LAKES OF ITALY

Short sediment cores (ca. 60-100 cm) from six Italian volcanic lakes (Bolsena, Bracciano, Albano, Nemi, Mezzano e Martignano) were stratigraphically analyzed for: magnetic susceptibility, organic matter, calcium carbonate, biogenic silica, organic carbon, nitrogen, total phosphorus, Fe, Cr, K, Ca, Mn, Si, Al, Mg, S, Ti, Zn, Pb, Ni, Cu, algal and bacterial pigments, and chironomid head capsules. Climatic parameters including precipitation, and maximum and minimum air temperature recorded during the last two centuries, were also considered for their possible effect on lake evolution.

Our study has two major objectives: (1) to reconstruct recent lake history with particular emphasis on the algal community by describing the specific pigments found in the sediment layers; and (2) to explore the extent to which the lakes have had the same evolutionary trend by using multivariate statistical analysis such as the *Redundancy analysis* and the *Detrending Canonical Correspondence Analysis*.

With the exception of one lake (Martignano) all the lakes developed towards higher trophic levels during the past 2 or 4 centuries. The trophic reconstruction, which was not always unidirectional, is very similar for lakes with similar morphometric features such as lakes Bracciano & Bolsena, and Albano & Nemi.

D-Th-pm-3 Turcg, B.; Albuquerque, A.L.S.; Cordeiro, R.C.; Martin, L.; Suguio, K. and Ybert, J.P. Orstom-Uff; Depto. de Geoquímica, Morro do Valonguinho s/nº, 24.020-007 Niterói, RJ, Brazil.

VARIATIONS IN LAKE SEDIMENTATION IN THE MIDDLE DOCE RIVER BASIN (Minas Gerais, Brazil): PALEOHYDROLOGICAL INTERPRETATIONS.

Two generations of lakes deposits are recognized in the Doce River Basin. The younger one had formed after an intense cluvial-alluvial phase, well marked in all the region and which has ended around 9000 years BP. The Rio Doce alluvial sedimentation provoked the daming of its tributaries forming the numerous present-day lakes. A transect of long-cores (up to 8,5m long) was obtained in the largest of these lakes, "Don Helvécio Lake", and allows to reconstruct its holocene paleoenvironmental evolution. The present-day water level was reached only after 1380 years BP confirming that the last millenium was the most humid period of Holocene in this region.

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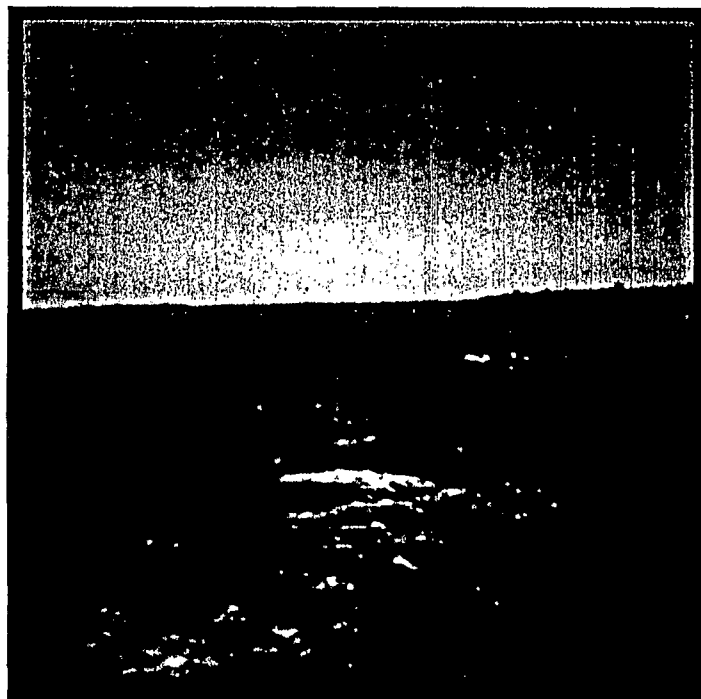
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ABSTRACTS



Meeting of River Solimões and River Negro (Amazon)

**Simultaneous event:
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