

Henault, Rachel (1996). "The Establishment of a Permanent Plot in a Pitch Pine Dune Woodland at Morse Mountain Conservation Area".

The permanent plot technique is used to monitor long-term changes in plant communities by following the growth and mortality of each individual within the plot. Permanent plots are useful in relating structures of plant populations with forest dynamics, in designing forest conservation and management strategies, and in comparing different forest types. This paper describes a 0.25 hectare permanent plot established in the coastal *P. rigida* dune forest at Morse Mountain Conservation Area. Each tree (n=227) and seedling (n=172) in the plot was identified, tagged and measured (height or dbh). Data were also collected on dead trees and shrub cover. Live trees, dead trees, seedlings, and shrub cover were distributed heterogeneously throughout the plot. The present community can be described as an uneven aged *P. rigida*-dominated woodland. Although seven other species of tree occurred in the plot, they are represented primarily by seedlings. Relative density, frequency, and dominance of trees were used to calculate relative importance values for each species. *P. rigida* achieved the highest importance (78.2), followed by spruce (7.19) and fir (6.14). It comprised 85.9% of total density, 53.2% of total subplot occurrences (frequency), and 95.6% of total basal area (dominance). *P. rigida* demonstrated less dominance of seedlings, comprising only 46.5% of total seedlings. The age of the Morse Mountain woodland and its successional state, whether early-successional or stable disclimax, is unknown. Repeated measurements of individuals in the plot will determine whether the dominance of *P. rigida* is maintained in the community as a result of more favorable growth and survivorship rates of *P. rigida* seedlings, or whether the species diversity of the plot will increase.