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2025 Richard and Minnie Windler Award Recipients

SYSTEMATICS

Edward R. Schilling, Aaron Floden, Jordan Reed, Cory Hale, Todd Crabtree, and Caitlin Elam

ECOLOGY

David L. Phillips and Justin L. Hart

The Richard and Minnie Windler Award recognizes the authors of the best systematics and ecology papers published in *Castanea* during the previous year. For 2025, authors of two articles were selected as winners: Edward R. Schilling, Aaron Floden, Jordan Reed, Cory Hale, Todd Crabtree, and Caitlin Elam for their article, "Molecular barcoding the rare plants of Tennessee." (*Castanea* 89[2]:149–168), and David L. Phillips and Justin L. Hart for their article, "Twenty years of structural change, including tornado damage, in southern disjunct eastern hemlock stands" (*Castanea* 89[2]:169–181).

Conservation of rare plants requires continuous monitoring of populations. However, many species may be difficult to identify correctly, especially when not in flower or when closely related congeners occur sympatrically. Molecular barcodes represent unique DNA sequences associated with species that can be used as evidence of a plants species identity, even when a plant lacks the appropriate characteristics for diagnosis. Recognizing the value of databasing DNA barcodes, Ed Schilling (University of Tennessee, Knoxville) and colleagues obtained barcodes from 71 species in 18 genera ranked as globally rare or rare in the state of Tennessee. These barcode sequences were compared to homologous sequences from closely related species to appraise their uniqueness. Not only were many of the barcodes useful for distinguishing rare species from more common ones, but some of them confirmed alternate taxonomic hypotheses or challenged conservation status.

Figure 1. *Platanthera integrifolia* inflorescence and habitat, one of the rare species bar-coded in Schilling et al. 2024.

David Phillips

Justin Hart

Eastern hemlock in the southern Appalachian range is relegated to high elevation habitat, and therefore populations at the southern boundary are often isolated. Along with threats from climate change and invasive pests like the wooly Adelgid, hemlock populations in the southern Appalachian highlands may experience decline in the near future. David Phillips and Justin Hart (University of Alabama), resurveyed disjunct hemlock stands that were first studied twenty years prior for structural changes. Despite general decrease in canopy dominance, the proportion of stems in larger size class increased, indicating that these populations may be stable in the near future. However, catastrophic disturbances such as tornados may increase with climate change, and these were shown to have major impacts on hemlock canopy structure in this study.

––Christopher P. Randle (Sam Houston State University),
Wayne Barger (Alabama Department of Conservation and Natural Resources),
and Jonathan Horton (University of North Carolina at Asheville)