Role of postglacial sea level history in targeted archaeological survey

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The postglacial sea level history of Newfoundland is complex because it was affected by a migrating forebulge generated by the Laurentide Ice Sheet and to a lesser extent local ice caps. Most of the island, therefore, experienced initial relative sea level lowering to below present, followed by a rise to the modern level. The magnitude and timing of these two sea level adjustments are spatially variable and, although not well known, are important considerations in assessing coastal archaeological resources.

The prehistory of Newfoundland is dominated by marine-oriented cultures who relied on, and lived close to, the sea. Consequently, the elevation of former sea level at the time of cultural occupation indicates whether potential sites may be located above or below present sea level. Because it is presumed that the results of a reasonably complete (land-based) archaeological survey are representative of the past prehistoric cultures that occupied an area, lacunae in the archaeological record are often treated as real absences and explained in cultural terms, such as migrations or extinctions, and are connected to environmental factors. However, a knowledge of postglacial sea level history, specifically the low-stand, may demonstrate that some of the gaps in the archaeological record are artifacts of sampling. Many of the "missing" sites may be located in the shallow offshore or much closer to modern sea level than previously thought.

In this presentation we report on preliminary results of a pilot project that evaluates whether gaps in the known archaeological record of selected regions of the island can be explained in terms of their relative sea level history.