

New England Botanical Club – Minutes of the 946th Meeting

5 March 1999 Prepared by Dr. Paul Somers, Recording Secretary

The 719th meeting of the New England Botanical Club, being the 946th since its original organization, met on Friday, March 5, 1999, in the main lecture hall at Harvard University's Biological Laboratories with 46 members and guests present.

President Dave Conant welcomed everyone and announced that five new members had joined the Club. Thanked for serving on the Council were Michael Donoghue and Matt Hickler (graduate student representative) whose terms just expired. Dennis Magee announced to the group that the *Flora of the Northeast: the Vascular Flora of New England and Adjacent New York* will soon be printed by the University of Massachusetts Press. It is a work started by Harry Ahles and completed by Magee following Ahles' death in 1981. Annual reports were given by the following committees and chairs: Field Trip by Art Gilman (presented by D. Conant), Graduate Student Award by Patricia Swain, Investment and Finance by Harold Brotzman, Library and Symposium committees by Les Mehrhoff, Nominating by George Neuman, Nonvascular Plant Herbarium by Anna Reid, and Vascular Plant Herbarium by Ray Angelo. The evening speaker was then introduced by Dave Conant.

Thomas J. Rawinski, Director of Ecological Management at Massachusetts Audubon's Center for Biological Conservation, addressed the Club on the topic "Travels through Virginia: Botanical Wonders and Conservation Victories." It was a partial accounting of his seven years away from New England, or, in his words, "a report back to the hive," regarding his employment as an ecologist with the Virginia Division of Natural Heritage, part of the state's Department of Conservation and Recreation. Using slide images and recounting many botanical discoveries and new natural areas protected as a result of the Division's efforts, he gave us an overview of the state's natural areas and botanically diverse ecosystems. He reminded us of how much M.L. Fernald had loved Virginia, noting that Fernald added more new species to his 8th edition of *Gray's Manual of Botany* from Virginia than from Newfoundland, another area he had explored extensively. Unlike Fernald, who had the misfortune of being mistaken for a foreign spy while exploring the state during World War II, Rawinski portrayed his travels in Virginia as much easier and facilitated by many convenience stores, such as Mr. Whippy's, that allowed him "to tool around forever, running on sugar, caffeine, and gasoline."

Contrasting Virginia with New England, Rawinski said Virginia has only two natural lakes, lacks some northern taxa such as *Chamaedaphne*, and is nearly devoid of paper and gray birch. As evidence of a richer flora than New England, he noted that there were 25 oaks, 8 pines, 6 magnolias, 25 *Rhynchospora* spp., 13 *Vaccinium* spp., and 10 *Trillium* spp., plus representation by families such as the Bromeliaceae and Loganiaceae. Virginia endemics include three species of *Clematis*: *C. addisonii*, which occurs on dolomite; *C. coactilis*, a species found on both dolomite and shale; and *C. viticaulis*, a narrow endemic found only on shale barrens. Other endemics include *Helenium virginicum*, a species of acid ponds in the Shenandoah Valley, and *Iliamna corei*, a species in the Malvaceae, for which they found fire worked well as a management tool.

The clearly defined physiographic provinces of the state helped Rawinski orient us to the state's major geological and climatic regions and to the locations of unique habitats for plants within them. Elevations range from the 5700 ft. high Mt. Rogers in the Blue Ridge Mountains in southwestern Virginia to sea level where one can find extensive tidal marshes. He compared the Piedmont of Virginia to Worcester County, Massachusetts, pointing out that either is diverse in habitat types, but that each possesses some interesting ones, such as those with diabase bedrock. Botanical hot spots are clustered in habitats such as shale barrens, sea-level fens, and dolomite outcrops: types found primarily in the eastern or western parts of the state. Using habitat characteristics as primary indicators, he and colleagues located 30 new state records, such as *Carex arctata* and *Sporobolus heterolepis*, between 1990 and 1997. Recent funding of 11.5 million dollars through a bond bill has allowed the Department to add over 20 new natural areas to its preserve system.

Rawinski highlighted certain ecosystems. More than 500 potential shale barrens were identified by the Heritage Division; they typically occur on steep hillsides undercut by streams. An abundance of limestone in the Shenandoah Valley and elsewhere has resulted in some notable dolomitic cliffs, and in the southwestern corner of the state, some calcareous glades with taxa such as the newly described clover species, *Trifolium calcaricum*. Dolomite glades supported the globally rare *Echinacea laevigata*, which can be found growing in loamy, dolomitic soil with such prairie taxa as *Castilleja coccinea* and *Senecio plattensis*. A priority for protection in Rawinski's eyes was an ultramafic barren (i.e, a serpentine-like area with high magnesium levels) in the Piedmont supporting several disjunct and rare species. Buffalo Mountain, a monadnock in the Blue Ridge, supported a diversity of vegetational associations and herbaceous species, including nine rare species for the state. Rawinski postulated that the thin soil mantle and open glade habitat is maintained by a natural deficiency of clay, which facilitates lateral movement of water and washing of any deposited soil. Ultramafic fens are another botanical hot spot in Virginia, providing habitat for 20 state-listed rare species, including a state record discovery: *Tofieldia glutinosa*. A truly significant area in the Piedmont is Ft. Pickett Military Reservation, where frequent fires have maintained a population of the very rare sumac, *Rhus michauxii*; it occupies hundreds of acres, making it by far the largest known population.

The Coastal Plain, as in New England, has many ponds, but in Virginia they are sinkhole depressions over 100,000 years old. Here one can find large overcup oaks, *Quercus lyrata*, and rare herbs such as *Carex jorii*, *Hottonia inflata*, *Sabatia campanulata*, and *Chelone cuthbertii*. In an especially dry year, ten new *Fimbristylis perpusilla* records showed up at pond sites. Other coastal plain communities of special interest are sand hills with longleaf pine, pocosins or shrub bogs, sea level fens, and cypress-tupelo swamps, where Virginia big-eared bats can be found in cavities of the ancient trees. For more information on Virginia natural areas and biota, Tom Rawinski advised seeking out the Virginia Department of Conservation and Recreation's web site:

<http://dit1.state.va.us/~dcr/vaher.html>