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**Dam! What happened to the site?  
A 3000 year old archaeological site on the  
Beechwood Reservoir, New Brunswick**

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Precariously located on the head pond of the Beechwood dam on the upper Saint John River, the Ultramar site is currently eroding away at an alarming rate. Fluctuating water

levels and ice scouring have significantly contributed to the erosion of more than 15 metres of this archaeological site since dam construction in 1958. Excavation and surface collecting have produced an assemblage of several hundred artifacts dated to approximately 3000 years ago, with lithic material originating from various Maine and Maritimes' sources and, significantly, one as distant as the northeast coast of Labrador. Current evidence suggests this site was first occupied by Susquehanna tradition peoples which may represent the most northerly site of this type in the northeast. Geoarchaeological examination, focussing on site formation processes, local and regional geology, fluvial geomorphology, lithic raw material and artifact analysis is helping archaeologists to chronicle the natural and cultural activities at this alluvial site.

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**Climatic signature of some Ordovician, Silurian  
and Devonian paleosols in the Avalon Terrane  
of northern Nova Scotia; implications for  
paleogeographic reconstructions**

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The relative position of the Avalon Terrane in Neoproterozoic to Paleozoic reconstructions has been a constant source of controversy. Some of the reconstructions are mainly based on paleomagnetism, isotopic signatures and zircon ages, without due consideration being given to the climatic signatures provided by sedimentary rocks. Paleosols are especially reliable paleoclimatic indicators, but those in the Avalon Terrane have received little attention in this regard.

Red paleosols developed between basalt flows of the Middle Ordovician Dunn Point Formation show evidence for a hot and humid equatorial climate, but one with strongly alkaline characteristics. The absence of significant land plants in Middle Ordovician times is thought to explain this apparent dichotomy between high humidity and high alkalinity. The Dunn Point paleosols may have formed at the eve of a major change in near-surface groundwater conditions that took place near the end of the Ordovician as the radiation of land plants terminated the trend of increasing alkalinity (related to a gradual reduction in atmospheric CO<sub>2</sub>