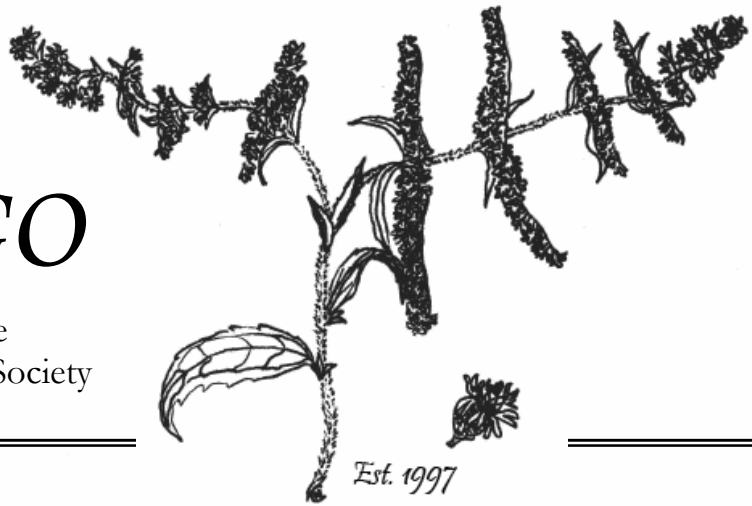


SOLIDAGO

The Newsletter of the
Finger Lakes Native Plant Society



Volume 13, No. 2 April 2012

Fossombronia in Central New York

by Norm Trigoboff

Under a hand lens, the liverwort *Fossombronia wondraczekii*, the only species of *Fossombronia* known from central New York, looks like a bunch of unkempt, light green, Victorian ruffles with distinctive bright violet rhizoids growing from the undersides of horizontal stems. It's a fairly common pioneer, in dime size or smaller patches, on the bare soil of dirt banks and compacted, constantly damp areas of foot and vehicle trails where the organic soil components have washed away. Sometimes, it forms larger clumps, as on the bare ground along the drip line of SUNY Cortland's Field House (9 Oct 2003, Trigoboff c0350).

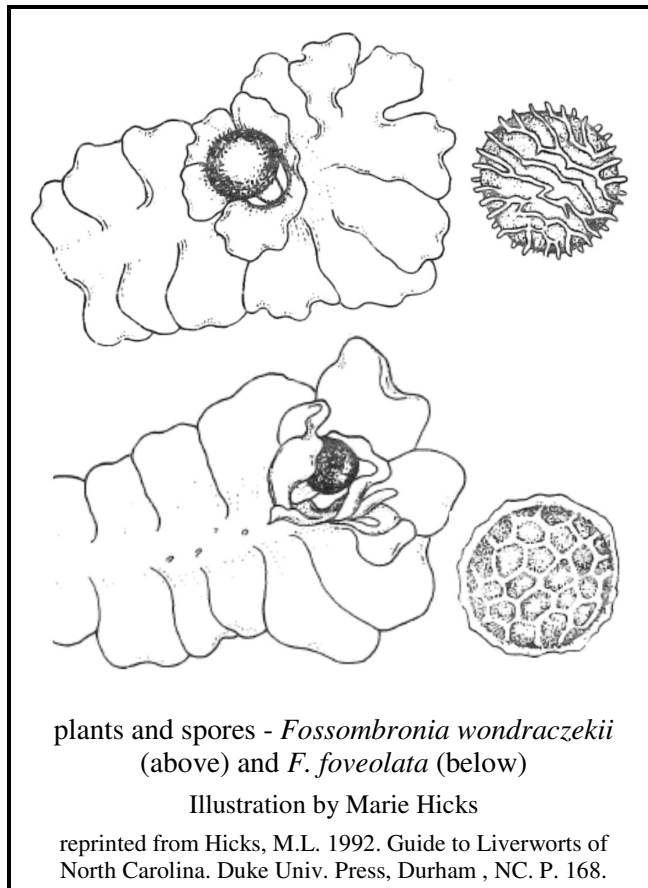
One fine fall day last September, I took my hand lens, sharpened credit card, old junk mail envelopes, and zip lock bags and meandered through Green Hills Cemetery, a nice mix of hilly woods and lawns several hundred yards from my home in Dryden. There I saw, on the damp bare spots of an otherwise grassy shoulder along a gravel road parallel to and shaded by the woods edge, a *Fossombronia* covering unusually large patches, including almost pure growths to about a foot square in extent, the liverwort equivalent of the Great Plains. Unusual abundance, especially in human altered habitats, sometimes hints that an organism is an introduced species. However, the plant

was limited to a stretch of shoulder less than 100 yards long, with most of it along a fifteen yard stretch. Associated bryophytes, all normal for this habitat, included the mosses *Aphanorrhagma serratum*, *Bryum argenteum*, *Bryum* sp., *Dicranella varia* and *Ditrichum lineare*; the liverworts *Cephaloziella* sp. and *Solenostoma gracillimum*; and the hornwort *Anthoceros laevis* var. *carolinianum*.

In the field, the different *Fossombronia* species and varieties look much the same, so I took some home for closer study. Otherwise well-educated people are often surprised to find that bryophytes, algae, and other small plants and animals look beautiful under an ordinary light microscope. Tiny living things often pack huge amounts of detail into minute spaces. Bryophyte leaf and spore surfaces sometimes boast small scale sculptures. In addition, when a scope's light passes through very thin objects, the colors glow like stained glass. Artists first paint their canvasses white for a similar effect – it makes the overlying paint more luminous.

Under a microscope at 400x, the spores of *Fossombronia wondraczekii* glow a beautiful rich brown and show distinctive parallel ridges that rarely cross to form small closed angular areas. The ridges form 28–35 short teeth seen in profile along the margins of each spore. The spores of the Dryden plants glowed brown, but had the surface features of a different species, *F. foveolata* var. *foveolata*. The spores showed at least six closed areas and there were far fewer than 28 marginal teeth.

continued on page 13



BECOME A MEMBER OF FLNPS

To become a member of FLNPS (suggested dues \$20 [\$10 students]) send your name, address, phone number, and email along with your dues to:

Finger Lakes Native Plant Society
532 Cayuga Heights Road
Ithaca, NY 14850
THANKS!!!

NEXT NEWSLETTER DEADLINE September 14th, 2012

Please send items for the newsletter to David Werier, editor (email noted in box to the right). The deadline for the next newsletter is **Friday September 14th**. As always, we need your pieces to help make this newsletter lively, interesting, and informative. Items to send can include articles, stories, trip reports, drawings, photos, information on relevant upcoming events, letters to the editor, and more. Thanks again for your help in making this newsletter possible.

NAME THAT PLANT CONTEST



The photo from last issue's [Solidago 13(1)] name that plant contest was of twinleaf (*Jeffersonia diphylla*). Many folks thought the plant was bloodroot (*Sanguinaria canadensis*). These two plants both flower very early in the season and although in different families, are still relatively closely related. The immature leaves can also look somewhat alike but upon closer examination are in fact quite distinct.

Thanks to all those that entered the contest and congratulations to contest winners: Sara Brown, Pat Curran, Ken Hull, Susanne Lorbeer, Joe O'Rourke, Louise Raimondo, Nancy Richards, Georgeanne Vyverberg, and Steve Young.

This issue's plant contest is pictured to the left. The picture shows the plant emerging in the spring. This common, wetland plant is easily identified by its distinctive leaves. Hints and suggestions are often provided to contest participants who try. Please submit your answers to David Werier (email and address in the box above). Common and/or scientific names are acceptable. More than one guess is allowed. The photo was taken by David Werier on 21 April 2008 in Tompkins Co., NY

THE FINGER LAKES NATIVE PLANT SOCIETY

Steering Committee Members

Charlotte Acharya: [redacted] at large
Krissy Boys: [redacted] Projects (chair)

Meena Haribal: interim webmeister

Mark Inglis: at large

David Keifer: Treasurer

Rick Lightbody: [redacted] at large

Susanne Lorbeer: Outings and Education

Rosemarie Parker: [redacted] Secretary and Assistant Newsletter Editor

Dan Segal: [redacted] at large

Anna Stalter: [redacted], [redacted] President, Outings & Education (chair)

David Werier: [redacted] nakita@lightlink.com) Newsletter Editor

Bob Wesley: Outings and Education

Send all correspondence regarding the newsletter to: David Werier, Editor, 30 Banks Rd., Brooktondale, NY 14817 [redacted] [redacted]

The 12th Northeast Natural History Conference (NENHC)

This conference promises again to be the largest regional forum for researchers, natural resource managers, students, and naturalists to present current information on the varied aspects of applied field biology (freshwater, marine, and terrestrial) and natural history for the Northeastern United States and adjacent Canada. It will serve as a premier venue to identify research and management needs, foster friendships and collegial relationships, and encourage a greater region-wide interest in natural history by bringing people with diverse backgrounds together. For more information visit www.eaglehill.us/NENHC_2012/NENHC 2012

A Day in Fisher Woods, February 2012

7 Haiku

by Sara Brown

February day
Outside in the quiet woods
We sit on the ground

Old growth trees still grow
Remember forests before
Deforestation

Big old trees standing
Rooted in Earth beyond sight
Oh to understand

Glaciers came on through
Upheaval of soil, rock, land
This place we call home

Water runs freely
In stream beds formed by glaciers
Ancient land holds us

Mighty tulip trees
My face turns up to the sky
Flower bract bouquet

The man who loves trees
He knows them in their beauty
Looking up he smiles

Solidago Labels by Rosemarie Parker

Observant members may have noticed that the coloring on the FLNPS return address label is different. In fact, this is the first time in about 10 years that the label has had a truly local native plant on it. I've mostly used a Colorado iris species that is very similar to *Iris versicolor*, and I hope no one noticed. People definitely noticed when my attempt at using a *Trillium* image had one "too pink." But since both our logo and our newsletter celebrate the genus *Solidago*, I decided to get in line. This meant using an uploaded image as none of the commercially available labels had goldenrod (wonder why). Both Ken Hull and Paul Schmitt kindly sent me images of *Solidago* spp. After much messing around with various label formatting templates, the one that worked best is Paul's image of *Solidago sempervirens* (see the December 2011 newsletter for a report on it moving into Tompkins County). I want to thank both Paul and Ken for sending photos, and Paul for working with me to adjust the original image so it works for such a small print size.

New York Flora Association's 2012 New York Native Plant Conservationist Award

The New York Flora Association (NYFA) is seeking nominations for a new award: **The New York Native Plant Conservationist Award**. The award is meant to honor a person who has worked towards the conservation of the native flora of New York. To nominate a candidate send the following information to Anna Stalter (chair of the NYFA Native Plant Conservation Committee) at ams15@cornell.edu.

-Name, address, email, and phone number of nominator and nominee.

-Why you believe this nominee deserves the award.

-What the nominee has done to work towards the conservation of the native flora of New York.

Deadline for submissions for the 2012 award is Dec. 31, 2012. The NYFA Native Plant Conservation Committee will determine the winner of the award, which will be announced sometime in 2013.

NYFA Field Trips and Workshops

The New York Flora Association (NYFA) has released its field trips and workshops schedule for 2012. They are offering programs throughout New York, which are likely of interest to FLNPS members. For details see the field trips and workshop tab on the NYFA website: www.nyflora.org/field-trips-and-workshops.

Flora of the Chemung Pine Barrens, N.Y.

by Robert Dirig & Edward A. Cope

Prologue by R. D.: From 30 Sept. to 9 Oct. 1979, John F. Cryan (my collaborator in Karner Blue Butterfly and Albany Pine Bush research) and I visited several sites with pine barrens vegetation in eastern and central N.Y. We were eager to explore new tracts with this vegetation type, to scout for *Lupinus perennis* and other components of potential Karner Blue habitats. We had viewed sandy areas in Albany, Saratoga, and Warren Counties before travelling to the Finger Lakes Region to investigate several places there.

We were especially curious about a site in Chemung County that Dept. of Environmental Conservation personnel had described to us as “pine barrens” in 1978. They had good instincts: We were thrilled to find a genuine, 46-acre pine barrens remnant on gravelly sand near Chemung, N.Y., just north of the Pennsylvania border along Rt. 17! Although fire-suppressed, it harbored many of the floristic elements of eastern N.Y. pine barrens, and hints of the open-canopied vegetation that characterizes such areas. We walked over the tract, made a preliminary plant list, and hoped to return in the spring for a closer look — but this did not happen.

In 1980, I began my curatorial position at the Bailey Hortorium Herbarium (BH) at Cornell University, where I worked with Ed Cope, who had been hired the year before. A few months later, Ed and I talked with our administrators about starting an herbarium field project. I suggested the Chemung Pine Barrens as a worthy site, and we thoroughly investigated its flora in 1982-1983. This article summarizes our project and results.



The Chemung Pine Barrens site is in the Chemung River valley between Waverly and Chemung, N.Y., within the Susquehanna River basin. Picturesque summits of surrounding hills rise 600-800 ft. above the river flats.

The location of our study site (elevation ca. 810 ft.) is given on a sample herbarium label (Fig. 1-I). We accessed the area by parking on the wide shoulder of the highway. The plot is north of the Chemung River, and ca. 1000 × 2000 ft. (46 acres) in extent, bordered on the north by cultivated fields edging the Conrail corridor, on the east by cultivated fields and mowed highway verges, on the west by a conifer plantation, and on the south by the Pennsylvania state line and a sand and gravel mine. Double lanes of the Southern Tier Expressway (Rt. 17/I-86) cut through the southern third of the tract. Figs. 1 (A-F) and 2 illustrate and map major types of vegetation that we found in the collecting area in 1982.

The underlying soil is *Chenango gravelly fine sandy loam*, originating as a terrace or alluvial fan deposited at the confluence of Wynkoop Creek with the Chemung River just east of the tract (Pearson *et al.* 1932: 25-26, 1973: 6). Soil pH in the PINE BARRENS and OAK WOODS sections of our site (Fig. 2) was 4.3-4.5, and 5.6 on the LUPINE BANK, based on five soil samples analyzed at Cornell's Dept. of Crop & Soil Sciences. (In 1979, R.D. and Cryan observed

that soil at this site resembled gravelly sand at the Rome Sand Plains in Oneida County and the Glens Falls Sand Plain in Warren County, N.Y.)

During our floristic study, 30 years ago, pine barrens vegetation covered about half of the area. The southern third showed evidence of long fire suppression — large oak trees (*Quercus alba*, *Q. rubra*, *Q. coccinea*) and a thick understory of early-successional shrubs (*Lonicera tatarica*, *Cornus racemosa*, *Rubus allegheniensis*) dominating a dense oak woods. Charred *Pinus rigida* trunks and more open vegetation in the northwest corner, south of the railroad, indicated a fire within the last few years (1977-1978?), perhaps originating as a spark from the rails. Considering the small extent of this tract and the extensive human disturbances of surrounding acreage, it is remarkable that any hint of pine barrens has survived. This vegetation seems not to have been noticed by W. N. Clute, T. F. Lucy, R. T. Clausen, or S. J. Smith, previous botanists who collected extensively in Chemung County. More recent visits (1991 to present) have revealed shading and crowding of pine barrens plants there due to lack of fire.

Methods: We visited the area on 7 Oct. 1979; 12 and 23 May, 2 and 22 June, 4 Aug., and 8 Sept. 1982; 14 July 1983; 18 July 1988; and 23 June 1991. Visits were made by both of us (except that Cryan, F. Robert Wesley, and Douglas H. Goldman accompanied R.D. on 7 Oct. 1979, 23 May 1982, and 23 June 1991, respectively). We also took three Soviet scientists from the Main Botanical Garden in Moscow (Rimma A. Karpisonova, Valery I. Nekrasov, and Boris N. Golovkin) to see this unusual vegetation when they visited the Hortorium in July 1988. David Werier and several Hortorium botanists have likewise visited the site in recent years.

We spent 59 person-hours there. On each visit, field work lasted between ca. 10:00 a.m. and 2:00 p.m. The entire area could easily be walked over by two people during one visit. We collected and pressed all vascular plants observed, attempting to search the whole area, crossing and re-crossing it from different directions, so as not to miss species newly in bloom. Abundant Gypsy Moth (*Lymantria dispar*) larvae (Fig. 1-G & H) severely defoliated trees, shrubs, and a few herbs at the site in 1982-1983 and 1991, at times making it difficult to find whole leaves to press.

Our 309 voucher specimens were deposited at BH, with some duplicates at the New York State Museum in Albany (NYS). R.D.'s field notes and a complete list of our specimens were also archived at BH. We made most specimen identifications, with occasional annotations by Joe L. Bruner (OS), Steven E. Clemants (BKL), David B. Dunn (UMO), Peter A. Hyypio (BH), Chong-wook Park (SNU), J. H. Rettig (GA), and F. Robert Wesley (Cornell Plantations). Scientific names used herein follow the online *New York Flora Atlas* [<http://newyork.plantatlas.usf.edu>].

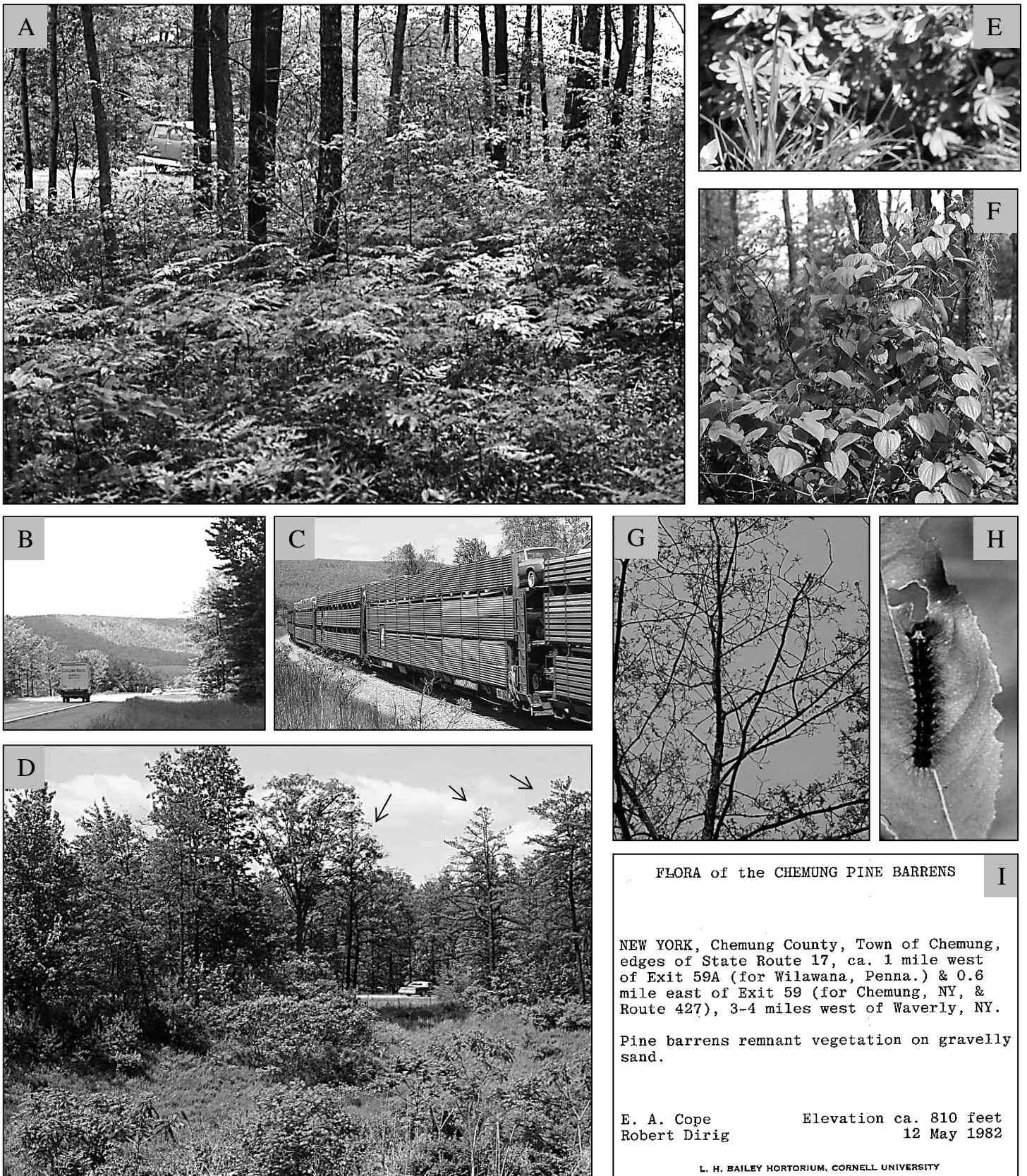


Figure 1: CHEMUNG PINE BARRENS. A. PINE BARRENS with *Pteridium aquilinum* in foreground (Hortorium van in back). B. Rt. 17-W corridor looking W. C. RAILROAD CORRIDOR on N, with *Schizachyrium scoparium* (front left). D. Disturbed weedy DUMP AREA from adjacent fields, and *Pinus rigida* (arrows) along Rt. 17-W. E. *Lupinus perennis* leaves on LUPINE BANK. F. *Dioscorea villosa* vine in defoliated OAK WOODS on S edge. G-H. Severe canopy defoliation by Gypsy Moth larvae. I. Sample herbarium label with locality details for 309 flora vouchers at the Bailey Hortorium. [A-H scanned from color slides taken by Ed Cope in 1982.]

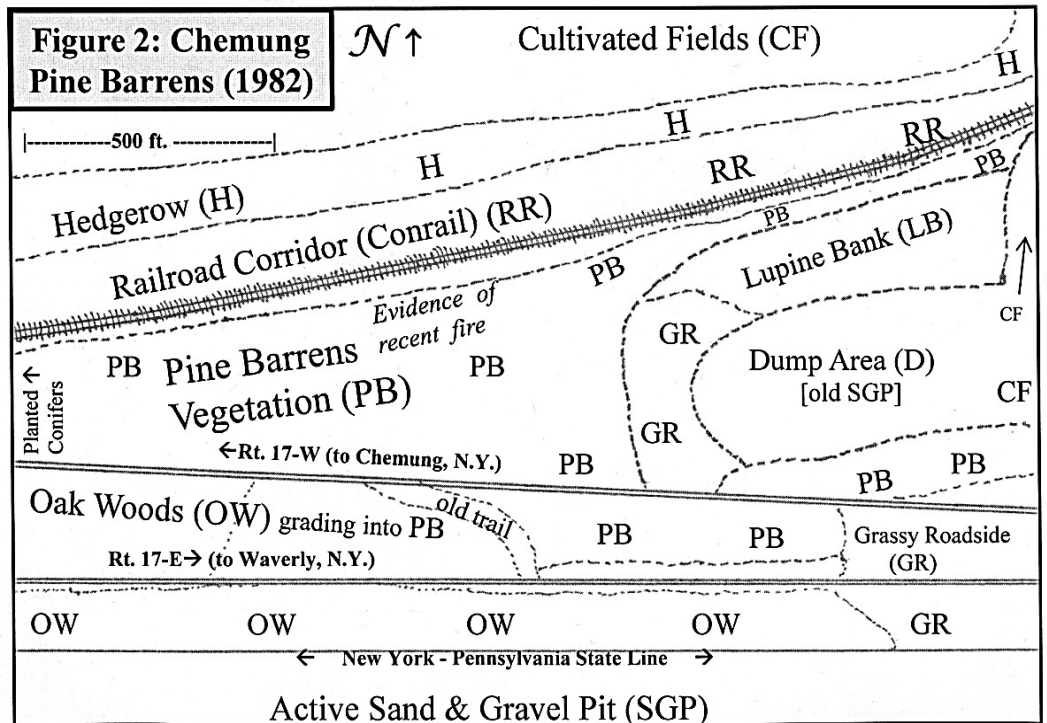
Results & Discussion: Rather than presenting a taxonomic list of plants, we have sorted the entire vascular flora (280 species) by habitat in Table 1, as an efficient way to indicate their ecological associations. In 1982-1983, the PINE BARRENS, OAK WOODS, and LUPINE BANK sections were most relevant to our pine barrens theme, containing 92% native plant species, in contrast to highly disturbed sections (GRASSY ROADSIDES, RAILROAD CORRIDOR & HEDGEROW, and DUMP AREA), where non-native, naturalized plants comprised 48% of the flora. The LUPINE BANK was the most xeric, sunny place in the tract, with the highest soil pH.

The fire that occurred before the first visit in 1979 restored about 25 acres of the vegetation to a pine barrens formation, but its effects disappeared in ca. 15 years. By 23 June 1991, the DUMP AREA had grown up in large rangy *Ailanthus altissima*, *Fallopia japonica*, and *Lonicera* spp., shading the LUPINE BANK so heavily that we found no *Lupinus perennis* there then. The RAILROAD CORRIDOR showed extensive herbicide damage, but still had some *Lupinus* plants on the east end; while fire suppression was evidenced by succession throughout the PINE BARRENS sections. The wide lanes of the Southern Tier Expressway may have served as fire barriers, as there was no evidence that the 1970s fire had reached the OAK WOODS sections on the south and southwestern edges of the tract (Fig. 2). Pearson *et al.* (1932: 35-36) mentioned the role of earlier fires in this region, likely referring to *Quercus ilicifolia* and *Q. prinoides*, when writing that "Witch-hazel and scrub oak come in rapidly on burned-over areas...."

Reschke (1990: 47) and Edinger *et al.* (2002: 83-84) described **Pitch Pine-Scrub Oak Barrens** as a "shrub-savanna community" developing on sand, and maintained by a frequent fire cycle, with *Pinus rigida* the dominant tree, *Quercus ilicifolia* and *Q. prinoides* dominant shrubs, and the following smaller shrubs and forbs (and a few others) present: *Comptonia peregrina*, *Vaccinium angustifolium*, *V. pallidum*, *Gaylussacia baccata*, *Andropogon gerardii*, *Schizachyrium scoparium*, *Lespedeza capitata*, *L. hirta*, and *Lupinus perennis*. Other characteristic pine barrens plants R. D. & Cryan have often seen in large pine barrens in eastern New York include *Aralia nudicaulis*, *Asclepias tuberosa*, *Ceanothus americanus*, *Comandra umbellata*, *Corylus americana*,

Crocianthemum canadense, *Desmodium canadense*, *Diervilla lonicera*, *Helianthus divaricatus*, *Hypoxis hirsuta*, *Lysimachia quadrifolia*, *Monarda fistulosa*, *Potentilla canadensis*, *Pteridium aquilinum*, *Rubus flagellaris*, *Salix humilis* var. *humilis*, *Sassafras albidum*, *Sericocarpus asteroides*, *Uvularia perfoliata*, and *Viola sagittata*. All of these were present at the Chemung site.

We visited **another nearby site**, not included in our study area, but likely part of the original pine barrens vegetational system in this valley, on 12 May 1982: a rest area on the northeastern side of Rt. 17, 1.4 mi. west of Exit 59. Elevations there ranged from 850 ft. at the top of the road bank to 800 ft. at the edge of the Chemung River, 330 ft. to the north. Xeric habitats included an open sandy road bank and oak woodland at its summit, supporting *Betula*



papyrifera, *Carex lucorum* var. *lucorum*, *Comandra umbellata*, *Cornus florida*, *Corylus americana*, *Hamamelis virginiana*, *Lespedeza capitata*, *Pinus rigida*, *Quercus alba*, *Q. rubra*, *Salix humilis* var. *humilis*, *Sassafras albidum*, *Schizachyrium scoparium*, *Vaccinium angustifolium*, and *V. stamineum*. Along the river's edge grew *Equisetum arvense*, *Erythronium americanum*, *Floerkea proserpinacoides*, *Juglans cinerea*, *J. nigra*, *Mertensia virginica*, *Populus deltoides* and *Viola* spp. (among others). A steep, shaded, north-facing slope between the dry oak woods and the river had *Cimicifuga racemosa*, *Hepatica nobilis* var. *obtusata*, *Hydrangea arborescens*, and *Lonicera dioica*. (*Dioscorea villosa* was also found there on 23 June 1991.)

This glimpse of upland plants on xeric sloping sand,
Species table next page,
discussion continued on page 12

Table 1: Chemung Pine Barrens Flora Organized by Habitat

*An asterisk preceding a plant name indicates a non-native, naturalized species.



PINE BARRENS: *Acer rubrum*, **Achillea millefolium*, *Ageratina altissima* var. *altissima*, *Amelanchier humilis*, *Amphicarpaea bracteata*, *Angelica venenosa*, **Anthoxanthum odoratum*, *Apocynum androsaemifolium*, *Aralia nudicaulis*, *Asclepias quadrifolia*, *A. tuberosa*, *Calamagrostis stricta*, **Carex normalis*, *C. tenera*, *Carya cordiformis*, *C. glabra*, *Ceanothus americanus*, *Circaea lutetiana* ssp. *canadensis*, *Comandra umbellata*, *Comptonia peregrina*, *Cornus florida*, *Cornus racemosa*, *Corylus americana*, *Desmodium canadense*, *Dichanthelium linearifolium*, *Diervilla lonicera*, *Epigaea repens*, *Eurybia divaricata*, *Galium circaezans*, *Gaultheria procumbens*, *Gaylussacia baccata*, *Geranium maculatum*, *Hamamelis virginiana*, *Helianthus divaricatus*, *Hepatica nobilis* var. *obtusata*, *Hylodesmum nudiflorum*, *Hypoxis hirsuta*, *Juncus tenuis*, *Lechea intermedia*, *Lespedeza capitata*, *Lespedeza hirta*, **Leucanthemum vulgare*, *Lonicera dioica*, *Lupinus perennis*, *Lysimachia ciliata*, *L. quadrifolia*, *Melampyrum lineare*, *Mitchella repens*, *Monarda fistulosa*, *Monotropa uniflora*, *Nyssa sylvatica*, *Oxalis stricta*, *Pinus resinosa*, *P. rigida*, *P. strobus*, **Plantago lanceolata*, *Podophyllum peltatum*, *Pteridium aquilinum*, *Populus grandidentata*, *P. tremuloides*, *Prenanthes trifoliolata*, *Prunus serotina*, *Pyrola americana*, *Quercus alba*, *Q. coccinea*, *Q. ilicifolia*, *Q. prinoides*, *Q. rubra*, *Rhododendron prinophyllum*, *R. periclymenoides*, *Rosa carolina*, *Rubus allegheniensis*, *R. occidentalis*, *Salix bebbiana*, *S. humilis* var. *humilis*, *Sassafras albidum*, *Sericocarpus asteroides*, *Smilax herbacea*, *Solidago bicolor*, *S. nemoralis*, **Stellaria graminea*, *Symphyotrichum pilosum*, *Thalictrum thalictroides*, *Uvularia perfoliata*, *Vaccinium angustifolium*, *V. stamineum*, *V. pallidum*, *Viburnum lentago*, *Viola cucullata*, *V. sagittata*, *V. sororia*, *V. striata*.

OAK WOODS: *Carya cordiformis*, *C. glabra*, *Cornus florida*, *C. racemosa*, *Dioscorea villosa*, *Eurybia divaricata*, *Fraxinus americana*, *Geranium maculatum*, *Hypoxis hirsuta*, **Lonicera tatarica*, *Luzula multiflora*, *Mitchella repens*, *Monotropa uniflora*, *Pinus strobus*, **Plantago lanceolata*, *Podophyllum peltatum*, *Prunus serotina*, *Pteridium aquilinum*, *Pyrola americana*, *Quercus alba*, *Q. coccinea*, *Q. rubra*, *Thalictrum thalictroides*, *Ribes cynosbati*, *Rubus allegheniensis*, *R. occidentalis*, *Sassafras albidum*, *Toxicodendron radicans*.

LUPINE BANK: **Achillea millefolium*, *Crocianthemum canadense*, **Dianthus armeria*, *Lespedeza capitata*, **Leucanthemum vulgare*, *Lupinus perennis*, *Penstemon hirsutus*, **Pilosella aurantiacum*, **P. officinarum*, **P. caespitosa*, *Platanus occidentalis*, *Rhus glabra*, *R. typhina*, *Rubus flagellaris*.

GRASSY ROADSIDES: *Ambrosia artemisiifolia*, *Asclepias syriaca*, *A. tuberosa*, **Barbarea vulgaris*, **Bromus inermis*, **Cardaria draba*, **Centaurea stoebe* ssp. *micranthos*, **Cerastium semidecandrum*, **Cichorium intybus*, **Cirsium vulgare*, **Clinopodium vulgare*, *Conyza canadensis*, *Cornus racemosa*, **Coronilla varia*, **Dactylis glomerata*, *Danthonia spicata*, **Daucus carota*, **Dianthus armeria*, *Dichanthelium dichotomum*, **Dipsacus laciniatus*, **Elaeagnus umbellata*, *Elymus canadensis*, **E. repens*, *Erigeron*

philadelphicus, *E. strigosus*, *Euphorbia corollata*, *E. maculata*, *Euthamia graminifolia*, *Galium boreale*, **G. mollugo*, **Gaura biennis*, **Glechoma hederacea*, *Heliopsis helianthoides*, **Hylotelephium telephium*, *Hypericum perforatum*, *Lactuca canadensis*, **Lepidium campestre*, **Leucanthemum vulgare*, **Linaria vulgaris*, **Lonicera tatarica*, **L. xylosteum*, **Lotus corniculatus*, **Malva moschata*, **Medicago lupulina*, **M. sativa*, **Melilotus alba*, **M. officinalis*, **Microthlaspi perfoliatum*, *Monarda fistulosa*, *Oenothera perennis*, *Oxalis stricta*, *Phalaris arundinacea*, **Phleum pratense*, **Pilosella piloselloides*, **Plantago lanceolata*, *Platanthera lacera*, **Poa compressa*, **P. pratensis*, *Populus grandidentata*, *P. tremuloides*, **Potentilla argentea*, *P. canadensis*, **Prunella vulgaris*, *Prunus pensylvanica*, *P. virginiana*, *Pteridium aquilinum*, **Ranunculus acris*, **R. repens*, *Rhus typhina*, *Rudbeckia hirta*, **Rumex acetosella*, **Saponaria officinalis*, **Schedonorus arundinaceus*, *Scrophularia lanceolata*, **Setaria pumila*, *S. viridis*, **Silene latifolia*, **S. vulgaris*, **Sisymbrium altissimum*, *Solidago bicolor*, *S. caesia*, *S. canadensis*, *S. gigantea*, *S. juncea*, *Symphyotrichum novae-angliae*, **Taraxacum officinale*, **Trifolium aureum*, **T. hybridum*, **T. pratense*, **Verbascum blattaria*, *Verbena urticifolia*, **Vicia tetrasperma*, **V. villosa*.

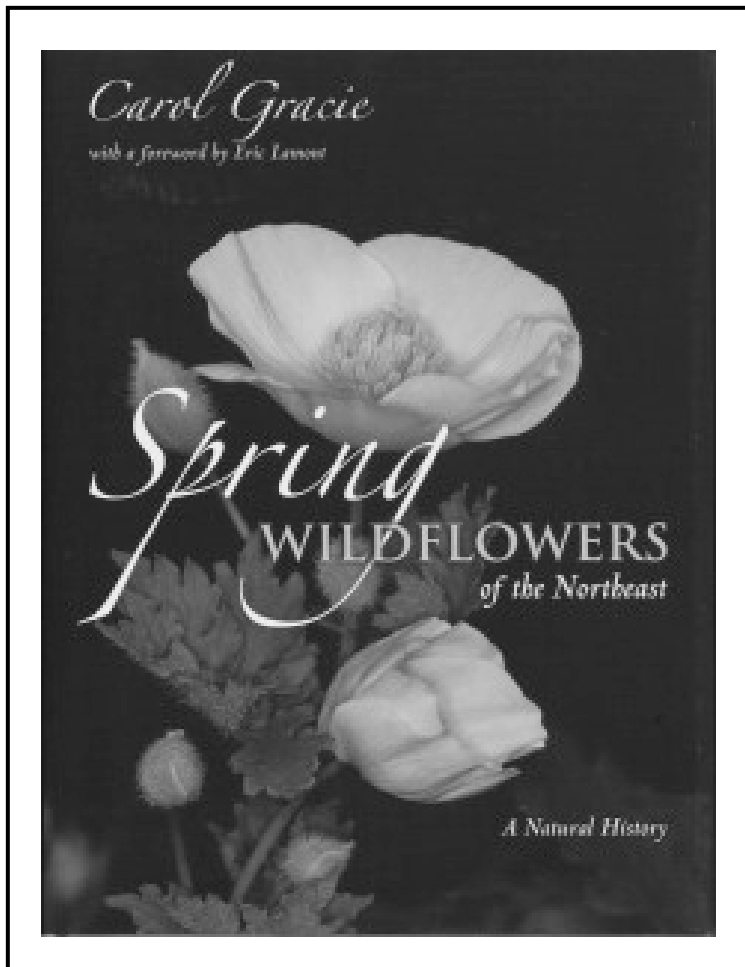
RAILROAD CORRIDOR & HEDGEROW: *Ageratina altissima* var. *altissima*, *Allium cernuum*, *Andropogon gerardii*, *Anemone virginiana*, *Apocynum androsaemifolium*, *Apocynum cannabinum*, *Aralia nudicaulis*, **Arenaria serpyllifolia*, *Asclepias syriaca*, *A. tuberosa*, **Asparagus officinalis*, **Berteroa incana*, **Bromus inermis*, *Celastrus scandens*, **Centaurea stoebe* ssp. *micranthos*, *Clematis virginiana*, *Corylus americana*, *Dennstaedtia punctilobula*, **Dianthus armeria*, *Dichanthelium dichotomum*, *D. linearifolium*, *Echinocystis lobata*, *Equisetum arvense*, *Euphorbia corollata*, *Fragaria virginiana*, *Geum aleppicum*, *G. canadense*, *Hackelia virginiana*, **Lepidium campestre*, **Linaria vulgaris*, *Lobelia inflata*, *Lonicera dioica*, **L. tatarica*, **L. xylosteum*, *Lupinus perennis*, *Lysimachia quadrifolia*, **Medicago sativa*, *Monarda fistulosa*, *Oxalis stricta*, **Pastinaca sativa*, *Pedicularis canadensis*, *Penstemon digitalis*, *P. hirsutus*, *Physalis heterophylla*, *Physocarpus opulifolius*, **Pilosella aurantiaca*, *Platanus occidentalis*, *Polygonatum biflorum*, **Potentilla argentea*, **P. recta*, *Pseudognaphalium obtusifolium*, *Pteridium aquilinum*, *Rosa carolina*, **Rumex acetosella*, **Saponaria officinalis*, *Schizachyrium scoparium*, **Setaria pumila*, *S. viridis*, *Toxicodendron radicans*, **Triodanis perfoliata*, **Verbascum thapsus*, **Viola arvensis*.

DUMP AREA: *Ageratina altissima* var. *altissima*, **Ailanthus altissima*, **Arctium minus*, **Brassica nigra*, *Calystegia sepium*, **Chenopodium album*, **Cirsium vulgare*, **Fallopia japonica*, *Fallopia scandens*, **Hesperis matronalis*, *Impatiens pallida*, **Leonurus cardiaca*, **Nepeta cataria*, **Oenothera biennis*, *Phryma leptostachya*, *Phytolacca americana*, **Saponaria officinalis*, **Solanum dulcamara*, **Stellaria graminea*, *Teucrium canadense*, **Tragopogon dubius*, **T. pratensis*, *Vitis vulpina*.

Spring Wildflowers of the Northeast. A Natural History by Carol Gracie

Book review by Bill Plummer

Carol Gracie is coauthor with Steven Clemants and principal photographer of *Wildflowers in the Field and Forest, a Field Guide to the Northeastern United States*. For *Spring Wildflowers of the Northeast, A Natural*



History, Carol has selectively chosen some 30 genera and describes all aspects of their compelling natural histories in great detail. She also includes details on their beauty, medical uses, and interesting interactions with insects. She includes some lesser well-known plants, a couple annuals, and some introduced plants that are widespread in the northeast. Some of my favorites are missing, such as trailing arbutus, but she has done a remarkable job with those she has chosen. For easier reading there are no footnotes, but a massive bibliography of some 600 references. Chapters are arranged by the common names of the wildflowers making it easy to find plants of particular interest. For each plant she provides a brief description, its habitat, and its range. She delves into taxonomy; explaining the many recent name changes. She also explores pollination strategies, seed dispersal, and many other fascinating aspects of the plants. The book is liberally illustrated with more than 500 exquisite photographs

showing in detail special features of the plant: leaves, flowers, fruits, roots, pollinators, and diseases. Many times she strips away floral parts to show you details. I can only hope to whet your appetite by giving you a glimpse of what Carol has to say about each plant. I highly recommend it and may it encourage you to explore more deeply our native flowers. As for me, I cannot wait until spring to check out her observations.

Carol describes the small, but detectable differences in the flowers of our two **baneberries** (*Actaea* spp.) as well as illustrating the differences with her photos. Taxonomists have recently placed the genus *Cimicifuga* (black cohosh) in the genus *Actaea* (the baneberries) as did Linnaeus who went back and forth with where it belonged. The deciding factor was the number of carpels, not the fleshiness of the fruits. The native bee pollinators of **bloodroot** only become active above 55°F with greatest activity in the mid-60's. It produces no nectar, but pollen is what the bees are after. Asa Gray declared that our native **blue cohosh** (*Caulophyllum thalictroides*) was identical to plants occurring in East Asia, but later botanists showed that the two plants are distinct. Additionally, in 1981, Loconte and Blackwell elevated Giant Blue Cohosh (formally recognized as a variety of *C. thalictroides*) to species rank (as *C. giganteum*).

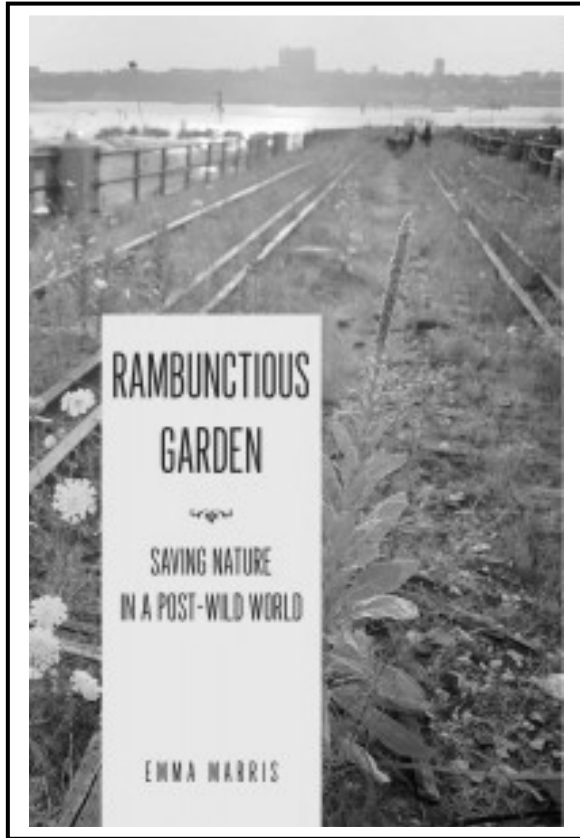
The small flower, **Blue-eyed Mary** is one of Carol's favorites because of its name and its deep blue color. This is one of two annuals she includes. What's in a name? Confusion-if the name is Celandine. This is how Carol begins her discussion of **Celandine** and **Celandine-poppy**, reserving for another chapter **Lesser Celandine**. Carol asks "What is the derivation of *Aquilegia*, the generic name of **Columbine**? Is it from *aquilinum*, meaning eagle-like or from *aquarius*, meaning "water carrier" for the nectar that collects in the spurs? **Dutchman's Breeches** was originally named as *Fumaria cucullaria*, cucullaria meaning "hooded". Leaves of its close relative **Squirrel Corn** closely resemble it but are more finely divided and slightly more blue-green in color. Viewing them side by side helps distinguish them. Carol states that the flowers of the separate male and female plants of **Early Meadow-rue** are so different in appearance that one might think they were two separate species. This is a plant pollinated by wind. In Thoreau's journal entry for April 10, 1853, he wrote "The **saxifrage** is beginning to be abundant, elevating its flowers somewhat, pure trustful white amid its pretty reddish cup of leaves...."

False Hellebore and members of its genus *Veratrum* contain toxic alkaloids. Carol relates a suggestion by Hippocrates that the timing of birth is controlled by the fetus. This was later confirmed when it was shown that sheep that had eaten *Veratrum* had delayed pregnancies due to the alkaloids in the plant damaging the fetus. **Featherfoil**, an annual found in seasonal ponds, derives its

continued on page 12

Rambunctious Garden: Saving Nature in a Post-Wild World by Emma Marris
Book review by David Keifer

How do we “manage” natural areas and wilderness? What are natural areas and wilderness? What should our



objectives be for these areas? Those are some key questions that Emma Marris addresses in her book *Rambunctious Garden*. Our society has brought in many foreign species, both intentionally and inadvertently. Some have reproduced and spread far beyond their place of original introduction. As good citizens we need to be concerned with the problem this creates for the native species and local ecosystems. This book helps us understand how to approach this problem.

Often we attempt to “restore” such areas. But restoration means we need a vision or goal. Goals often include returning the area to: what it was before the invasive arrived; what it was before European settlers arrived; or what it was like before humans altered the area. There are fallacies with these goals. The most basic is that they all assume the environment is in a steady state. Instead it is constantly changing in response to disruptions and our returning it to a previous state may be counter-productive. Other problems include not knowing exactly what was here at earlier times, or the assumption that humans did not interfere with the landscape before European arrival. Additionally, we could not recreate the pre-human ecosystem as the climate is now different and mega-fauna, like mastodons, are permanently gone. Consider in our own lifetime the environmental change:

increased CO2 levels, increased warm-season lengths, and global warming. Our natural areas have to respond to these on-going changes; we cannot restore them to what they were. Emma Marris’s point is that we need to pick better goals than restoration.

She considers several alternate goals. 1.) Aldo Leopold’s “land ethic” focuses on protecting the rights of other species. This goal is hard to implement in practice due to conflicts between the rights of different species, making it difficult to apply to a specific piece of land. 2.) Protecting just the charismatic megafauna fails as these large species can exterminate lesser species when they themselves are protected from predation and their population increases. 3.) Slowing the rate of species extinction requires tough decisions in allocation of our limited resources (triage) as so many species need help. Additionally, how valuable is a saved species if its habitat is gone or it only exists in a zoo? 4.) Protecting genetic diversity if taken to extreme can result in the protection of the weirdest species or to the absurdity of saving DNA in a freezer. 5.) Defining and defending biodiversity is a focus on a combination of: species, genetic variation, and the variety of ecosystems. This embraces the whole ecosystem at once. This approach sometimes means the most beautiful sites may not be the focus of attention, but instead that we preserve the humble local bog. Biodiversity is a slippery concept. It does come closest to capturing what people appreciate in nature, largely because it encompasses so much. But the breadth makes it challenging to implement. 6.) Maximizing ecosystem services, like water filtration, flood mitigation, and flower pollination, is an approach currently in vogue. Placing economic value on these benefits gets society to value their protection. Assigning value requires making assumptions and may place zero value on species not directly contributing to the evaluated benefit. Since ecologists have not been able to show that higher biodiversity, by itself, improves the ecosystem services, they often resort to assigning *existence value* to nature or diversity. This approach is probably better as a tool to accomplish preservation rather than a goal in and of itself. 7.) Protecting spiritual and aesthetic experiences of nature gets public buy-in but does not guide us on how to proceed with any given site.

Marris concludes that no one goal is best. We need to pursue multiple goals and be willing to compromise. We need to give up romantic ideas about a “stable Eden” and just go out and try almost everything to learn what works. We should designate multiple sites and manage each for different ends to cover all the bases.

I suggest you read this book for yourself as Emma Marris is far better at presenting her ideas than I have in this brief summary. If you are involved with nature, care about the natural world, are concerned with invasive species or the disappearance of native species, then this is a book for you.

**The 2012 Native Plant Symposium
and My Half Acre**

by Linda Blossom

Probably like a few others at the recent “Designing with Native Plants” symposium, I was applying the filter that seeks out what I can learn and then apply to my own situation. My “situation” is a half acre yard that became my palette this past spring, and my goal is to completely transform it from turf grass to something that utilizes native plants in a forest garden, with a vegetable garden added in. My idea is to create a space dominated by native plants with the vegetable garden integrated as much as possible. I plan to use permaculture principles, including no tilling and working with nature as much as possible. Think organic gardening grown up.

The first day of the symposium started with a talk by Dan Segal of The Plantsmen. Everything he said was picked up by my filter. Dan shared ecological principles that he said are largely ignored in horticulture and landscaping. He spoke of using seeds instead of cuttings, and using seeds from as close to home as possible. He also talked about observing which plants grow together and sites and conditions that they prefer. I thought of my black walnut tree behind the barn, which harbors *Galium* (bedstraw), deadly nightshade, a good crop of *Circaea*, pokeweed, sumac, one fern, garlic mustard, and dames rocket — a good variety of plants, given the reputation of the tree. Apparently, the wild plants on my half acre are growing there due to adaptation, the end result of responses to stresses. I like some of the plants I have found, especially the lone boneset. Until I had the geothermal field dug, the most that happened here prior to the lawn were deposits by the horses that inhabited my little barn and trotted around the neighborhood behind the carriage. It seems that the garlic mustard must have the adaptation thing down well, having found happiness in a few short years. Its first year leaves are so large I use them as mulch.

At the east end of my property, at the edge of a creek and under a few trees is a plant community which Dan’s speech brought to mind. Native plants are nice but it is time, according to Dan, to do more. The natives need context and purpose in a garden situation, especially ecological purpose. Meanwhile, a privet, planted long ago, is growing on my property line. “Communities are plants that aggregate together, and are also complex, dynamic, balanced, and co-dependent.” I’ll learn more about the others terms, but I am hoping dynamic means privet is short lived and garlic mustard too. Communities may have ecological benefits that we don’t yet know. The more we

can model communities, the better chance we have to create regional native landscapes, which will have more ecological value than a simple native plant garden.

I was hoping to make plant guilds using forest garden principles and he reinforced this concept. One for fruit, one to fix nitrogen, this one to draw insects, and that one to feed me. I must add that I am also in agreement with the idea that growing natives is good but it is even better for the natives if you grow your own food. This takes pressure off the agriculture sector which takes far more land from natives than cities or towns.



Gentiana clausa – bottle gentian

photo by David Werier

The last principle he presented concerns succession, and the message was to get over it, as not much is forever. Things may be here one year, looking wonderful, and gone the next, but look, something else has taken its place! I doubt that he means I should let the black locust continue to try to be the master of the geothermal field by allowing it to put out seedlings everywhere. Some plants are tolerant of us and difficult situations, and many will outlast us. Cattails sequester pollutants, absorb much water, and by removing them we assist salty and polluted runoff to race crazily to the lake. This has significance to me now that I see that salt is used on my one block long street. Can a driver not make it one block without sliding out of control?

I am on the ditch side of the street and last spring I felt pampered as the ditches were being reamed out. However, the new resident to Tompkins County, *Solidago sempervirens* (a salt loving plant), seems a likely candidate for my ditch as long as I can convince our two-man DPW to let them grow.

A good line from Dan: "If you use late successional plants, you won't have fast results and if you use early succession plants, it won't last." And "sumacs live fast and die young." I have a lot of sumac, especially after attacking the mother plant when clearing the barn of vegetation. I remember a stand at my first house in Tompkins County, I must remember to check to see if they are still there. It's been over 25 years and they were there the entire 16 years I owned the house. The message is don't get too worked up over them but I would like to know how deep their roots grow, since they are growing over the geothermal field. My plan is to create guilds of dwarf fruit trees, fruit producing shrubs, and herbaceous flowering plants since I am heading for mid-successional communities always with that six foot down loop of piping in mind.

Tim Tolland from the Environmental Science and Forestry school (ESF) gave me another look at the ESF plans that Don Leopold shared in a meeting in Syracuse this past summer. ESF has numerous planned and completed campus projects that feature native plants and ecological design principles. To be a student today and studying at ESF! Once their project is done, I'll go see it on a nice day. The image of the caretaker riding the mower resonates as I bought a reel mower that cuts a 13" path. Nothing is so demoralizing as doing something that is only to please the neighbors when there is shovel work waiting.

Thank you for your talk about cultivars, Todd Bittner. I now understand that they narrow the gene pool, losing variability and adaptability, and reduce the fitness of the plant over time. Therefore, cultivars have no place in restoration, and without source fidelity, the seeds are of limited value. However, I am not sure I am doing restoration in the same vein, so I will keep my *Gentiana clausa* from wild-gathered seed in Maryland. I need something brilliant to point to when my neighbors are looking for the hostas.

I had wondered about Chautauqua, and Dean Gowen gave me a peek into it. His project is to harness parking lot runoff. The soil he uses is topsoil and compost and the results confirm that this was a good choice. I can attest that *Lobelia cardinalis* loves manure. It grew at least 4' tall in its first year here - I admit I brought them from Maryland. Provenance violation. The landscape company employees could not speak English and would have mowed them as I could not explain how special they were. The better test will be if they make it through the winter here and return in the spring. Without a more consistent snow cover, I am pinning my hopes on leaf mulch.

I learned that there are natural salt springs! Maybe someone should tell Cargill to look for the concrete lids so they can quit digging! That was how the speaker Tony Eallonardo found one historic spring - he was shown the cover by an old timer. He was actually able to restore very salty sites with the correct, salt tolerant plants which included upland boneset, so I can add that to my list of flowers to show the village DPW for my roadside ditch.

Even after hearing Steve Kress I am no closer to knowing how to protect birds from the feral cats that have discovered me and the barn but I now know why so many native shrubs have berries about the size of a little bird's beak. I am also more convinced than ever that I should grow those shrubs and come up with a cat deterrent and then get a patent. There are many other threats, but this is the one on my half acre that I will do my best to handle.

Andy Zepp showed us a map of the national forests and state parks that form the Finger Lakes emerald necklace, making up a hiking trail 82 miles long! Maybe I can stop wishing I had walked the Appalachian Trail and walk this one, or at least a part of it.

And finally, it is environmentally better to slowly return to the earth, in an anaerobic state, six feet down, than be cremated. But Green Springs has created an even better solution - the creation of a preserve made up of native plants that will grow over you. By ending up at the preserve we will not have tied up land that has no other purpose except historical curiosity when we are long forgotten and our gravestones have spalled into slices from water expansion in the winter. Instead, we will have encouraged roots to go deeper for moisture.

Non-FLNPS Local Events of Interest

"Birds and Blossoms," a series of guided spring walks in collaboration with the Cornell Lab of Ornithology, led by Plantations Volunteers and FLNPS members! **Sundays, 1-2 pm.** Meet at the Visitor Center. **Apr. 29 – led by Anna Stalter; May 6 and May 27 – led by Betty Rowley; May 13 and May 20 – led by Susanne Lorbeer.**

Finger Lakes Land Trust Earth Day Tree Walk. April 21, 1:00 PM, Kingsbury Woods Conservation Area Join outdoor educator and naturalist Akiva Silver to learn about identification, natural history, wildlife value, the role of invasive plants as well as the survival uses of trees and plants. The walk will last two hours or more so please come prepared with appropriate clothing, footwear, water and snacks. Walk is free and open to the public. For more info: www.fllt.org/events.

Spring Wildflowers of the Northeast

continued from page 8

name from the distinctive featherlike leaves that spread out just below the water's surface. The fungus, which produces a smut on the flowers of **Fire-pink**, is spread by the ruby-throated hummingbird. The unusual arrangement of the floral parts of **Fringed Polygala** may be seen as an adaptation to pollination by bumblebees. The taxonomists cannot agree on whether Hepaticas should be classified as Anemones or whether we have two species of **Hepatica** or two varieties of *H. nobilis*.

Most of us probably know that **Jack-in-the-Pulpit** plants can change from male to female and back again. But Carol points out that both flower types occasionally can be found on the same inflorescence. The Cypripediums, **Lady-slippers**, develop micorrhizal relationships only with a narrow range of species within a fungal family making it difficult to transplant. "**Lousewort**"—what an odd name for such an attractive flower! It comes from an old belief that sheep that grazed on it became infested with lice. Linnaeus chose the genus name, *Pedicularis* (meaning louse in Latin) to reflect this belief. **Mayapple** has an active phytochemical, podophyllotoxin. It yields two semisynthetic drugs used in treating several types of cancer. In addition to bees and flies, gnats surprisingly are among the pollinators of **Miterwort**, but its seed dispersal is unusual as well. Seeds do not have elaisomes, but the fruit capsules orient themselves to face upward. When it rains the seeds are splashed out of the capsules.

One-flowered Cancer-root lacks chlorophyll and is parasitic obtaining water and nutrients from other plants. **Skunk Cabbage** has contractile roots that pull the plant into the soil. Carol has found it in bloom in February, the spadix being able to generate heat. It took three hours to excavate a plant and she has pictures of a partially excavated plant and a close-up of its contractile roots. The range of **Spring Beauty**, *Claytonia virginica*, and the *Andrena erigeniae* bee are almost congruent. The bee makes pollen balls into which it lays an egg. **Squawroot** is found near oak trees, which it parasitizes to obtain its nutritional needs. It reproduces by seed and yet the flowers contain no nectar and no scent so that it must self-pollinate. The **Trilliums** have been placed in the *Liliaceae*, the *Trilliaceae* and now reside in the *Melanthiaceae*, based on molecular data. Only three are discussed: *T. erectum*, *T. grandiflorum*, and *T. undulatum*. Young plants of **Trout-Lily** with one leaf will work themselves into the soil as deep as 8-10 inches. It may then produce two leaves and flower, whereas mature plants will produce offsets.

What we know as **Jeffersonia diphylla**, Linnaeus named as *Podophyllum diphylla* and there it stayed for 40 years until Dr. Barton named it in honor of our third president. Carol devotes 18 pages of text and pictures to **Violets** from our native species to the Pansy, a long

discussion on the origins of the double-flowered Parma Violets and the story of Rhinebeck as the center of a violet industry. **Virginia Bluebells** is one of the most important nectar resources for early season bumblebees and the short-tongued bumblebees may split the corolla to "steal" nectar. The robbers still manage to transfer pollen and actually benefit the plant by increased seed set. What insect or insects pollinate **Wild Ginger**? Biologists are still puzzled over the question. Carol herself has only seen a small beetle. So does it rely on self-pollination? Intrigued? There are more fascinating facts, most well illustrated by Gracie's exquisite photography, in her book.

Flora of the Chemung Pine Barrens, N.Y.

continued from page 6

juxtaposed with mesic species along the river, suggests a rich historical checkerboard of contrasting plant associations covering the gently rolling topography of this valley. Our study documents a hitherto unrecognized pine barrens caught at an ideal successional stage that allowed us to envision its potential. The plants and their seed bank remain . . . awaiting another fire.

Acknowledgements: David Bates, David Young, Peter Hyypio, and Kevin Nixon encouraged our study and made the Hortorium van and facilities available in the 1980s-1990s; while Anna Stalter and Peter Fraissinet provided BH Herbarium and Library access in 2012. Scott LaGreca, Torben Russo, Stalter, and David Werier read a draft of this article before publication.

Literature Cited

- Edinger, G.J., et al. (editors). 2002, January. *Ecological Communities of New York State*, second edition. Albany, N.Y., N.Y.S. Dept. of Envir. Cons., <http://www.dec.ny.gov/animals/29384.html>.
- Pearson, C.S., W.W. Reitz, J. Macj, W. Ellsworth, & J. Schwartz. 1932. *Soil Survey of Chemung County, New York*. Bureau of Chemistry and Soils, U.S.D.A., Series 1932, Number 3, 42 pp. + map.
- , R.A. Parsons, N.B. Hulbert Jr., & W.C. Williams. 1973. *Soil Survey of Chemung County, New York*. U.S.D.A., Soil Conservation Service, in cooperation with Cornell Univ. Agr. Expt. Sta., [ii] + 102 pp. + 36 maps.
- Reschke, C. 1990, March. *Ecological Communities of New York State*. Latham, N.Y., New York Natural Heritage Program, xii + 97 pp.

Fossombronia in Central New York

continued from page 1

The elaters (specialized, sterile, elongated cells) were 2–3 spiraled and at least 160µm in length, which distinguished it from the otherwise similar *F. foveolata* var. *crustula*. Unlike *F. wondraczekii*, *F. foveolata* var. *foveolata* often forms pure mats and often grows on organic substrates. *F. foveolata* is widespread in North America, but its known distribution is spotty, probably because it's easy to miss and enthusiastic liverwort gatherers are few and far between. In New York State, *F. foveolata* var. *foveolata* has been collected 3 times, all by Burnham in the early 1900s, in Washington Co., which is at the eastern edge of the state (Schuster 1992). In central New York, where *F. wondraczekii* is "occasional on bare soil," Andrews (1957) noted collections by only two people.

A professional bryologist probably would have been satisfied with one collection from Dryden, but I'm an amateur and the liverworts were: unusual, abundant, near my home and possibly a species not in my books. I kept returning, for a total of eight collections over three and a half months: September 22 (*Trigoboff 1142*); September 29 (*Trigoboff 1144*); October 7 (*Trigoboff 1145*); October 15 (*Trigoboff 1147*); November 1 (*Trigoboff 1152*); November 19 (*Trigoboff 1154*); December 5, 2011 (*Trigoboff 1155*) and January 10, 2012 (*Trigoboff 121*).

In the fifth collection (November 1), I noticed *Fossombronia wondraczekii* spores and ripe capsules mixed with the *F. foveolata*. These might have been there earlier, though overlooked because the *F. foveolata* capsules were far more abundant. In the next collection (November 19), the *F. wondraczekii* was more abundant than the *F. foveolata*. The mature spores of the two species were always clearly different. The December 5 collection had ripe capsules of only *F. wondraczekii*, with shed spores of both species; many plants were bleached and ghostly looking and it was unclear whether some plants were still growing, or just hanging on, the liverwort equivalent of the undead. On January 10, despite some green bits of tissue here and there and even some unripe spore capsules and a couple of unopened capsules with mature spores of *F. wondraczekii*, the plants looked legally dead so it was time to pull the plug on the project.

In North America, *Fossombronia foveolata* fruits in summer and fall, while *F. wondraczekii* fruits in late summer and fall (Schuster 1992). In Dryden, the spore production periods overlapped, as would be expected. In central New York, *F. wondraczekii* usually produces capsules between September 15 and October 15, with a peak spore discharge about September 25 to October 5 (Schuster 1949). The much later dates of the Dryden cemetery plants are probably due to warmer weather in recent years and this fall and winter in particular.

The cars and especially the trucks with their heavy monument stones that pass the gravel roads in the Green Hills Cemetery occasionally denude the shoulders and create a habitat for a variety of bryophyte, lichen, and soil algae pioneers. These flourish on the bare soil for a few years before being out-competed by bigger bryophytes, grasses, and other vascular plants. Perhaps, the same vehicle tires transport the spores of the small pioneers, in much the same way that in nature, deer hooves that tear up ground might also transport spores. It's easy to imagine colonies of *Fossombronia* dancing from place to place within the cemetery (and among similar distant habitats) over the years.

In May of 2004, I collected *Fossombronia* in the Ithaca Cemetery (18 May 2004, *Trigoboff c0411*). It was too early in the season for ripe spores. Without thinking, I labeled it *F. wondraczekii*. I'd like to return, check the spores, and maybe take a crack at counting the oil bodies in the fresh leaf cells. *F. wondraczekii* has 60–85; *F. foveolata* has 6–9, but occasionally has up to 40. To understand the difficulty here, cook a gallon of pale green Jello, mix in a big handful of dry lima beans, pour this into a gallon size plastic bag, hang it from a tree, walk ten paces away, set your binoculars on a tripod, get comfortable and count the beans.

All this may sound confusing and a bit hard to follow. If so, I've succeeded in conveying some of my own feelings at those times when I was unsure whether the site held *Fossombronia foveolata* var. *foveolata*, *F. wondraczekii*, or both.

Cited specimens have been deposited at BH (Bailey Hortorium Herbarium) and a duplicate of *Trigoboff 1142* is also at NY (New York Botanical Garden Herbarium).

I thank Bill Buck for help with identification and reading a draft of this paper, the hortatory Anna Stalter for reading a draft of this paper, and Cornell's Bailey Hortorium for access to specimens and literature.

Literature Cited

- Andrews, A.L. 1957. The Bryophyte Flora of the Upper Cayuga Lake Basin, New York. Cornell Univ. Agric. Exp. Sta., Ithaca, NY.
- Schuster, R.M. 1949. The Ecology and Distribution of Hepaticae in Central and Western New York. Amer. Midl. Naturalist 42: 513-712.
- . 1992. The Hepaticae and Anthocerotae of North America East of the Hundredth Meridian. Field Museum of Natural History, Chicago, IL.

FINGER LAKES NATIVE PLANT SOCIETY

UPCOMING PRESENTATIONS SPRING 2012

April 18th – Wednesday – 7 pm – Non-Native Species in Our Midst: A Curse or A Blessing by Susan Cook, Cornell University. If you could travel through time and compare grassy, flower-studded fields that exist today with those that existed 200 years ago in New York, you might notice two interesting differences. Some plant and insect species that lived in New York for millennia (natives) are gone, and non-native “exotics” now make up almost 30% of all plant species in NY fields. Does it matter that species are being gained and lost so rapidly from these diverse communities and, if so, why? Scientists have shown that diverse plant communities are healthier in many ways. Susan’s research asks what type of diversity is important. Are some species more important for community health than others? Are native-only communities healthier than communities in which exotics are intermingled? Do the insects care? Come hear her answers!

May 16th – Wednesday – 7 pm – Tiny Mite Homes & Extrafloral Nectaries: The Miniature Drama on Your Garden's Viburnums by Marjorie Weber, Cornell University

All presentations are from 7-8:30 pm and are free and open to the public.

The locations for the spring presentations are different than our usual location so please take note. From April through November presentations will be held at the Unitarian Church annex (corner of Buffalo and Aurora, enter side door of annex on Buffalo St & go up the stairs).

WALKS AND OUTINGS SPRING-SUMMER 2012

April 29 – Sunday – 1 pm – Moss Walk – Danby State Forest. Led by Stephanie Stuber and Norm Trigoboff. Enjoy a walk through upland forest, stopping to examine mosses and other small organisms along the way. We’ll proceed along the Abbott Loop Trail, and may make it to Thatcher’s Pinnacles if time allows. A moderate to steep hike; wear appropriate footwear. Bring a 10x hand lens if you have one. **Meet at Ithaca High School (end of parking lot near tennis courts) at 1 pm to carpool. ** Call Anna for info: [REDACTED].

May 6 – Sunday – 1 pm – Spring Wildflowers at Upper Lick Brook. Led by Susanne Lorbeer. Join Susanne for a moderate walk along the Finger Lakes Trail, where a rich spring flora is bound to please! Meet at CCE at 1 pm to carpool. Call Susanne for more info: [REDACTED].

May 12 – Saturday - 10 am – Smith Woods. Co-sponsored by Cayuga Nature Center. Join Marvin Pritts (Horticulture Professor and CNC Board Member) and Cindy Rice (Manager of Outdoor Education at CNC) for a spring walk in Smith Woods. Smith Woods is a spectacular 30 acre remnant of old growth forest in the heart of Trumansburg. Explore the trails, see wildflowers, and participate in tree identification. Meet at the corner of Cemetery and Falls Road ([REDACTED]).

June 10 – Sunday – **12 pm **– Lime Hollow Forest and Wetlands. Led by Michael Hough (botanist and instructor at SUNY Cortland). Mike will lead the group through a buttonbush swamp with some interesting wetland species like Wild Calla, and the acid woodlands around the swamp might provide a glimpse of the Pink Lady's Slipper and ebony spleenwort. Walking along the Lehigh Trail through rich woodlands we’ll see Canada Waterleaf, Black Snakeroot, Canada Honewort, and near and in the marl ponds, Canada Moonseed and Carex viridula. If we have time we may take a detour to Chicago Bog to look for bog species. Meet at CCE at 12 pm to carpool. Call Anna for more information: [REDACTED].

June 30 – Saturday – 8:30 am – Botrychium Walk – Led by Ken Hull. Participation limited and registration required. Please call Anna for details: [REDACTED].

July 8 – Sunday – 1 pm – Fern Walk at Upper Treman - Led by Susanne Lorbeer. Mid summer is the perfect time to see our native fern species at their finest and several species can be found at this site. Meet at CCE at 1 pm to carpool. Call Susanne for more information: [REDACTED].

TENTATIVE for MID – AUGUST. Seneca Meadows. A guided walk along the trails of the Seneca Meadows remediation site, see: <http://www.senecameadows.com/trails.php>. Details will be posted on our website: www.flnps.org, as they become available.

Unless otherwise noted, trips begin and end in the parking lot at Cornell Cooperative Extension (CCE), located just off Willow Ave. in Ithaca. Field trips are free and open to the public. Participants are encouraged to join FLNPS. Participants are also asked to stay on trails and not to collect any plants without the trip leader’s consent. For more information call the trip leader at the number provided, Anna Stalter at [REDACTED], or Susanne Lorbeer at [REDACTED].

See page 11 for a few non-FLNPS local events of interest.