

LISTENING TO OLD BEECH & YOUNG CHERRY TREES – EXPERIENCES IN THE ALLEGHENIES & NEARBY

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This paper will provide an overview of the value and benefits associated with long-term forestry research, using examples from the Allegheny Plateau region of northwestern Pennsylvania. The presentation will include examples from “reference condition” long-term research as well as long-term manipulative research. The values and benefits to be examined include humility, ecological interactions, quantification of trade-offs, documentation of long-term cost & benefit streams, and answers to unanticipated questions. The talk will also discuss some of the costs of long-term studies and the barriers to sustaining them.

One focus will be on studies that represent the “reference condition” concept of long-term research, focused on studies in the Tionesta Scenic and Research Natural Areas (Bjorkbom and Larsen 1977), a 4,000-acre tract on the Allegheny National Forest. This area is considered one of the best representatives of the beech-hemlock forests that covered more than 16 million acres at the time of European settlement. Since being set aside as a Research Natural Area, it has provided critically important data about natural disturbance regimes at several scales, the impact of white-tailed deer on forest communities, and forest change in the face of exotic insects and diseases, specifically including the beech bark disease complex.

The other focus will be on medium and long-term studies conducted across the Allegheny Plateau region over the last 8 decades. These include studies of stand development (Marquis 1992), silvicultural systems, white-tailed deer impact (Horsley and others 2003), and forest liming (Long and others 1997). We will discuss some threshold for what makes a study “long-term” and give examples of surprises that arose in studies as they cross the threshold into “long-term.” Finally, the paper will provide a brief overview of the relationship between long-term studies on the Allegheny Plateau and the practice of sustainable forestry in that region.

Literature Cited

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