

GSA 1999

## TRACES OF THE PAST

### Invited abstract

Henry is a 70-something Vermont farmer with a well-used back hoe, a yellow, 1980-something, Extenda-hoe. Henry and his wife and three of his sons live on and from several hundred acres of rolling land in northwestern Vermont, ancient terraces of the Huntington River where Henry knows the backhoe will dig through 10 feet of river gravel before he'll hit dense blue clay and water.

Traces of the past are everywhere. Walk the hills behind Henry's home; there is dull, wet, mossy gray schist that shines if you break it. The schist was mud once at the bottom of a now-vanished ocean. Half billion years later, some of the highest mountains in New England were peaking out from a blanket of ice. At Henry's place, gravel spilled from the glaciers into a now-vanished lake choked gray with silt. Glaciers, and the brickyards of their lakes, held up mills of the industrial revolution, workers homes, and lavish capitalist mansions.

In 1770, when these westerners came, Vermont was covered by forest. Through the 1800s, trees fell, their stumps burned or wrenched from the ground by oxen. By 1870, 80% of the state was cleared. Rainstorms hit and water sluiced downslope carrying sand and silt and clay. The correlation is clear, the trees were cut and sediment poured from the hillsides. Today, the majority of Vermont is again covered by trees. But things are changing. Logging is returning to the woods. Human impact on the landscape is growing again. Walmarts have come to Vermont. Trees fall before sprawling suburbs.

The Earth records its history and ours in many ways, we need only be aware and alert enough to understand what it is saying. Geology is a way of looking back and seeing into the past. The hope is that by looking backwards, we can see into the future.