Geomorphological processes and the formation of the lower Saint John River, New Brunswick, leading to Holocene occupation

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Deglaciation of New Brunswick resulted in flooding of the Saint John River valley, marine incursion, and formation of a large inland lake informally referred to here as de-glacial Grand Lake. Examination of topography and existing drill-core data from drill sites within the lower Saint John River valley, may be used to reconstruct a deglacial geomorphic history for the Grand Lake area. This model is compared with 21 known archaeological sites, dating 400 to 6000 BP, indicating the spatial and temporal distribution of known archaeological sites relative to post-glacial evolution of the Saint John River valley.

Present evidence from surrounding provinces and states, indicates that precontact occupation of the Maritimes occurred around 10 000 BP; however, no sites dating older than 6000 BP have been found in New Brunswick. It is not yet clear if the delineation of post glacial water bodies and lake levels will suggest that occupation of the area may have been hampered by residual ice masses and meltwater drainage systems.

The delineation of ancient drainage pathways and associated occupational patterns aids in the prediction of where newly discovered and potentially older archaeological sites may be found within the region. The ability to predict areas with a high probability for buried archaeological sites can represent a major cost-saving to engineering projects and provide a focus for new archaeological research.