



Flooding and climate warming in Charlevoix (Québec, Canada) between 800 and 1350 AD

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This study aims to reconstruct the fluvial dynamics of Rivière du Gouffre, Québec, Canada during the last 1500 years. A 3 m-thick section was studied in term of the lithostratigraphy and the sedimentology. Two superimposed stratum formations that buried trees and organic layers have been defined, each of which includes three components. The base is composed of medium to large grained sand, the middle is composed of rudite, and the upper is fine sand and silt. This type of deposit is an indication of dynamic fluvial flooding. Studies of both the trees and of organic samples indicate that the first event probably happened between 800 and 900 AD while the second was probably between 1230 and 1350. This second flood coincides, and may have been caused by, the medieval warm period that took place from 1200 to 1400. However, is also possible that the second flood was caused by a landslide or an earthquake. It is equally possible that both floods were caused by an accumulation of separate factors.