



NYFA Newsletter

New York Flora Association - New York State Museum Associates

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A Perfect Day on Schunnemunk –

by Richard S. Mitchell

This year will be one of the last field seasons of the Hudson Highlands floristic survey, of which I feel so privileged to have been a part. Our team is venturing out on its eleventh year of exploration of the region, which, of course, we can never know in its botanical entirety, and which teaches us so many new things every time we go out. In the early years, Gordon Tucker was with us, but, since 1993, the core of the team has been Spider Barbour, Jack Focht and me, with some wonderful help from others, such as John Yrizarry and Ken Dean. This year, we added David Werier, from Ithaca, to our group, and he has already provided a very astute pair of new eyes to our searches.

Although funding sources for the project have remained mysteriously silent, we decided to tackle Schunnemunk Mountain anyway. It is an imposing sugarloaf on the northwestern perimeter of the Highlands – the one you parallel for over nine miles (on your right) as you approach the last toll booths heading south on the Interstate. It was the last major floristic area of the region that we hadn't addressed.

My colleagues couldn't wait to get started surveying Schunnemunk, but, for the first time, I felt an odd forboding about an inanimate geographical entity – that big, gloomy pile of rocks. I had experienced a strange fall and winter, heading south past NY City on September 10, followed by two more 3,000 mile drives to Florida, months of all-day hospital sitting with my 90 year old mother after a botched operation, my unsuccessful attempts at her re-habilitation, the death of my favorite uncle and a hurricane. Otherwise everything had been going great, but, somehow, I was not looking forward to spring with my usual enthusiasm.

A nightmare, which actually recurred for me, featured the other botanists scaling something that looked like "Bald Mountain," from Walt Disney's "Fantasia," bounding up treacherous slopes like mountain sheep, while I was left behind, slipping on icy boulder-talus, hanging by my trapped limbs from sharp crevices and such. I was too stressed to even take my vacation in mid-May, so I turned to Schunnemunk for comfort, but with trepidation.



***Potentilla tridentata* Soland. ex Ait., three-toothed cinquefoil, has been rediscovered in the Hudson Highlands on Schunnemunk Mountain; it is a boreal-montane species that ranges from Greenland across Canada, south to the Dakotas, Michigan and New York, with a very spotty distribution southward; found in northeastern Pennsylvania then in the southern Appalachians to Georgia**

It was my third trip to the mountain, but I had not yet climbed to any extent. Jack, Spider and David were enthusiastic, and that was contagious. The temperature would rise to a perfect 70 degrees later in the day, under pale, blue skies, and the green world would answer by bursting and budding forth in an absurdly beautiful way.

Our first stop was an old monastic retreat now owned by the State, with its abandoned chapels,

utility buildings and stations of the cross, scattered throughout the woodlands. Most impressive were the plantings from which so many unusual garden plants were escaping. Among these were globe candytuft: *Iberis umbellata* L.; purple dead nettle: *Lamium purpureum* L.; mayweed: *Anthemis cotula* L.; and even the common tulip: *Tulipa sylvestris* L., which seemed to be spreading by runners. Exotic, planted trees in the vicinity included a pinyon pine from the west (*Pinus edulis* Engelm.), Japanese maple (*Acer palmatum* Thunb.) and a very peculiar hickory, with tiny fruits whose husks split to the base (like sweet pignut), mostly five leaflets, and the bark of a shagbark. (*C. ovata* var. *microcarpa*?)



Spring avens, *Geum vernum* (Raf.) Torrey & Gray, a rare native plant that seems to be spreading into New York from the south. Could it go from the endangered list to being an invasive pest?

Everywhere you looked, on that particular day, there were new things to see. A clean land fill in the immediate vicinity seemed to have been brought in by helicopter from Afghanistan, when you analyzed what was growing there. The diversity of Brassicaceae was quite wonderful, not to speak of the many composites, some of which were not yet flowering or fruiting and still have us guessing.

Then, we were off into the woods, where you could easily discern a lime influence in the soil just by looking at the flora. There were hop hornbeams, hepaticas and rue anemones in the woods of these

northwestern slopes of Schunemunk Mountain, in sharp contrast to the very acidic habitats we would find on the northern ridge crests a week later.

Spider called out the characteristic phrase that I'm always so happy to hear from him: "Oh... I think I've found something." It was green rock-cress (*Arabis missouriensis* Greene), new to the Hudson Highlands and listed Threatened by the New York Natural Heritage Program. A good start.

Dave Werier then came up with spring avens [*Geum vernum* (Raf.) Torrey & Gray], new to the Highlands. This is an interesting species, in that it has been considered a rare native plant (listed as Endangered by NYNHP), but it appears to be spreading as a weed in recent times. It is one of those native plants that seem to be on the march northward from New Jersey and Pennsylvania in recent times. Steve Young, Troy Weldy and I have had preliminary discussions about recommending a downgrade in rarity status if the trend continues.

So, on we went to climb the ridge. The vegetation of the lower slopes showed definite calcareous soil influences that soon gave way to circumneutral and, later, acidic substrates. Again, everywhere you looked, conditions and plant associations were changing as you climbed, unlike the great, uniform expanses of chestnut oak, bear oak, witch-hazel and laurel-dominated terrain we were accustomed to seeing off to the southeast.

One of the goals we had discussed early-on, was to rediscover *Potentilla tridentata* Soland. ex Ait., the three-toothed cinquefoil, which had been reported by R.H. Torrey in the 1930s from what is called the "High Knoll." In his article, he said that there were only about 15 plants, growing in crevices at the highest point on that part of the ridge (1,380 ft, to be precise), and that he was not sure about their future survival. Our team had climbed that knob two weeks before, when I couldn't come along, but with no success in finding the cinquefoil.

Potentilla tridentata is a boreal-montane plant that occurs mostly from Greenland across Canada and southward down the Appalachian Shield. It is well-represented on rocky ledges and alpine peaks in the Adirondacks, resembling a tiny strawberry, and thriving in the rich, mesic soils and gravels of the alpine zone, but rare except in a few locations south of the Catskills and Taconics. From there, it jumps to sites in northeastern Pennsylvania and the southern Appalachians south to Georgia.

The vista from the summit was spectacular, with the entire Hudson Highlands off to the southeast and the Catskills clearly visible to the north. We had climbed to about 1,200 ft, where we rested on

an odd, dark-colored rock formation with red and greenish hues and eroded, soil-filled cracks.

As we headed upward and northward along the trail, its borders became lushly lined with flowering columbines in places, as if they were planted. Further on, there was spotted a spectacular show of dwarf plum. (*Prunus pumila* L. var. *susquehanae* (Hort. ex Willd.) Jaeger. Mostly one to two feet tall, these shrubs were full-flowering plumes of white, temporarily masking leaves that were not far behind in development. The dark, stony surface was spectacular at this spot, and I was admiring the textures when I saw my first cinquefoil. I began to stammer something, and noticed that two other members of the party were doing the same, trying and finally saying “that’s it,” right along with me.



Green rock-cress, *Arabis missouriensis* Greene, a plant listed as Threatened, known from nine counties in New York. It grows in rocky, open-canopy forests, often along shores, but also in ecotones and power line corridors

There were hundreds of plants, most of which were in full flower – not at all spectacular – tiny, white things that brought you quickly to your knees and summoned your trusty, Serbo-Croatian hand lens into action.

The next week we climbed the northwest ridge, down its east slope, found the swamp we’d seen on the topo map, then bushwhacked back up to the

crest and down again... all in all 3,000 feet up and 3,000 down. I have joyfully swapped my stress for a few sore muscles, and I’m energized again. But no day in recent field history stands out in my memory like the Wednesday when everything seemed extracted from a movie, with unfamiliar weeds and rare native plants, odd habitats, long scenic views and young men running along the ridge top in 16th-century, Hasidic, black robes, for whatever reason.

Editor’s Note:

If the previous article sounded like it was written in the 19th century, it’s because I’ve been influenced recently by a marvelous book that I read in conjunction with my upcoming compendium. The author seemed to be having such a wonderful time with his Victorian viewpoint, that I thought I would try it on for fun. If you can find this book, I highly recommend it: **Peattie, D.C. 1966. A Natural History of Trees of Eastern and Central North America. (2nd Edition), Houghton – Mifflin, Boston. 606 pp.**

***Epilobium parviflorum*, a Rare European Introduction along the Niagara River – by Patricia M. Eckel, Buffalo Museum of Science**

The Niagara River Gorge is, and has been, host to a dazzling array of both native and exotic plant species throughout the centuries-long history of botanical interest in the area. It offers seven miles of stratified sandstone and dolomite habitats, providing a pattern of both acidic and basic substrates on a variety of steep slopes. There is a patchwork display of shaded pockets of stable, moist black soil with high humus and exposed, sterile crumbling soft shales, with about half of these areas exposed to the west and half to the east.

Transportation corridors span the gorge, now, with a complex of bridges, exposing the region to a rain of propagules of exotic species, some of which are spread by trains and highway vehicles, and some of which escape nearby gardens and yard plantings. In addition, the region is frequented by waterfowl who bring in quantities of seeds and plant parts picked up during their migrations.

There has been a recent proliferation of persistent, exotic taxa among the native flora, brought about, at least in part, by climatic factors. Nowhere is this more apparent than along the two old, west-facing railroad beds near the northern terminus of the gorge, at Lewiston, New York.

There, in what was formerly a relatively barren area of crumbling red shales, a soft, mobile talus derived from the beds has recently developed a veritable jungle of exotic species. The weedy populations have developed in extensive seepage along the dolomite caprock and in its effluent, which flows in the up per ditches that parallel the railroad bed and the gorge wall.

As part of an attempt to describe the vegetation of this habitat and correlate it with other patch-communities on both sides of the gorge, I initiated a botanical survey in 2001. Preliminary collections included an *Epilobium* species that was unfamiliar to me at the time, and not recorded from the Niagara Gorge region. It turned out to be *E. parviflorum* Schreber. **Label Data:** USA, New York, Niagara Co., town of Lewiston, upper railroad path at mouth of Niagara River and gorge just south of Artpark in the village of Lewiston; calcareous bedrock with extensive shale-sandstone strata, with *Salix eriocephala*, *S. bebbii*, *S. interior*.



***Epilobium parviflorum* Schreb., a European willow-herb, was reported in the 19th century from southeastern New York, and has now appeared 300 miles inland, near Rochester and along the Niagara River Gorge**

P. M. Eckel, coll. Sept. 23, 2001 (BUF). The only previously reported station for this European species in western New York was from Monroe Co., where it was collected by Robert Wesley (NYFA, 1990, Richard Mitchell, personal communication). For about a century, it had been reported for North America only in the vicinity of New York City (Kings and Queens Counties) and on ballast at Hoboken, New Jersey, by W. Trelease in 1891 (Purcell, 1976); subsequently, it was recorded eight stations in the province of Ontario, Canada, from the counties of Grey, Simcoe and York. The habitats were a clay field, a riparian meadow, mud beside a beaver pond, a wet cedar-tamarack swamp, stream edges and a "wildlife area" on Toronto Island in Lake Ontario. The three Ontario populations were near to significant bodies of water in the Great Lakes, making it likely that spread of the plant has been by waterfowl, even though seed dispersal in this group is usually by wind. The species was found in Michigan in 1966 and has since spread to several counties there (Voss, 1985).

Epilobium parviflorum has stems with spreading hairs and relatively inconspicuous, red-purple flowers. The horizontally pubescence of the stem can cause the species to be confused with native *E. strictum* Muhl. and the Eurasian *E. hirsutum* L. *Epilobium strictum*, however, has entire, nearly linear leaves up to 8 mm wide and the stigma is entire.

Both *E. hirsutum* and *E. parviflorum* have leaves much wider than 8 mm, and both are distinctly denticulate with deeply 4-lobed stigmas. *Epilobium hirsutum* has more conspicuous petals, up to 1 cm long, whereas those of *E. parviflorum* (as the epithet indicates) are smaller, only reaching a centimeter in length. The leaves of *E. hirsutum* clasp the stem to halfway around its circumference whereas those of *E. parviflora* are sessile.

Examination of other collections made along the Niagara River beach, on the southern boundary of the village of Lewiston, revealed a second collection of *E. parviflorum*, deposited at BUF, indicating that the species is probably well established along the river. It is most likely also established on the Canadian shores of the river, but this remains to be demonstrated.

Literature Cited:

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Line-drawing illustrations are from Holmgren, 1998

WORKSHOPS ARE ONLY AVAILABLE TO PAID
MEMBERS, SO SEND IN YOUR 2002 DUES!

Upcoming NYFA Events

NYFA Field Trip: Ithaca, NY - June 9, 2002

David Werier will lead a tour of some botanical hot-spots in the vicinity of Ithaca, including Taughannock Falls Gorge, with a chance to see *Primula mistassinica*, *Pinguicula vulgaris*, and *Saxifraga aizoides*, plus a beautiful and rich gorge. David will also lead a sedge walk on Saturday, June 8th for the Finger Lakes Native Plant Society of Ithaca, and he has invited NYFA members to join in. The walk will be from 12:30 to approximately 5pm. If there is significant interest, we may also offer a social opportunity on June 8th for NYFA members to

tour some of the local Finger Lakes wineries together. If you are interested in any of these activities, please check out the association's website or contact Troy Weldy:

weldy@nynhp.org

Carex Identification Workshop - June, 27, 2002

Dr. Tony Reznicek, a widely-acknowledged expert on sedges, has agreed to lead a field oriented workshop for NYFA. Contact **Troy Weldy** for location and cost:

weldy@nynhp.org

NYFA Fall Field Trip – September 21, 2002

Rogers Island, near Catskill

Steve Young, botanist for the New York Natural Heritage Program, will lead a tour of the mudflats and marshes of Rogers Island where we will see all kinds of interesting and rare freshwater tidal species. Be prepared to get down and dirty (wet to the knees). If you have a canoe to share, please contact Steve Young: young@nynhp.org

Ballot:

If you are a dues-paid member of NYFA, you are invited to vote for officers by detaching this slip and mailing it to us, or send your 2002 dues and the ballot together.

The following were nominated at the meeting of the NYFA Council – Northeastern Natural History Conference; the nominee who comes in second for the Director will become the Assistant Director:

TO VOTE: CIRCLE ONE NAME FOR DIRECTOR; NELSON FOR TREASURER OR WRITE ONE IN

Director: **Troy Weldy** **Robert Ingalls**

Treasurer: **Andrew Nelson** **Write-ins (Comments):** _____



The Iona marshes of Rockland County represent a unique habitat on the Hudson River Estuary. Influenced daily by tidal fluctuations of two feet or more, they harbor some of New York's more endangered plants.

Look for an illustrated book on the flora of New York's Hudson Highlands within the next three years.