

An aerial photograph of a vast, lush green mountain valley. The landscape is dominated by dense, vibrant green forests covering rolling hills and deep valleys. A winding road or path is visible on the left side, and a river or stream flows through the center of the valley. In the distance, more mountain ranges are visible under a sky with scattered white clouds. The overall scene is one of natural beauty and ecological richness.

The intersection of land use history and current development:

Implications for carbon storage in the northeast

Kemen Austin

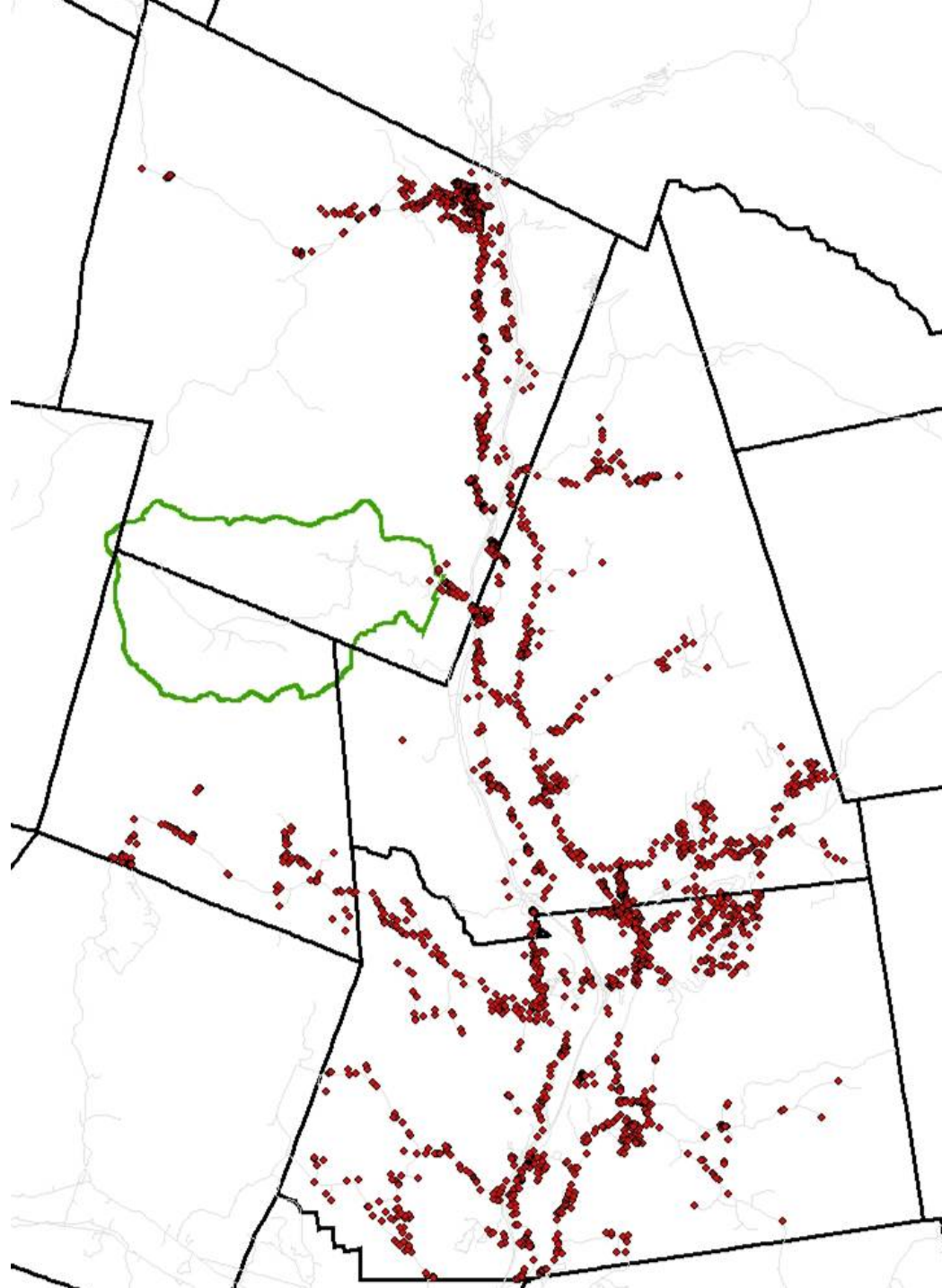
and current development

July 11, 2006

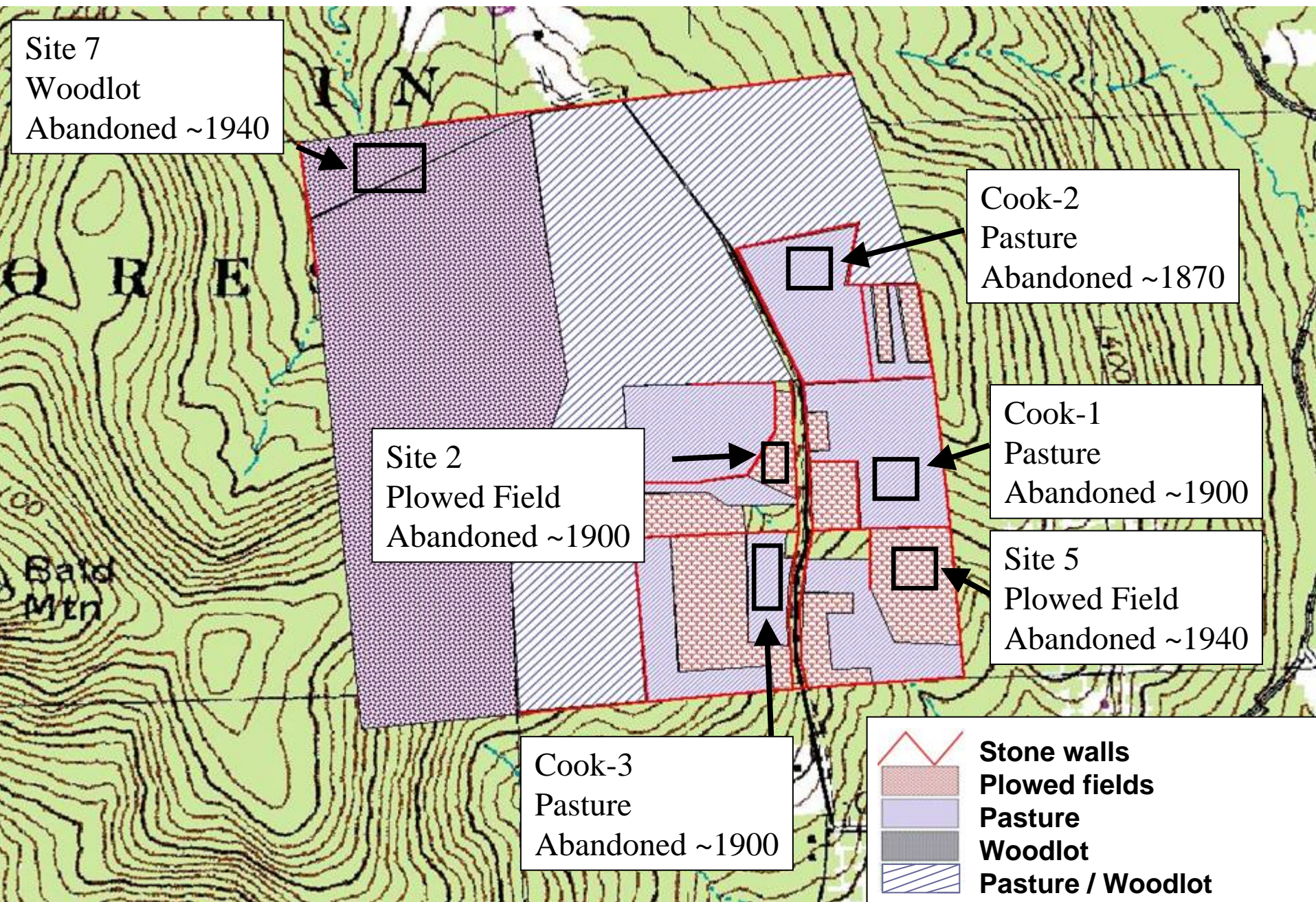
Brown University

Structures

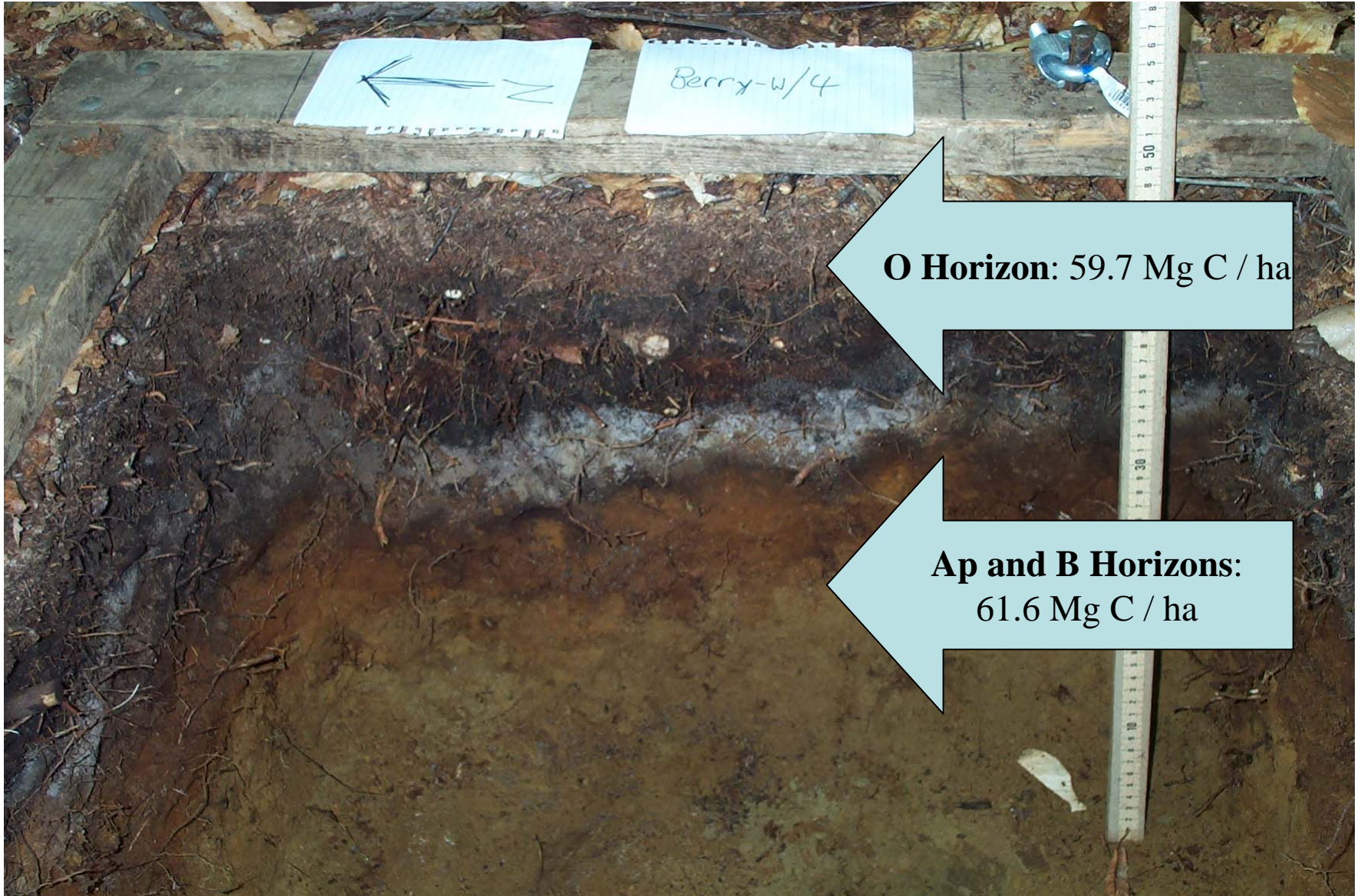
1990



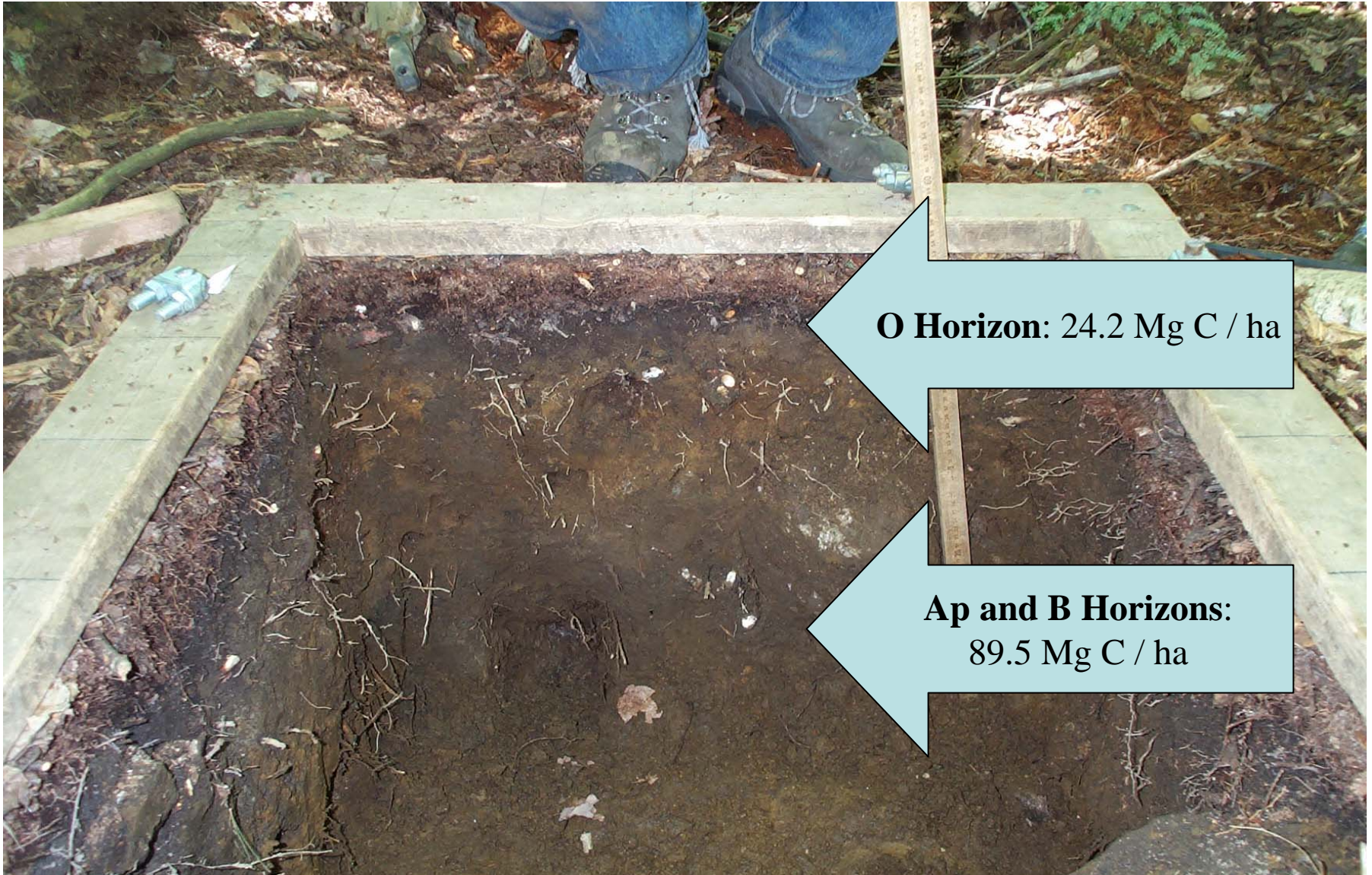
The Cook Farm



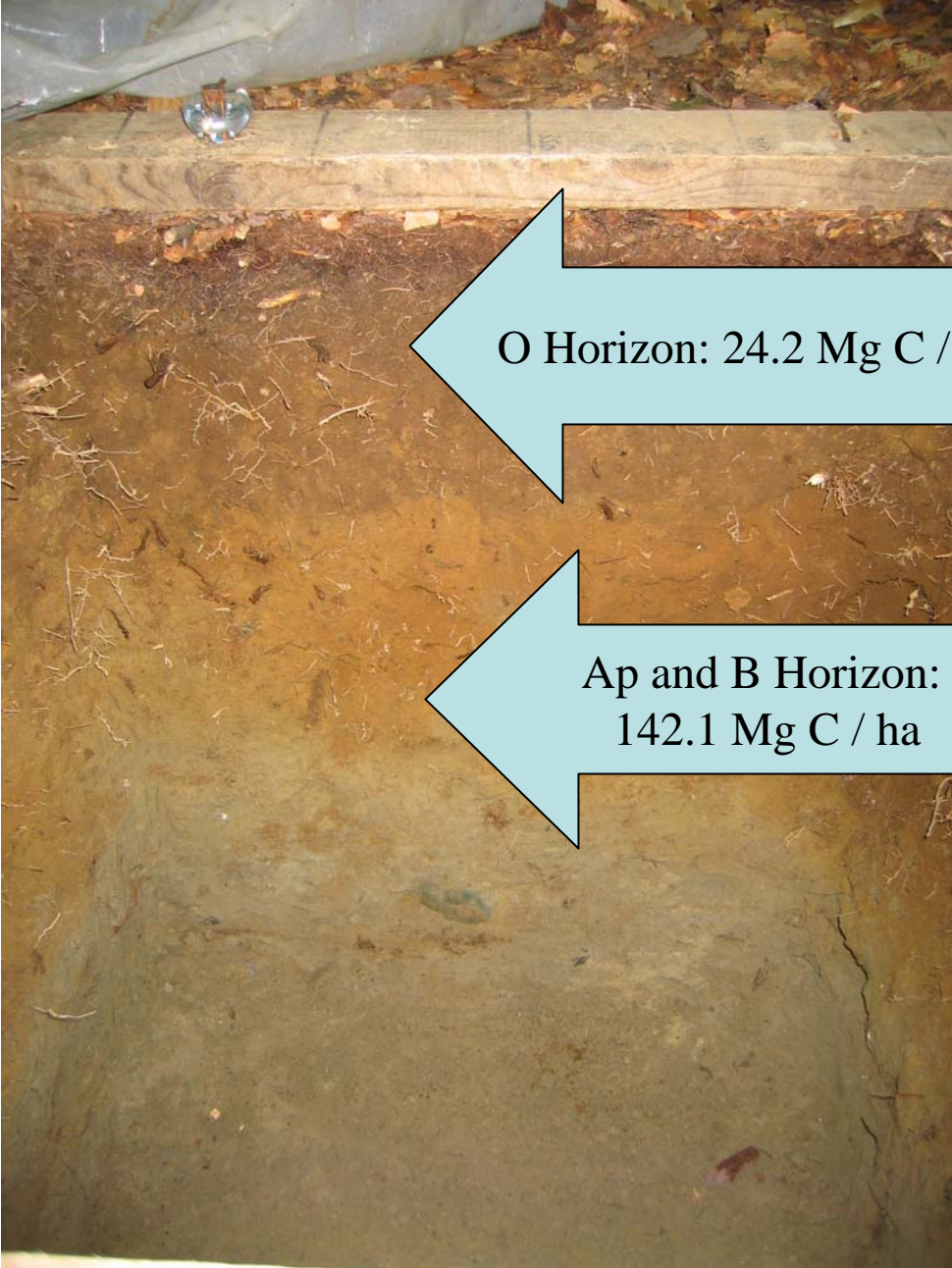
Woodlot



Pasture



Plowed Field – Site 6 (90 yrs Old)



O Horizon: 24.2 Mg C / ha

The photograph shows a soil profile in a plowed field. At the top, there is a layer of organic matter (O horizon) above a wooden boardwalk. Below the boardwalk, the soil is divided into two main horizons: the Ap and B horizons. The Ap horizon is a thin, dark brown layer, and the B horizon is a thicker, lighter brown layer. The soil is moist and shows some root activity.

Ap and B Horizon:
142.1 Mg C / ha

- We can see that there are dramatic differences in the amount and distribution of soil carbon depending on what the land was used for historically.
- Will these differences lead to a difference in the system's resistance to current perturbations?
- Will there be a significant difference in carbon loss due to development on lands that were used as a plowed field versus a pasture or woodlot?

Distribution of Study sites

