The interpretation of pre-contact Native American land-use played an increasing role in landscape dynamics through the Holocene is prevalent in historical, scientific, and cultural literature, and yet there has never been a robust analysis of underlying archaeological and paleoecological data on the subject. This poster presents the research design, goals, and progress to date within the archaeological component of a larger National Science Foundation (NSF)-funded collaborative research project investigating Interactions of Climate, Land Use, and Other Disparities on Region Shifts in Forest Ecosystems: Holocene Dynamics on the Northeastern United States (2007-2011). Interdisciplinary work is focusing on the hypothesis that past land-cover change and resource use were affected by interactions among climatic, vegetation, and cultural conditions, which are linked to climate. Car changes in land-use and settlement patterns are attributed to climate, change, human evolution, or human agency? Of, or in combination of these factors? To resolve this relationship the project integrates multiple scales of understanding of both ecological and cultural dynamics, with benefits to biophysical and social science.

The research project has just begun, but it aims to advance the understanding on how climate change interacts with human and natural systems to generate about ecological changes by developing and applying a rich array of paleoecological, archaeological, and anthropological data on the past 12,000 years. The study will focus on periods characterized by sharp climatic changes in the Holocene, and rapid change, major droughts, rapid climate change. The project will provide a comprehensive understanding of climate, such as temperature and rainfall patterns, which are linked to climate. Car changes in land-use and settlement patterns are attributed to climate, change, human evolution, or human agency? Of or in combination of these factors? To resolve this relationship the project integrates multiple scales of understanding of both ecological and cultural dynamics, with benefits to biophysical and social science.

The trivariant landscape analyses will involve collecting data on sites across Massachusetts from state site forms to: (i) provide interpretations informed by the regional analysis and high resolution paleoecological records; and (ii) enable cross-discipline analyses of geographical and temporal variation in site density and ecosystem patterns across biophysical and cultural gradients; and (iii) regional variation in site density and ecosystem patterns across biophysical and cultural gradients.

The statewide analysis will involve collecting data on sites across Massachusetts from state site forms to: (i) provide interpretations informed by the regional analysis and high resolution paleoecological records; and (ii) enable cross-discipline analyses of geographical and temporal variation in site density and ecosystem patterns across biophysical and cultural gradients; and (iii) regional variation in site density and ecosystem patterns across biophysical and cultural gradients.

The comprehensive data from sites in the TRDB, Martha’s Vineyard, and the Deerfield Valley (approximately 200 sites in each area) will be gathered, food processing, cooking, storage, disposal, horticulture, burial, ceremonial, long distance trade), and Literature References.

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The three contrasting landscapes shown in Figure 1 to be analyzed include: The Deerfield River Drainage Basin (TRDB), Martha’s Vineyard, and the Deerfield River Valley, which represent three contrasting cultural landscapes: a near-coastal estuary, a coastal plain, and an entirely floodplain.

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The Deerfield River Valley: This corridor of the Connecticut River Valley and Deerfield-Miller River Valley served as a major transportation route for Native Americans throughout the pre-contact period, supported by the presence of Pedro Esteva in Late Woodland and 17th century archaeological sites. The Deerfield River floodplain offers rich bottomland, a more productive and warmer environment than the surrounding uplands and protection from the more flood-prone Connecticut River. The Deerfield River has been the focus of archaeological sites by Ubachs Ambrist for the past 30 years. This rich archaeological and historical record reflects a detailed synthesis of the geomorphological, botanical, and cultural histories within the state-wide record and in comparison with other landscapes.