PALEOSEISMOLOGY INVESTIGATIONS IN THE GREATER BOSTON, MASSACHUSETTS, AREA: COLLABORATIVE RESEARCH WITH M. TUTTLE & ASSOCIATES, JOHN SIMS & ASSOCIATES, AND BOSTON COLLEGE

USGS Award No: 1434-HQ-98-GR-00001

Martitia P. Tuttle
M. Tuttle & Associates
HC 33 Box 48, Bay Point Road
Georgetown, ME 04548
Tel: 207-371-2796
e-mail: mptuttle@erols.com

John D. Sims
John Sims & Associates
Route 3, Box 427
Harpers Ferry, WV 25425
Tel: 304-876-8525
e-mail: jsims@ix.netcom.com

David Roy
Boston College
Department of Geology and Geophysics
Boston, MA 02167
Tel: 617-552-3647
email: roy@bc.edu

Program Element: I

Key Words: Paleoseismology, Paleoliquefaction, Quaternary Fault Behavior, Age Dating

Abstract

M. Tuttle, J. Sims, and D. Roy performed a systematic search for earthquake-related features in the Greater Boston region including eastern Massachusetts and southern and central New Hampshire. We investigated at a site of probable liquefaction during the 1755 earthquake but were not permitted to trench in the location most likely to reveal liquefaction features. In addition, we conducted reconnaissance along the Baker, Concord, Contoocook, Merrimack, North, Parker, Pemigewasset, and Sudbury Rivers. To date, we have found no unequivocal liquefaction features in the region; however, this may be due in part to poor exposure in eastern Massachusetts and the coarse-grained nature of most of the sediment examined.