

range from 79100 to 1430 BP and are consistently younger with decreasing water depths. Three-D time-series paleogeographic reconstructions facilitate site-flooding geometry relative to rising water levels. Initial results indicate Bermuda sea level has risen 9 m over the past 7 ka with decreasing rate over time.

A eustatic sea level curve for the Bermuda seamount – a
reference curve for East Coast Canada

S.M. BLASCO¹, E. B. TUCKER², D.L. FORBES¹, B. COVILL³,
R. A. HARMES¹, AND J. R. BENNETT¹

1. Geological Survey of Canada Atlantic, Dartmouth, NS,

B2Y 4A2. <sblasco@nrcan.gc.ca> <dforbes@nrcan.gc.ca>

<rharmes@nrcan.gc.ca> <rbennett@nrcan.gc.ca> ¶ 2. Bermuda

Underwater Exploration Institute, Hamilton, HMGX, Bermuda

<w.tucker@buei.org> ¶ 3. Tekmap Consulting, Fall River, NS,

B2T 1K6. <bcovill@tekmap.ns.ca>

The Bermuda seamount is primarily subject to eustatic sea level rise. Glacioisostatic forebulge effects are minimal, and vertical motion GPS data can be used to correct for minimal tectonic motion. A well-constrained eustatic curve for Bermuda could provide a reference curve for the eustatic component of sea level rise for east coast Canada.

Bermuda has a well-documented history of sea level rise data from the often-cited Neumann curve of 1971 to the most recent works by Javaux (1999) and Volbrecht (1996). These historic data are being supplemented by new data to generate a more constrained eustatic sea level curve for the past 7 ka. Three submerged forests at Gurnet Rock, Harrington Sound and Well Bay in water depths of 9, 6 and 1.5 m respectively are under investigation. Several *in situ* tree stumps with associated forest floor organic layers have been located at each site. In addition, a submerged lake basin identified by a laterally extensive thick peat section is being mapped at Ferry Reach in water depths of 6 m. These sites are being surveyed with multibeam sonar for accurate water/sample depths and for 3-D paleogeographic reconstructions. Surveyed sites are being mapped and excavated using scuba diving techniques. *In situ* tree stump, peat, organic and carbonate samples were recovered from these sites and were submitted for carbon dating. Radiocarbon ages