

maximum (~125 ka), verified by the single OSL date on the Cape George sand and amino acid racemization (AAR) and electron spin resonance (ESR) dating of shell faunas. The stratigraphic record also suggests an RSL oscillation with an early rise to ~4 m (rock bench), RSL fall (peat layer), and then subsequent RSL rise (Cape George-Salmon River sands) to ~20 m. This RSL record suggests the combined effects of climate change and slower forebulge collapse following the Illinoian glaciation although such a magnitude of forebulge subsidence is not predicted by current models.

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### Sangamonian interglacial sea-levels of + 20 m in Maritime Canada

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A well-defined wave-cut rock platform overlain by organic paleosols and several tills implies that relative sea-level (RSL) in eastern Canada during the last interglacial was between 4 and 6 m above mean sea-level (MSL). But was it much higher? Sections exposed during a severe winter storm on the southwest coast of Cape Breton show the lower platform, overlain by openwork gravel, two distinct peat layers, then a well-sorted, parallel-laminated sand to +12 m, and finally two till units. The peat layers, contain large logs and can be traced laterally for 500 m, dipping seaward below the high water mark. The interglacial sand unit can be traced along much of the northern coast of mainland Nova Scotia and attains an elevation of +20 m. Optically-stimulated luminescence (OSL) dating of the Cape George Sand, gave an age of  $115 \pm 10$  ka. The lateral extent, sorting, age, and sedimentology of the sand imply a marine origin, and the overlying till contains a reworked interglacial molluscan fauna including *Mercenaria* and *Ostrea*.

Correlative sections at Castle Bay along the Bras D'Or Lakes in Cape Breton reveal an organic silt unit with marine diatom floras underlying till at an elevation of >18 m. A stratigraphy identical to the Nova Scotia sections is found in Quebec, with interglacial peat, well-sorted sand deposits containing *Ostrea virginica* and an erosional rock platform at elevations of +13 to +20 m. At Salmon River in southern Nova Scotia, a massive sand unit containing an interglacial marine molluscan fauna indicates a paleo-sea level between +16 and +31 m. The anomalous elevations of pre-Late Wisconsinan marine sections were variously explained by Mid-Wisconsinan glacio-isostatic subsidence, neotectonics, salt tectonics, and glaciotectionics.

Each of these local explanations has serious flaws, so the logical synthesis is that interglacial sea-levels were much higher than previously thought. Pollen studies suggest that the highest RSL occurred during a cooler climate interval after the thermal