

HOLOCENE LAKE-LEVEL CHANGE IN MIDDLE DOCE RIVER BASIN (MINAS GERAIS - BRAZIL)

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The Doce River basin provides an unusual opportunity to decipher regional aspects of the Brazilian climate during the Holocene. Several lakes were formed by damming of tributary valleys by the Doce River. The Doce River terraces were dated at 14,000 and 9,500 BP, showing that the damming initiated during the dry period which followed the Last Glacial Maximum.

The Middle Doce River Basin is situated at 19° 54' S and 42° 35' W, 300 m in altitude. The natural vegetation cover is a Semi-Deciduous form of "Mata Atlântica" tropical forest. The climate is relatively dry for a rain-forest region with an average annual rainfall of 1350 mm distributed over 7 to 8 month of the wet season. In the region the hilly relief shows numerous erosional features on the slopes, associated with colluvial deposits in the form of very flat cones whose distal part is in continuity with the valley flats. These deposits are not consistent with present-day vegetation and climate. They were formed during two stages of Pleistocene, and the second one at the beginning of the Holocene.

A transect of eight long-cores (2.3 to 8.5 m long) obtained along a depth gradient (6 to 30 m) in Dom Helvécio lake, the largest of the lake complex of Middle Doce River, in order to establish lake level variations during the last 10,000 yrs. The sediment column exhibits two dry periods, the present-day level being only reached after 1380 BP. The Holocene climate variations are compared with other records in South America

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