

New England Botanical Club – Minutes of the 969th Meeting

8 June 2001 Prepared by Lisa Standley, Recording Secretary pro tempore, & Art Gilman, Field Trip Chair

The 742nd meeting of the New England Botanical Club, Inc., being the 969th meeting since the original organization, was convened at Bennington College on 8 June 2001 with 19 members and guests in attendance. Following the introduction of guests, David Hunt noted with regret that he is relocating to the Rensselaer Plateau and is unlikely to regularly attend future meetings. Paul Somers introduced the evening's speaker, Dr. Kerry Woods of Bennington College, Vermont, whose topic was "The imagined forest: Stability and change in old growth hemlock-northern hardwoods." Dr. Woods obtained his Ph. D. at Cornell University, working with the indomitable Robert Whittaker. Kerry came to Bennington in 1986, following post-doctoral stints at the University of Minnesota and University of California at Santa Barbara.

The current concept of "old-growth forest" that controls conservation policy in the northeast is of a stable, old, undisturbed forest dominated by endogenous factors – processes internal to the community. However, we have no measureable or observable property that serves as an indicator that a community is "old growth" according to this definition. Kerry contends that our definition of "old-growth forest" and its dynamics are based on unverified models and untested assumptions – and that "old growth" really is only an imaginary forest.

To determine the actual dynamics of old forest communities, Kerry is studying two forests in northern Michigan that appear to have been free of major disturbance for at least 500 years. His study at both sites compares modern forest composition with data from plots established in 1962 (the Huron Mtn site) and 1935 (the Dukes Forest site). His data show that, at both sites, sugar maple is increasing; hemlock is stable or increasing; birch is significantly decreasing; and beech (which only arrived at the Dukes Forest site about 500 years ago – first generation trees are still standing) is significantly increasing. Birch appears to have become established following some historic disturbance around 250 years ago and is now not replacing itself. Beech has an age-distribution curve skewed to young trees. At the Dukes Forest site, the basal area of beech has increased by 2 to 4 times since the initial data collection 60 years ago.

The data show that these old forests are in fact not stable communities, but are undergoing slow successional changes in response to historic exogenous disturbance events. Community composition is still changing in response to events that occurred more than 200 years ago! Kerry's model predicts that a steady state, if ever reached, would be dominated by hemlock and beech, but that this state would be reached very slowly because hemlock requires 2 to 3 generations (1,000 to 2,000 years) to reach dominance. Kerry concluded that the old-growth forest concept is not supported by this research and suggested that forest conservation policy should be revised to reflect the actual, if slow, dynamics of old hemlock-northern hardwoods forests.

FIELD TRIPS

Fifteen members and guests met at 2 PM on a hot Friday afternoon, 8 June 2001 to explore the area in Pownal, Vermont, known as Krigger Rocks, with Dr. Kerry Woods as leader. Starting at Rte. 346, a peculiar rush, later identified as *Juncus compressus*, was found thriving in the salted road shoulder. Climbing gently up an old quarry access road, President Lisa Standley pointed out reed-like sedge, *Carex sparganioides*. The group fanned out upon entering the quarry proper, with various members pointing out plants of interest, most of them calciphiles and many of them rare in Vermont. Such plants as *Asplenium ruta-muraria*, *Cystopteris tenuis*, *Carex aurea*, *C. eburnea*, *Arabis lyrata*, *Rhus aromatica*, *Cornus rugosa*, and *Campanula rotundifolia* were seen around the quarry edges. On quarry spoil were fine plants of the native *Celastrus scandens* in full flower, a treat for those used to seeing only the increasingly invasive alien, *C. orbiculatus*. *Potentilla arguta*, *Pentstemon hirsutus*, and *Quercus muhlenbergii* were noted here as well. The dry limestone woodlands above the quarry yielded *Asclepias quadrifolia* (in fine bloom), *Aureolaria flava* (young foliage only), and *Conopholis americana*. These were mixed with the usual and common members of the local flora such as *Carex pensylvanica*, *Hepatica americana*, and *Solidago caesia*. After two hours of relaxed botanizing, members strolled back to their cars and headed for well-deserved cooling refreshments, a quick cleanup, and supper.

On Saturday June 9th, 12 Club members ventured out of New England into the wilds of New York. Led by Kerry Woods, the group explored the ledges and ravines of The Notch, in White Creek NY (Washington County). The forests and ledges on the east side of the valley support a very rich herbaceous flora that includes *Laportea*, *Hepatica*, *Dentaria*, *Hydrophyllum*, *Dicentra*, *Allium*, *Caulophyllum*, *Claytonia*, violets, and other forbs. The fern flora is equally rich, with Goldie's fern in abundance, along with *Deparia acrostichoides* and *Diplazium pycnocarpon*. The forests and ledges on the west side of the valley are drier, with a chestnut oak (*Quercus prinus*) woods at the summit and surprising hemlock-yellow birch swamps in depressions on the ridge. In perfect weather, the group enjoyed the ledge scrambles, fresh black bear tracks, and wonderful views extending from Mount Greylock (MA) to Dorset (VT).