

The Ongoing Task of Describing Our Region's Flora

By Alan Weakley, UNC Herbarium Curator

North Carolina researchers and collaborators recently named two new plant species for North Carolina — an aster and a bishopweed — from opposite ends of the state.

Many people assume that the basic work of describing and cataloging the indigenous flora of North Carolina must have been completed long ago, but that is simply not true — new species are described nearly every year as researchers continue to explore the state's flora in both field and herbarium.

The two recently named species were both noted as “interesting” in the past, but the task of studying them and their close relatives in detail was not completed until this year.

Decades ago, *Manual of the Vascular Flora of the Carolinas* co-author Harry Ahles noted unusually large-fruited plants of bishopweed (*Ptilimnium*, a feathery-leaved plant in the carrot family), growing in tidal freshwater marshes near Wilmington, NC, Charleston, SC, and Savannah, GA. In the predecessor to the 1968 *Manual*, the 1964



The Buck Creek Serpentine Barren, home to a newly described aster species. (Photo by Gary L. Kauffman)

Guide to the Vascular Flora of the Carolinas, Ahles referred to the plant as “*Ptilimnium macrospermum*,” but he did not validly publish the name. North Carolina Botanical Garden Director Emeritus Ritchie Bell was also unsure of the taxonomic validity of the alleged species and therefore decided not to describe it until additional research could take place. Decades passed.

In the early 1990s, while working as botanist for the N.C. Natural Heritage Program, I became interested in this unsolved puzzle. This plant appeared to be very rare and would be a candidate for conservation attention—if indeed it was a “true” species. After studying it in the field and herbarium, I decided that the *Ptilimnium* was distinct, particularly as it often grew with its closest relative but flowered and fruited six weeks earlier and maintained its distinctive morphology. Guy Nesom, at the Botanical Research Institute of Texas, also became interested in the plant and came to the same conclusion following his own herbarium studies.

Nesom and I have collaboratively described the plant as *Ptilimnium ahlesii*, honoring Harry Ahles's insight into its distinctiveness. Carolina bishopweed is one of the rarer plants in the Carolinas, and it is suffering from alteration of its habitat by the invasive reed *Phragmites australis*.

In the early 1980s, an unusual aster attracted the attention

of Laura Cotterman (then Mansberg), as she conducted her Master's thesis research at the Buck Creek Serpentine Barren, near Franklin in western NC. After puzzling over the plant, she sent specimens to various experts, who were unsure of what to make of it. In the years since, U.S. Forest Service and university botanists remained puzzled about the plant.

In the fall of 2003, a small party of botanists met to tour the serpentine barren, but were forced to take a rest-stop in a patch of asters by a napless toddler. After pondering the unidentified aster, we decided that two decades was long enough for the puzzle to remain unsolved! Detailed studies by Nesom, Georgia-

based botanical consultant Tom Govus, Forest Service botanist Gary Kauffman, and myself led to the conclusion that this plant warrants recognition as a species, and we named it *Symphotrichum rhiannon* (see my discussion of changes in aster taxonomy in the March-April 2004 *Newsletter*). Known from a single site, the Buck Creek aster is one of the rarest species in North America and highlights the conservation importance of the Buck Creek Serpentine Barren natural area.

Many more taxonomic projects are underway at the Herbarium. Next to be described and named is a St. John's-wort (*Hypericum*) endemic to the granite domes of Alexander and Wilkes Counties and first col-

lected in 1940 by Laurie Stewart Radford (Herbarium curator, 1936–42) near her childhood home in the Brushy Mountains. She made additional collections with her husband, Albert E. Radford (Herbarium curator and director, 1946–83). This distinctive species will be named in honor of the Radfords and their many contributions to southeastern botany, the Botanical Garden, and the Herbarium. We note with sorrow the passing of Mrs. Radford (see page 2 of this *Newsletter*), and acknowledge with gratitude the significant contributions she made to the UNC Herbarium.

Other News from the Herbarium

Herbarium volunteer Diane Butzin has been databasing the southeastern orchids in our collection. Diane comes to the Herbarium every Wednesday for 4 to 5 hours. She started with *Aplectrum* (Adam and Eve orchid), is currently entering *Listera* (twayblade orchids), and is working alphabetically toward *Triphora* (three-birds orchid).

You can see the fruits of her labors in the “distribution maps” section of the Herbarium's website < www.herbarium.unc.edu > . Thank you Diane!



Calopogon pulchellus, by Marion Satterlee (1899)