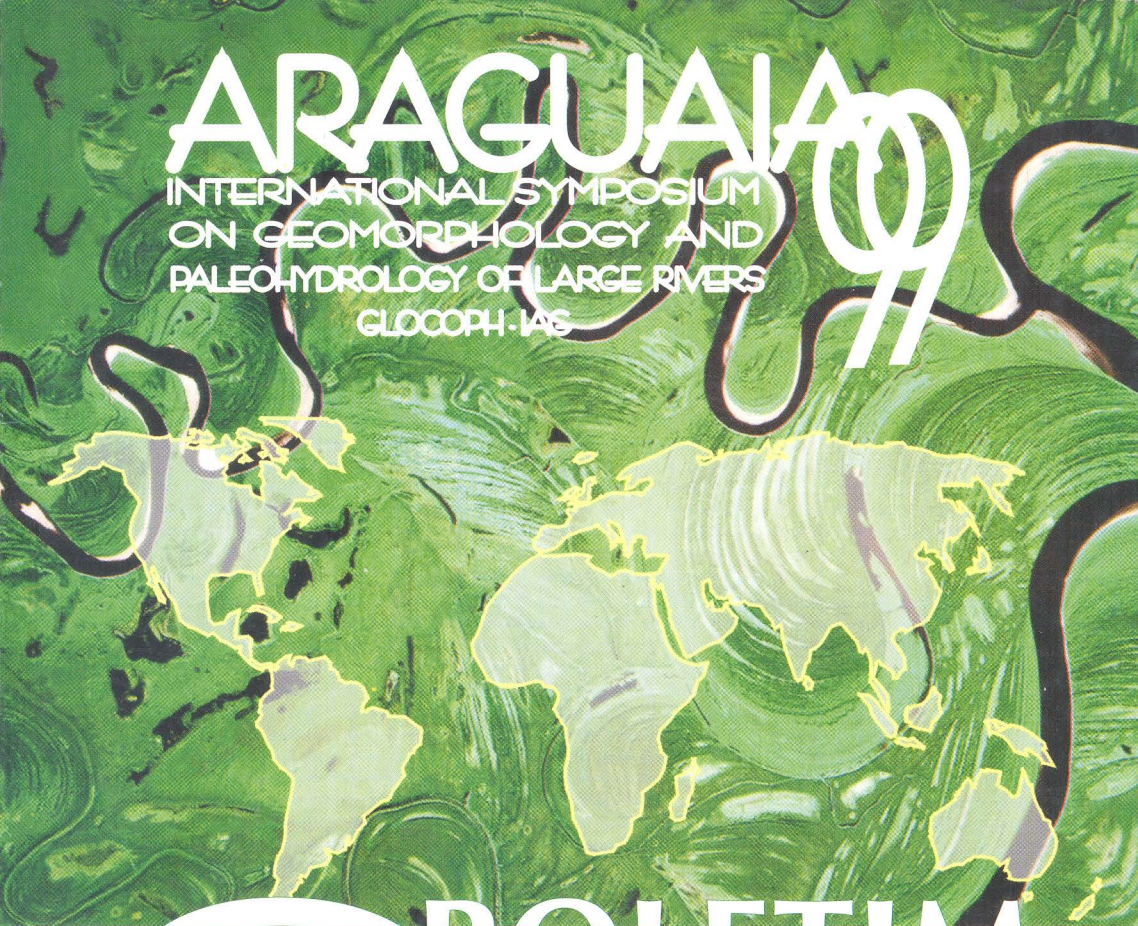


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TREES ACCUMULATION IN ALLUVIA OF LARGE RIVERS

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In Central Europe, the subfossil trunks (more often oaks) are often found in Holocene alluvia of the large river. The mechanism of deposition is controversial. Single, catastrophic floods were first considered. Then later channel lateral migration was emphasized. Phases of deposition of the trunks were associated with intensified activity of rivers and terrace formation.

The method, which has been used hitherto for dating alluvia based exclusively on single trunks dated ^{14}C or single dendrochronological generations, has led usually to erroneous results because the majority of trunks in the alluvia were redeposited. Preservation of tree trunks is helpful in solving problems of dating alluvia, which should use only *in situ* trunks, i.e., trunks with bark, sapwood and branches. Redeposition of trunks in alluvia is associated with lateral migration of a river channel. Channel migration leads to the washing out of subfossil trunks of different ages from older alluvia. These trunks, heavier than water, are redeposited at the level of channel lag. Simultaneously, waterside trees undermined by the river accumulate at the water level in the upper parts of point bar deposits.

This results in one series of channel deposits with two layers of trunks - "a sequence of simulate aggradation". In last centuries, after deforestation of floodplains, this mechanism lead to the formation of a single level of subfossil trunks at the level of channel lag.

SW Amazonia is cover by rainforest. However, the subfossil trees are very rare in the alluvia of large rivers in this region i.e. the Purus

river. Purus has meandering bed, but there are the confined meanders with high banks up to 10-12 m during the dry season. During the summer floods the water level increase and the fallen trees are transported more less on the same level like a higher edge of bank. Therefore the trees are accumulated on the erosional bank of the channel when the river change direction. After the floods the trees form big dams on this banks, but they are very quickly destroyed by rich organic world.

The single trees or their fragments could be find in the sediments of longitudinal bars inside the large river bed. All radiocarbon datings are very young (since recent to maximum 800 BP) because the organic material was redeposited along the river channel and not dated the alluvial plain.