Background and Data Limitations:

The Massachusetts 1830 map series represents a unique data source that depicts land cover and cultural features during the historical period of widespread land clearing for agricultural. To our knowledge, Massachusetts is the only state in the US where detailed land cover information was comprehensively mapped at such an early date. As a result, these maps provide unusual insight into land cover and cultural patterns in 19th century New England. However, as with any historical data, the limitations and appropriate uses of these data must be recognized: (1) These maps were originally developed by many different surveyors across the state, with varying levels of effort and accuracy. (2) It is apparent that original mapping did not follow consistent surveying or drafting protocols; for instance, no consistent minimum mapping unit was identified or used by different surveyors; as a result, whereas some maps depict only large forest blocks, others also depict small wooded areas, suggesting that numerous smaller woodlands may have gone unmapped in many towns. Surveyors also were apparently not consistent in what they mapped as ‘woodlands’; comparison with independently collected tax valuation data from the same time period indicates substantial lack of consistency among towns in the relative amounts of ‘woodlands’, ‘unimproved’ lands, and ‘unimproveable’ lands that were mapped as ‘woodlands’ on the 1830 maps. In some instances, the lack of consistent mapping protocols resulted in substantially different patterns of forest cover being depicted on maps from adjoining towns that may in fact have had relatively similar forest patterns or in woodlands that ‘end’ at a town boundary. (3) The degree to which these maps represent approximations of ‘primary’ woodlands (i.e., areas that were never cleared for agriculture during the historical period, but were generally logged for wood products) varies considerably from town to town, depending on whether agricultural land clearing peaked prior to, during, or substantially after 1830. (4) Despite our efforts to accurately geo-reference and digitize these maps, a variety of additional sources of error were introduced in converting the mapped information to electronic data files (see detailed methods below). Thus, we urge considerable caution in interpreting these maps. Despite these limitations, the 1830 maps present an incredible wealth of information about land cover patterns and cultural features during the early 19th century, a period that continues to exert strong influence on the natural and cultural landscapes of the region.

For more information, please visit our website at: http://harvardforest.fas.harvard.edu/data/gis-data.html or call: Brian Hall at (978) 724-3302.