

Tree-Ring Data and Observations on Pitch Pine Adaptations

David A. Orwig, Ph.D.
Forest Ecologist
Harvard Forest, Harvard University

P.O. Box 68
Petersham, MA 01366
orwig@fas.harvard.edu

November 24, 1999

I have enclosed observations made by myself, Glenn Motzkin, and David Foster from our visit to Mt. Everett to examine it as a potential study site for our continuing investigations of ridge-top pitch pine/red pine communities in southern New England.

The stunted form of the pitch pine community (1 - 3 m. tall) was very interesting and we certainly consider it to be very rare for Massachusetts.

Upon a cursory reconnaissance of the summit and upper slopes, we found no direct evidence of fire at the site: there were no observed fire scars on the tree boles or lower branches and no soil charcoal. We also found no serotinous cones in our brief investigation of cones from trees on several different locations.

From several tree cores obtained on the summit and upper slopes, we believe that the forest is multiple-aged and includes very recent establishment (young seedlings) up to individuals exceeding 130 years old. This data and lack of fire evidence would suggest that pines are not currently dependent on fire for recruitment and that pines have exhibited successful recruitment up to the present day.

The following ages were obtained from pitch pines: 30,50,67,80,84,118,130, and 134. In addition, a red spruce was aged at 103 and two red oaks were aged at 80 and 90 years, respectively.

A few of the oaks surrounding the summit exhibited multiple stems and clearing for enhanced views can not be ruled out. This, combined with the relatively young ages of the stems would, in our estimation, preclude this site from being classified as true old-growth forest. This does not lessen the significance of the site in any way. To the contrary, the unusual growth form of the pines along with the site conditions and suite of associated species make this site very interesting from an ecological and historical perspective, and definitely worthy of protection. We look forward to studying this site further.