

Forward

Long-term Research – Why Do We Do It?

While jotting down some notes for this forward, I'm also thinking about how the day was spent in the upper elevations of the Bartlett Experimental Forest planning out a monitoring scheme for an early upper-slope harvest in an oak stand. The previous several weeks were spent in relocating cruise lines for some 450-500 permanent plots established in 1931-32. And it's time to resurvey several compartments under management since the mid-50's. My associates are conducting small mammal surveys, underway for 20 years or so, in a variety of managed and unmanaged compartments. Annual breeding bird surveys, also conducted for a couple of decades, were just completed.

Dedicated research folks across the nation, and beyond, are engaged in similar longterm research activities. The work is often arduous and by organizational/agency metrics – numbers of journal articles and plush grant support – sometimes unrewarding.

Why do we do it? The answer is: that reliable answers on forest management can only be developed and substantiated through longterm research. Early results from the Bartlett Experimental Forest concluded that single-tree selection in northern hardwoods was highly recommended. Due to poor regeneration and low species diversity, we now only recommend the system for sensitive areas on the best sites. Group selection, low-density shelterwoods, and (yes) even clearcutting are better choices. Threats since the 1960's of severe nutrient depletion in New England from clearcutting and biomass harvesting have recently been overturned by longterm findings on soils and productivity. Precommercial thinning returns in northern hardwoods were estimated at 6 percent or more based on 5-year results. Actual returns some three-four decades later were less than half that amount. I could go on and on. I am sure that others have more and better examples. Just one more item.....

We are in the middle of active discussions and arguments about climate uncertainty and the effects on forest conditions and management direction. And that is the way it should be since there are possible longterm consequences of making the wrong decisions. Computer projections of climate change and species composition show substantial changes – on the computer screen! BUT, those 450-500 eighty-year records from the Bartlett cruise plots mentioned above show that no new species are moving in or climbing up the mountain. The only real changes are in line with natural succession. Let's cautiously wait and see....

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Long-term Silvicultural & Ecological Studies

Results for Science and Management: Volume 2

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January 2013
GISF Research Paper 013

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