2003 UNC Spring Phytogeographical Excursion
April 4-6, 2003


Friday, April 4:
Leave Chapel Hill 4:30pm. US15/501 s to US1 s to NC177 s to SC177 s to SC9 w to US1 s to Cheraw State Park (ignore sign to State Park), Co. 20 1 mile e across Juniper Crk (#1).

1. Hudsonia Island, Chesterfield Co., SC.
Gradient from turkey oak scrub to pine woodland to bay forest. Only site for *Hudsonia ericoides* south of Delaware. One of four known sites for *Chrysoma pauciflosculosa* in the Carolinas. [Alas, we canceled this stop when we arrive after dark.]

Return w to US1, se to US601 (Camden), s 3 mi to I20, sw into Georgia. On SW side of Augusta, take GA 383 exit (63, or perhaps 194). Immediately south of I20 you should find the Best Western Motel, 452 Park West Dr., 706-651-9100. We have five rooms held in the name of Robert Peet, Confirmation number 85529.
Saturday, April 5:

I20 sw to GA47/US221 (exit 61), n 2.7 mi to GA232, e (rt) 1.7 mi to first crossroads (S2122?)
Lewisville Rd., long defunct Smitty's Grocery on corner), n (lft) 2.2 mi, park across from chainlink
fence (walk e 0.7 mi; #2). The code for the gate lock is 5005.

2. Heggie's Rock, Columbia Co., GA

This is the best remaining granite outcrop community left in the Southeast. Contains 21 or
the 26 SE granite outcrop endemics.

S2122 ne to S2123 ne (rt) to GA104 nw (lft) across Kiokee Creek, dirt rd (Petersburg Rd.) n (rt) to
Old Middleton Ferry Rd., e (rt) to Burks Mtn (#3).


The best example of piedmont serpentine vegetation south of Maryland.

W to Pollard's Corner, US221 ne to Clark's Hill, Co.88 ne 1.1 miles to dirt rd, ne 400 yards to
Stevens Creek (#4).

4. Steven's Creek, McCormick Co., SC

Spectacular mesic herb vegetation of circumneutral soils. One of two known locations for
Ribes echinellum.

Co.88 sw to SC28/US221 (Clark's Hill), SC28 se to I20, ne to first exit in SC = SC230, se (rt) 0.2 mi
to first rt, 0.3 mi to end of pavement (#5).

5. Savannah River Bluffs, Aiken Co, SC

Classic pleistocene refugial habitat with numerous rare, disjunct species (e.g., *Cladrastis
kentukea*, *Aesculus parviflora*, *Forestiera ligustrina*, *Trillium reliquum*)

Backtrack to I20, ne (rgt) to SC19 (exit 18), S to US 1 in center of Aiken. Continue straight one block
and turn rt on Hayne Ave. Continue to Dibble Rd. left on Dibble crossing RR and parking on
turnout on left side of road.

6. Hitchcock Woods, Aiken Co, SC

Mixture of Longleaf pine types; excellent examples of mixed pine and evergreen heath
communities on Vaucluse soils.

Backtrack to I20, ne to SC6 (exit 55). Right, almost immediately stopping at Ramada Limited
Lexington. 1015 Southlake Drive, Lexington SC. 803-356-6533.
Sunday, April 6:

S on SC6 to SC627, s (rt) to729, w to Souters Creek (#7)

7. Shealy Pond, Lexington Co., SC

Excellent aquatic habitats, with adjacent seepage slope dominated by South Carolina’s most extensive stand of white cedar. Only known site for *Vaccinium sempervirens*.

E to SC6, s 2.3 mi to SC635, n 0.3 mi (#8).

8. Peach Tree Rock, Lexington Co., SC

Sandhill rock outcrop community that combines coastal plain (e.g., longleaf pine) and mountain (e.g., Mountain laurel) elements.

SC6 n to I20, I20 e to I77, n to SC9, w ca 4 mi to SC909, nw (rt) to SC72, nne (rt) ca 2.5 mi to county #82 (Chappel Rd)(sic), w (lft) 0.7 mi to Alex Miller House (#11), where we will regroup and exchange fluids. Continue w to dirt road, and continue north ca 0.5 mi.(#9)

9. Camassia Flat, York Co., SC

Lowland montmorillonite soils supporting remnant populations of plants from the long-destroyed Charlotte prairies, including one of three populations of Camassia known from the Carolinas.

Backtrack to SC9, e to join US521 bypass, stay on 521 and shortly past 9 turns off, turn se on SC903, se (lft) ca 16 mi to US601, ne (lft) ca 1 mi to Flat Creek (#10).

10. Flat Creek Dike, Lancaster Co., SC

Mesic forest over basic soils, one of the richest herb communities known from South Carolina.

c 0.2 mi to SC27, (#11).

11. Forty-acre Rock, Lancaster Co., SC

Classic granite outcrop community

N on US601 to NC9, e to US1, N toUS15-501, N to Chapel Hill (#12)

12. Chapel Hill
#1. Hudsonia Island

**Location:** Lexington County, SC; 6 miles south of Cheraw, SC; 34°37’11”N, 79°56’25”W. Cash Quadrangle.

Cross Juniper Creek on Co. 20, and park on roadside.

**Site:** This site contains a gradient from interstream flat over coarse sand dominated by Quercus laevis, through Pinus palustris woodland to bay forest. Elevation 140-190’, area ca 40 ha.

**Significance:** The shrub *Chrysoma (=Solidago) pauciflosculosa,* a sandhill dominant where it occurs, is known from only three sites in the Carolinas (Raubeson Co. NC, Lexington and Chesterfield Cos. SC), but is locally abundant farther south. This is the only known sites for *Hudsonia ericoides* south of Delaware. *Leiophyllum* has a somewhat less extreme disjunction in its range with populations in the New Jersey pine barrens, on rock outcrops in the high mountains and on the coastal plain of southeastern North Carolina and adjacent South Carolina.

**References:**

**Species list:**

**Trees**
- *Acer rubrum tridens*
- *Chamaecyparis thyoides*
- *Ilex opaca*
- *Pinus palustris*
- *Pinus serotina*
- *Pinus taeda*
- *Quercus falcata*

**Shrubs and vines**
- *Quercus laevis*
- *Taxodium ascendens*
- *Amelanchier obovalis*
- *Aronia arbutifolia*
- *Arundinaria gigantea tecta*
- *Chrysoma pauciflosculosa*
Clethera alnifolia
Cyrilla racemosa
Fothergilla gardenii
Gaylussacia dumosa
Gelsemium sempervirens
Gordonia lasianthus
Hudsonia ericoides
Hypericum hypericoides
Ilex coriacea
Ilex glabra
Kalmia caroliniana
Leiophyllum buxifolium
Leucothoe racemosa
Lonicera japonica
Lyonia lucida
Lyonia mariana
Magnolia virginiana
Opuntia humifusa
Persea palustris
Phorodendron serotinum
Rhododendron viscosum
Rhus copallina
Smilax glauca
Smilax laurifolia
Symphoricarpos tinctoria
Vaccinium attrococcum
Vaccinium crassifolium
Vaccinium formosum
Vaccinium tenellum
Vitis rotundifolia
Zenobia pulverulenta

Aster tortilifolius
Bigelowia nudata
Carex glaucescens
Cnidium stimulating
Dichanthelium spp.
Drosera capillaris
Drosera intermedia
Iris verna verna
Juncus abortivus
Juncus canadensis
Juncus calidus
Lachnanthes carolinana
Lachnanthes anceps
Lycopodium alopecuroides
Lycopodium appressum
Minuartia caroliniana
Muhlenbergia expansia
Osmunda cinnamomea
Pityopsis graminifolia
Polygala lutea
Polygonella polygama
Pteris aquilinae pseudocaudatum
Pyxidanthera barbulata
Rhchasia mariana
Rhexia petiolata
Rhynchospora inexpansa
Sarracenia rubra
Scirpus cyperinus
Selaginella arenicola
Seymeria cassioides
Solidago odora
Sporobolus pinetorum
Stipulicida setacea
Trilisia odoratissima
Utricularia juncea
Xyris carolinana
Zygadenus densus

Herbs
Andropogon elliottii
Andropogon tenerius
Andropogon virginicus
Aristida stricta
Aster paternus

Andropogon tenerius
Andropogon virginicus
Aristida stricta
Aster paternus
#2. Heggie's Rock

**Location:** Columbia County, Georgia. Appling Quadrangle. 33°32'30"N; 82°15'05"W. Follow dirt road to ramshackle farmhouse. Trail follows the left (N) side of the field, just inside the woods.

**Site:** Flat granite outcrop of about 92 acres, owned by the Georgia Nature Conservancy. Primarily a porphyrytic granite with large phenocrysts. Be sure to look at the range of habitats on top of the rock, and then follow it to the base to look at the seepage areas.

**Significance:** This is perhaps the best remaining example of a piedmont granite flatrock. This community complex is best known for the numerous endemics. Extensive research has also been done on the primary succession. Radford claims 11 of the 19 granite flatrock endemics occur here (*Isoetes melanospora*, *Isoetes tegetiformans*, *Panicum lithophilum*, *Cyperus granitophilus*, *Rhynchospora saxicola*, *Juncus georgianus*, *Sedum pusillum*, *Draba aprica*, *Oenothera linifolia gladulosa*, *Oenothera fruticosa subglobosa*, *Phacelia dubia georgiana*, *Amphianthus pusillus*, & *Viguiera porteri*).
Group admiring *Isoetes tegetiformans*.

**References:**


**Species List:**

**Trees, Shrubs and vines:**
- Arundinaria gigantea tecta
- Callicarpa americana
- Campus radicans
- Carya glabra
- Chionanthus virginicus
- Diospyrus virginiana
- Euonymus americana
- Forestiera ligustrina
- Carya alba
Gelsemium sempervirens
Juniperus virginiana
Liquidambar styraciflua
Lonicera japonica
Mitchella repens
Nyssa sylvatica
Opuntia drummondii
Parthenocissus quinquefolia
Pinus taeda
Prunus serotina
Quercus georgiana
Quercus nigra
Quercus phellos
Quercus stellata
Quercus velutina
Rhamnus caroliniana
Rhus copallina
Smilax bona-nox
Toxicodendron radicans
Ulmus alata
Vaccinium arboreum
Vitis rotundifolia

Herbs:
Agrostis hyemalis
Amphianthus pusillus
Andropogon virginicus
Anemone berlandieri
Arabis laevigatus
Arabis missouriensis
Asplenium platyneuron
Chelanthes lanosa
Coreopis lanceolata
Crontonopsis elliptica
Danthonia sericea
Delphinium carolinianum
Dichanthelium boscii
Dichanthelium laxiflorum
Dimorpha smallii
Erigeron strigosus
Gnaphalium purpurea
Hedyotis crassifolia
Hypericum gentianoides
Isoetes melanopecta
Isoetes tegetiformans
Juncus georgianus
Krigia virginica
Lindernia monticola

Matelia sp.
Melica mutica
Minuartia uniflora
Nothoscordum bivalve
Nuttallanthus canadensis
Oenothera perennis
Phacelia dubia georgiana
Piptochaetum avenacea
Plantago virginica
Sanicula sp.
Schoenolirion croceum
Scutellaria ovata
Sedum pusillum
Selaginella tortipila
Senecio tomentosus
Senecio anonymus
Talinum teretifolium
Tradescantia rosea rosea
Triodanis speculare
Yucca aloifolia

(Other characteristic outcrop specialties to watch for.)
Agrostis elliottiana
Arenaria groenlandica var glabra
Botrychium lunarioides
Commelina erecta
Cyperus granitophilus
Diamorpha cymosa
Draba aprica
Fimbristylis dichotoma
Houstonia pusilla
Lepuropetalon spathulatum
Lotus helleri
Nothoscordum bivalve
Oenothera linifolia glandulosa
Oenothera fruticosa subglobosa
Ophioglossum crotalophoroides
Panicum lithophilum
Polygala curtisii
Portulaca coronata
Riccia dictyospora
Rhynchospora saxicola
Scirpus kollolepis
Tradescantia hirsuticaulis
Trifolium carolinianum
Viguiera porteri
#3. Burks Mountain

**Location:** Columbia County, Georgia. Evans Quadrangle. 33°37'10"N, 82°13'00"W.

**Site:** Serpentine vegetation with open mixed-pine savanna on the southern exposure.

**Significance:** Burks Mountain is the only piedmont example of well-developed vegetation over serpentine south of Maryland. The mix of *Pinus palustris*, *P. echinata* and *Quercus marilandica* is also very unusual for the piedmont. *Elliotia racemosa* grows here.

**References:**

**Species List:**

**Key**
+ new to the 2003 trip
* seen on the 2003 trip and previous trip
** special interest

**Trees**
*Ilex opaca*
+*Ilex decidua*
*Liquidambar styraciflua*
*Pinus echinata*
*Pinus palustris*
+*Pinus taeda*
*Pinus virginiana*
*Quercus laevis*
*Quercus marilandica*
*Quercus rubra*
*Quercus stellata*

**Shrubs and vines**
*Callicarpa americana*
**Clematis albicoma*
*Clinopodium georgianum*
*Elliotia racemosa*
*Gelsemium sempervirens*
+*Lonicera sempervirens*
*Myrica cerifera*
*Rhus copallinum
*Smilax bona-nox
Smilax glauca
*Smilax rotundifolia
*Vaccinium arboreum
+Vaccinium elliottii
*Vaccinium staminium melanocarpum
*Vitis rotundifolia

Herbs
Agalinis obtusifolia
Agave virginica
Allium bivalue
*Andropogon glomeratus
*Aristida purpurascens
*Aristida sp.
+Asclepias tuberosa
*Baptisia alba
Baptisia pendula
+Berchemia scandens
*Carex spp.
Centrosema virginiana
*Chimaphila maculata
Clematis ochroluca
+Coryopsis major
Delphinium sp.
Desmodium marilandicum
Dichanthelium depauperatum
Elephantopus tomentosus
Eragrostis ciliaris
Erigeron sp.
+Eupatorium album
Eupatorium aromaticum
Eupatorium compositifolium
Euphorbia sp.
Galium pilosum
Helianthemum
*Hieracium venosum

Houstonia longifolia
Hypericum drummondii
Hypericum gentianoides
Hypericum hypericoides
Hypericum perforatum
*Hypoxis hirsuta
Lespedeza sp.
Liatris graminifolia
Oenothera
Oxalis acetosella
Pityopsis graminifolia
**Polygonum tenue
+Potentialla canadensis
*Potentialla simplex
*Pteridium aquilinum pseudocaudatum
Ranunculus hispidus
Rhus copelina
*Schizachrium scoparium
Scleria oligantha
Scutellaria elliptica
Silene antirrhina
+Smilax rotundifolia
Solidago arguta
Sorghastrum nutans
Spenopholis filiformis
Sporobolus sp.
Stylosanthes biflora
+Sisyrinchium sp.
Talinum teretifolium
Thaspium trifoliatum
Tragia urticifolia
Verbesina sp.
Viola emarginata
*Viola pedata
Viola septemloba
Zizia aptera
#4. Stevens Creek

**Location:** McCormick County, SC; Clarks Hill Quadrangle. 33°41'00"N, 82°09'00"W.

**Site:** Relatively old-growth hardwood forest over circumneutral to basic soils with ph 7-8

**Significance:** This site and other mesic, nutrient-rich sites like it, such as the Savannah River Bluffs Preserve, probably contained isolated stands mesic hardwood forest throughout the Pleistocene. Disjunct, rare, and endemic plants form the basis for this interpretation. Stevens Creek is most famous for its large population of Ribes echinellum which is known only from this site and a couple plants at a second site in the Florida panhandle. Carex jamesii occurs here, disjunct in the coastal plain and piedmont region from the Roanoke River Bluffs in northern North Carolina. Four other species are (or were) known only from this one site in SC: Dicentra cucullaria, Isopyrum biternatum (subsequently found at Savanna River Bluffs), Lithospermum tuberosum and Urtica chamaedryoides.

*Dodecatheon meadii*  
*Isopyrum biternatum*
References:
SC Natural Heritage Trust. http://www.dnr.state.sc.us/wild/heritage/hp/stevenscrk/default.htm

Species list

Trees:
Acer barbatum
Acer negundo
Bumelia lycioides
Carpinus carolinana
Carya glabra
Celtis laevigata
Cercis candensis
Cornus florida
Fagus grandifolia
Fraxinus americana
Fraxinus pensylvanica
Ilex opaca
Morus rubra
Ostrya virginica
Pinus taeda
Platanus occidentalis
Prunus serotina
Quercus alba
Quercus prinus
Quercus rubra
Tilia heterophylla
Ulmus rubra

Herbs:
Actaea sp.
Adiantum pedatum
Aesculus sylvatica
Amphicarpa bracteata
Anemonella thalictroides
Antennaria plantaginifolia
Arisaema triphyllum
Aristolochia serpentaria
Asarum canadense
Asplenium platyneuron
*Carex blanda
*Carex jamesii
*Carex retroflexa
Chrysogonum virginianum
Claytonia virginiana
Conopholis virginica
*Corydalis flavula
Cynoglossum virginianum
Cystopteris protrusa
Danthonia spicata
Dentaria cucullaria
Dodecatheon meadia
Dryopteris marginalis
Duchesnea indica
Erythronium americanum
*Euphorbia commutata
Festuca obtusa
Galium aparine
Geranium maculatum
Goodyera pubescens
Hepatica americana
Heuchera americana
Hexastylis arifolia
Hieracium venosum
Houstonia caerulea
Hybanthus concolor
Impatiens capensis

Shrubs and vines:
Arundinaria gigantea
Bignonia capreolata
Calycanthus floridus
Cephalanthus occidentalis
Chimaphila maculata
Cornus alternifolia
Crateagus
Euonymus americana
Gelsemium sempervirens
Hamamelis virginiana
Lindera benzoin
Liriodendron tulipifera
Lonicera japonica
Parthenocissus quinquefolia
Philadelphus inodora
Rhododendron sp.
Ribes echinellum
Sambucus canadensis
Smilax bona-nox
Smilax rotundifolia
Staphylea trifoliata
Toxicodendron radicans
Viburnum prunifolium
Viburnum rufidulum

Isopyrum biternatum
Laportia canadensis
*Lithospermum tuberosum
*Luclus echinata
Melica mutica
Nemophila microcalyx
Nothoscordum bivalve
Obolaria virginica
Orobanche uniflora
Osmorhiza claytoni
Oxalis purpurea
Pedicularis candensis
Phacelia dubia
Phlox amoena
Piptochaetium avenaceum
*Poa sylvestris
Podophyllum peltatum
Polygonatum biflorum
Polystichum acrosticoides
Prenanthes altitissima
Ranunculus abortivus
Ranunculus recurvatus
Rudbeckia laciniata
Sanicula gregaria
Saxifraga virginica
Senecio obovatus elliotii
Sisyrinchium albidum
Smilacina racemosa
Solidago sp.
Stellaria pubera
Thelypteris hexagonoptera
Tiarella cordifolia collina
Tradescantia virginiana
*Trillium catesbaei
Trillium cernuum
*Trillium cuneatum
Trillium discolor
Trillium lanceolatum
Urtica chamaedryoides
Uvularia perfoliata
Viola affinis
*Viola papilionacea
Vitis rotundifolia
#5. Savanna River Bluffs

**Location:** Aiken County, SC; Southeast of I-20 on North bank of the Savannah River. From the intersection of I-20 and SC 230 (Martintown Road): go southeast on 230 (0.5 mi) toward North Augusta; turn at (most likely first) right onto Plantation Rd; go 0.2 mi and take first road on right; go 0.3 mi and park before the "private property" signs where the paved road ends, and before the barricade; walk 0.1 mi along the private property road and turn left onto the road; follow the road to powerline right-of-way and go left to the next ridge; track goes on an old road, loops within the property and comes back to the powerline.

**Site:** A 83.84 acre steep ravine adjacent to one of the last remaining Savannah River shoals along the edge of the coastal plain.

**Significance:** This site contains several disjunct mesophytic species that provide support for the hypothesis that mesic forest may have persisted here during the full glacial period and that the river bluffs may have formed a corridor for species migration.

There is a population of *Aesculus parviflora* which is disjunct nearly 300 km from the nearest sites in Alabama and SW Georgia. This may also be the site for collection of the type specimen collected by John Fraser and Andre Michaux in 1787. Another disjunct tree species is *Cladrastis kentukea*. Other rare species present at the sites include *Hymenocallis coronaria*, *Trillium reliquum*, *Forestiera ligustrina*, *Acer leucoderme*, *Delphinium tricorne* and *Isopyrum biternatum*.

**References:**
SC Heritage Trust. [http://www.dnr.state.sc.us/wild/heritage/hp/savannahrb/default.htm](http://www.dnr.state.sc.us/wild/heritage/hp/savannahrb/default.htm)
<table>
<thead>
<tr>
<th>Species list:</th>
</tr>
</thead>
<tbody>
<tr>
<td>* = seen in 2003</td>
</tr>
<tr>
<td><strong>Trees</strong></td>
</tr>
<tr>
<td><em>Acer leucoderme</em></td>
</tr>
<tr>
<td><em>Acer negundo</em></td>
</tr>
<tr>
<td><em>Acer rubrum</em></td>
</tr>
<tr>
<td>Aesculus parviflora</td>
</tr>
<tr>
<td><em>Aesculus sylvatica</em></td>
</tr>
<tr>
<td><em>Amelanchier sp.</em></td>
</tr>
<tr>
<td><em>Carpinus caroliniana</em></td>
</tr>
<tr>
<td><em>Carya glabra</em></td>
</tr>
<tr>
<td><em>Carya carolinae-septentrionalis</em></td>
</tr>
<tr>
<td><em>Carya tomentosa</em></td>
</tr>
<tr>
<td><em>Celtis laevigata</em></td>
</tr>
<tr>
<td><em>Cercis canadensis</em></td>
</tr>
<tr>
<td><em>Cladrastis kentukea</em></td>
</tr>
<tr>
<td><em>Cornus florida</em></td>
</tr>
<tr>
<td><em>Crataegus uniflora</em></td>
</tr>
<tr>
<td>Diospyrus virginicus</td>
</tr>
<tr>
<td><em>Fagus grandifolia</em></td>
</tr>
<tr>
<td><em>Fraxinus americana</em></td>
</tr>
<tr>
<td><em>Ilex opaca</em></td>
</tr>
<tr>
<td><em>Itea virginica</em></td>
</tr>
<tr>
<td><em>Juniperus virginiana</em></td>
</tr>
<tr>
<td><em>Liquidambra styraciflua</em></td>
</tr>
<tr>
<td><em>Liriodendron tulipifera</em></td>
</tr>
<tr>
<td><em>Morus rubra</em></td>
</tr>
<tr>
<td><em>Ostrya virginiana</em></td>
</tr>
<tr>
<td><em>Pinus taeda</em></td>
</tr>
<tr>
<td><em>Platanus occidentalis</em></td>
</tr>
<tr>
<td><em>Quercus alba</em></td>
</tr>
<tr>
<td><em>Quercus nigra</em></td>
</tr>
<tr>
<td><em>Quercus phellos</em></td>
</tr>
<tr>
<td>Quercus rubra</td>
</tr>
<tr>
<td><em>Taxodium distichum</em></td>
</tr>
<tr>
<td><em>Tilia americana caroliniana</em></td>
</tr>
<tr>
<td><em>Ulmus alata</em></td>
</tr>
<tr>
<td><strong>Shrubs and vines</strong></td>
</tr>
<tr>
<td><em>Arundinaria gigantea tecta</em></td>
</tr>
<tr>
<td>Asimina trifolia</td>
</tr>
<tr>
<td><em>Berchemia scandens</em></td>
</tr>
<tr>
<td><em>Bigonia capreolata</em></td>
</tr>
<tr>
<td><em>Bumelia lycoides</em></td>
</tr>
<tr>
<td><em>Callicarpa americana</em></td>
</tr>
<tr>
<td>Chionanthus virginicus</td>
</tr>
<tr>
<td><em>Clinopodium georgianum</em></td>
</tr>
<tr>
<td>(Satureja g.)</td>
</tr>
<tr>
<td>Cornus alternifolia</td>
</tr>
<tr>
<td><em>Decumaria barbara</em></td>
</tr>
<tr>
<td>Fers Petit <em>ligustria</em></td>
</tr>
<tr>
<td><em>Hamamelis virginiana</em></td>
</tr>
<tr>
<td><em>Ilex vomitoria</em></td>
</tr>
<tr>
<td><em>Lonicera japonica</em></td>
</tr>
<tr>
<td><em>Mitchella repens</em></td>
</tr>
<tr>
<td><em>Nandina domestica</em></td>
</tr>
<tr>
<td><em>Parthenocissus quinquefolia</em></td>
</tr>
<tr>
<td><em>Philadelphus inodorus</em></td>
</tr>
<tr>
<td><em>Rhhamnus caroliniana</em></td>
</tr>
<tr>
<td><em>Rhododendron nudicaulis</em></td>
</tr>
<tr>
<td><em>Sabal minor</em></td>
</tr>
<tr>
<td>Sambucus Canadensis</td>
</tr>
<tr>
<td><em>Smilax bona-nox</em></td>
</tr>
<tr>
<td><em>Styrax grandifolia</em></td>
</tr>
<tr>
<td><em>Toxicodendron radicans</em></td>
</tr>
<tr>
<td><em>Vaccinium arboretum</em></td>
</tr>
<tr>
<td><em>Vacciniumelloïtii</em></td>
</tr>
<tr>
<td><em>Vaccinium stamineum</em></td>
</tr>
<tr>
<td><em>Vitis rotundifolia</em></td>
</tr>
</tbody>
</table>
Herbs
*Anemonella thalictroides
Aristolochia serpentina
Asplenium platyneuron
Aureolaria virginica
*Baptisia pendula or alba
*Botrichium virginianum
Brachyelytrum erectum
*Cardamine hirsuta
Carex debilis
Carex flaccosperma
Carex gracilens
Carex oxylepis
Carex willdenowii
*Caulophyllum thalictroides
*Chasmanthium sessiliflorum
*Chrysogonum virginicum
*Claytonia virginiana
*Conopholus americana
*Corydalis flavula
*Cynoglossum sp.
Delphinium tricorne
*Dichanthelium boscii
Dioscorea villosa
*Dodecatheon meadia

*Duchesnea indica
*Euphorbia corollata
*Erythronium americanum
*Galium aparine
*Geranium maculatum
*Hepatica americana
Heuchera sp.
Hieracium venosum
Hymenocalis coronaria
*Hypericum hypericoides
*Hyxastylis arfolia
*Isopyrum biternatum
Luzula echinata
*Melica mutica
*Microstegium vimineum
Myosotis verna
*Nemophila microcalyx
*Osmorhiza claytonii
Osmorhiza longistylis
*Oxalis grandis
*Oxalis violacea
Peltandra virginica ?
*Phryma leptostachya
*Piptochaetum avenacea
*Polygonatum biflorum

*Polypodium polypodioides
*Polystichium acrosticoides
*Potentilla sp.
*Prenanthes sp.
*Salvia lyrata
Sanicula canadensis
Saxifraga virginica
*Senecio anomumus or obovatus
*Sisyrinchium spp.
Smilacina racemosa
*Solidago caesia
*Stellaria pubera
*Tillandsia usneoides
*Tipularia discolor
*Tridentia subaspera
*Trillium relikum
*Uvularia perfoliata
*Valerianella sp.
*Verbesina occidentalis
Viola affinis
Viola walteri
*Zephiranthes atamasco
Zizia sp.
#6. Hitchcock Woods

**Site:** Hitchcock woods is a large preserve in the center of Aiken. It was originally established for equestrian recreation, but now also serves to preserve the natural landscape of the South Carolina fall line sandhills. Much of the property suffered from fire suppression for many years, but fire is now routinely used as a management tool. We visited one of the few sites on the preserve where wiregrass is part of the natural ground cover.
#7. Shealy Pond

**Location:** Lexington County, SC; Pelion East Quadrangle; 33°51′40″N, 81°14′00″W.

**Site:** Shealy Pond was formed in a valley containing seepage slopes by the damming of a fast moving stream with a road. An impermeable clay layer creates boggy conditions on the slope and allows *Chamaecyparis* to grow. The uplands are covered by fire-suppressed *Pinus palustris* woodland typical of the region.

**Significance:** This is the southern limit of *Chamaecyparis* as an important species until the Florida panhandle, although a few populations occur, such as Camp Gravatt in Aiken County SC and Fort Gordon, Richmond County, GA. The most interesting plant species here is *Vaccinium sempervirens*, a close relative of *V. crassifolium* (and perhaps just a variety of it.). *V. sempervirens* is endemic to Lexington County, SC and occurs only within about a two mile radius of Shealy Pond. The aquatics in the pond are quite diverse.

**References:**
**Species List:**
* = Seen in 2003

## A. Dry, upland sites

### Trees

- Juniperus virginiana
- *Pinus palustris*
- *Pinus taeda*
- *Quercus laevis*
- Quercus margaretta
- Quercus marilandica
- Quercus stellata
- *Sassafras albidum*

### Shrubs and vines

- *Ceratiola ericoides*
- *Gelsemium sempervirens*
- *Leiophyllum buxifolium*
- Opuntia humifusa
- *Vaccinium arbores*
- *Vaccinium stamineum*
- *Vaccinium tenellum*

### Herbs

- Aristida lanosa
- Aristida tuberculosa

## B. Seepage slope and pond

### Trees

- *Acer rubrum tridens*
- *Chamaecyparis thyoides*
- *Gordonia lasianthus*
- Juniperus virginianus
- *Magnolia virginiana*
- *Nyssa biflora*
- *Persea palustris*
- *Pinus serotina*

### Shrubs and vines

- *Alnus serrulata*
- *Aronia arbutifolia*
- *Clethera alnifolia*
- *Cyrilla racemiflora*
- Gaylussacia frondosa
- *Gelsemium sempervirens*
- *Ilex coriacea*
- *Ilex glabra*
- *Lonicera lucida*
- *Myrica heterophylla*
- Rhododendron viscosum
- Smilax rotundifolia
- Smilax glauca
- *Smilax laurifolia*
- *Styrax americana*
- *Toxicodendron vernix*
- *Vaccinium sempervirens*
- *Vaccinium atrorubens*
- *Vaccinium formosum*
- *Viburnum nudatum*
- *Vitis rotundifolia*

### Herbs

- Allium sp.
- Andropogon virginicus
- Andropogon pyramidalis
- Arundinaria gigantea tecta
- *Asplenium platyneuron*
- Aster novi-belgii
- Bacopa caroliniana
- Bartonia capitata
- Brasenia schreberi
- Burmannia biflora
- Carex glaucescens
- Carex leptalea
- Carex tenax
- *Drosera capillaris*
- *Drosera intermedia*
- *Drosera rotundifolia*
- Dulichium arundinaceum
- Eleocharis robbinsii
- Ensethes giganteus
- *Eriocaulon compressum*
- Eryngium integrifolium
- Fuirena squarrosa
- Goodyera pubescens
- Hypericum canadensis
- Hypericum mutilum
- Hypericum perforatum
- Juncus biflorus
- Lachnocaulon anceps
- Lobelia pubera
- Lobelia sp.
- Lycopodium appressum

### Additional Herbs

- Lycopodium carolinianum
- Lycopodium cernuum
- Mayaca aubletii
- Myriophyllum sp.
- Nuphar lutea
- *Nymphaea odorata*
- *Nymphaoides cordata*
- Onoclea sensibilis
- *Orontium aquaticum*
- Osmunda cinnamomea
- *Osmunda regalis*
- Peltandra virginica
- Platanthera clavellata
- Polygala lutea
- *Proserpinaca pectinata*
- Pteridium aquilinum pseudocaudatum
- Rhyncospora spp.
- *Sarracenia flava*
- *Sarracenia purpurea*
- *Sarracenia rubra*
- Sarracenia x catesbyana
- Scirpus etuberculatus
- Scirpus subterminalis
- Solidago patula strictula
- Sparganium americanum
- Tipularia discolor
- Utricularia cornuta
- Utricularia juncea
- *Woodwardia areolata*
- *Xyris sp.*
#8. Peach Tree Rock

**Location:** Lexington County, SC; Pelion East Quadrangle.

**Major Habitats:**

*Mesic sheltered slopes:* The first habitat encountered is the moist slope, characterized by a tupelo-evergreen shrub bog. Around the waterfall, one might find mountain laurel, maple leafed viburnum, and the crane-fly orchid. There are also several neat fern communities.

*Sand Barren:* The trail goes from the moist lowlands into a sparse community of longleaf pine and turkey oak emerging from blazing white sand. Here there is no understory save for a few patches of grass.
Upland longleaf with Leiophyllum: A dense thicket of sand myrtle and grasses with long leaf towering over them

Significance: One of the few preserved longleaf pine areas in the sandhill south of Columbia. While the site, like all others, has a history of fire suppression, the Nature Conservancy has been aggressively reintroducing growing-season fire. Nice examples of Vaucluse soils with Kalmia thickets. Some Ceratiola occurs on the dry sandy uplands

Species List:
Amsonia ciliata
*Andropogon sp.
Aronia arbutifolia
*Arundinaria gigantea tecta
Asclepias sp.
Asplenium platyneuron
Aster sp.
*Aureolaria sp.
Baptisia sp.
Bonamia sp.
*Bulbostylis sp.
Carphephorus
Carya palida
Calycanthus florida
Carex debilis
Carex folliculata australis
Carex nigromarginata
*Carya pallida
Ceanothus sp.
*Ceratiola ericoides
*Cheilanthes tomentosa
*Chimaphila maculata
Chionanthus virginicus
*Chrysogonum virginianum
*Clethera alnifolia
*Coreopsis verticillata
*Coronopus floridus
*Crataegus sp.
Cuscuta sp.
Danthonia sericea
Desmodium sp.
*Dichanthelium spp.
*Diospyrus virginicus
pigae repens
*Eriogonum tomentosum
*Eupatorium ipecacuanhae
Euphorbia corollata
Galactia sp.
Galax aphylla
Gaylussacia sp.
Gelsemium sempervirens
Gnaphalium sp.
Gordonia lasianthus
Gymnopogon sp.
Hamamelis virginiana
*Hexastylis sp.
*Hieracium venosum
*Hieracium gronovii
*Hypericum hypericoides
Hypericum lloydii
*Ilex opaca
Iris verna verna
*Kalmia latifolia
*Leiophyllum buxifolium
Liatris sp.
*Liquidambar styraciflua
Lespedeza sp.
*Lonicera sempervirens
Lupinus diffuses
*Lyonia lucida
*Lyonia mariana
Lysimachia quadrifolia
*Magnolia virginiana
Marshallia sp.
Mitchella repens
*Minuartia caroliniana
Monotropa uniflora
*Nuttallanthus canadensis
*Nyssa sylvatica

*Opuntia humifusa
*Osmunda cinnamomea
* Panicum sp.
Passiflora lutea
Penstemon sp.
*Persea palustris
*Pinus palustris
*Pityopsis graminifolia
*Pleopeltis polypodioides
*Polygonella polygama
*Prunus serotina alabamense
*Prunus serotina serotina
*Pteridium aquilinum
*Pteridium pseudocaudata
*Quercus falcata
*Quercus hemispherica
*Quercus laevis
Quercus incana
*Quercus marilandica
Quercus velutina
*Sassafras albidum
*Satureja georgia
Schrankia sp.
Scutellaria sp.

*Selaginella arenicola
*Silene caroliniana
*Silphium compositum
*Smilax ecrihata hugeri
*Smilax laurifolia
Solidago sp.
*Sporobolus junceus
*Stipulicida tinctoria
Symlocos tinctoria
Tephrosa sp.
*Pilularia discolor
*Toxicodendron pubescens
*Tradescantia sp.
Uvularia sp.
*Vaccinium arboretum
*Vaccinium crassifolium
**Vaccinium sempervirens
*Vaccinium stamineum
*Vaccinium tenellum
*Viburnum acerifolium
Woodsia obtusa
*Yucca filamentosa

* = Seen in 2003
#9. Camassia Flat

**Location:** York County, SC; Lowrys and Edgemoor Quadrangles; 34°50'00"N, 81°07'30"W.

**Significance:** Camassia flats is in the center of a region underlain by Gabbro which has weathered to calcareous shrink-swell clays. The entire region was keep as open grassy savanna in presettlement times, but grew up to woodland by 1800 as a consequence of fire suppression. Camassia flats is the best example of the moist or meadow flats of this prairie or savanna region and still contains many species of midwestern prairie affinities. In the wet seasons the soils become very sticky and hard to work; they belong ot the Iredell or Elbert series (Hapludalfs) in theory, but seem much more like vertisols than the more "normal" Iredell soils of mafic piedmont sites. *Camassia scilloides* is the most famous species present and is known from only two other sites in the Carolinas (the best known being Camassia slopes on the Roanoke bluffs). *Camassia* and *Zephyranthes atamasco* can dominate the aspect in the spring months. Another rare prairie herb present is *Ranunculus fascicularis*, which is not presently known to occur elsewhere in the Carolinas. This is the only site in SC for *Scutellaria parvula* and the second site for *Carex laxiculmis*. The abundance of Quercus bicolor and Q. palustris is also peculiar to wettish mafic soils that probably supported oak savannas in presettlement landscape.

**2003 Status Report:** Much to our dismay, we arrived to find that most of the forest at this site had been cleared, although the riparian strip where the *Camassia* occurs had been left intact. Because of this we did not remain long at this site and did not attempt to list all species encountered. A sample of the species we encountered is denoted by asterisks below. Subsequent discussion with the landowner led us to conclude that uncut forest land of similar character may be left on the property. This needs to be explored.
Species List:

**Trees**
* Acer barbatum
* Acer negundo
* Carya carolinanae-septentrionalis
* Carya ovata
* Celtis canadensis
* Cornus florida
* Fraxinus pensylvanica
* Gleditsia trianths
* Liquidambar styraciflua
* Morus rubra
* Prunus serotina
* Quercus bicolor
* Quercus michauxii
* Quercus palustris
* Quercus phellos
* Quercus shumardii
* Quercus stellata
* Ulmus alata
* Ulmus americana
* Ulmus rubra

**Shrubs and vines**
* Campsis radicans
* Clematis viorna
* Euonymous americana
* Hypericum hypericoides
* Lonicera japonica
* Parthenocissus quinquefolia
* Rhamnus caroliniana

**Rubus sp.**
* Symphoricarpos orbiculatus
* Toxicodendron radicans
* Viburnum prunifolium
* Vitis sp.

**Herbs**
* Agrimonia parviflora
* Schoenolirion bivalence
* Allium canadense
* Aspencium platynemus
* Aster ducusus
* Aster sp.
* Botryxchium sp.
* Calitriche heterophylia
* Camassia scilloides
* Cardamine rhomboidea
* Cardamine douglassii
* Carex blanda
* Carex caroliniana/complanata
* Carex cephalophora
* Carex debilis
* Carex flaccosperma
* Carex olylepis
* Casmanthium latilfolium
* Cinna sp.
* Claytonia virginica
* Eleocharis
* flavescens/olivacea
* Galium aparine
* Galium obtusum filifolium
* Galium tinctorium
* Galium triflorum
* Geranium carolinianum
* Geum canadense
* Geum laciniata
* Houstonia caerulea
* Hypericum hypericoides
* Isoetes
* engelmannii/melanopoda
* Lysimachia ciliata
* Melanchium virginicum
* Melica mutica
* Muscari armeniacum
* Myosurus sp.
* Nothoscordum
* Oxalis acetasella
* Phlox nivalis hentzii
* Polygonatum biflorum
* Potentilla simplex
* Prunella vulgaris
* Ranunculus abortivus
* Ranunculus fascicularis
* Ruellia carolinensis
* Sanicula sp.
* Saxifraga virginensis
* Scutellaria parvula
* Sisyrinchium mucronatum
* Smilax herbacea
* Solidago sp.
* Taenidia integerrima
* Viola septembrina
* Viola sororia/papilionacea
* Zephyranthes atamasco
#10. Flat Creek Dike

**Location:** Lancaster County, SC; Taxahaw Quadrangle; 34°39'20"N, 80°31'10"W.

**Significance:** An exceptionally rich mesic forest occurs along a diabase dike. Radford described it as the most impressive in the Carolinas before it was logged in 1957(?). Rarities include Caulophyllum thalictroides (only site in SC), Euonymous atropurpureus (only site in SC), Trillium cernuum (only here and Stevens Creek in SC) and Phlox stolonifera (three sites in the Carolina piedmont. This community type is classified as a Basic Mesic Forest, Piedmont Subtype (Shafale and Weakley 1990). Basic Mesic Forests occur on deep, well-drained soils with circumneutral or higher pH, on slopes, ravines and on small stream bottoms. These communities are characterized by a canopy dominated with mesophytic trees and a dense and very diverse herbaceous layer.

**Species List:**
The asterisk (*) denotes species that were observed in 2003 as well as during previous visits to the site. The plus sign (+) denotes species that were recorded for the first time during the 2003 trip.

**Trees:**
* Acer leucoderme  
* Acer negundo  
+ Asimina triloba  
+ Carpinus caroliniana  
+ Carya cordiformis  
+ Cercis canadensis  
* Cornus florida  
+ Cornus alternifolia  
* Fraxinus americana  
+ Ilex opaca  
* Liquidambar styraciflua  
+ Liriodendron tulipifera  
* Platanus occidentalis  
+ Quercus alba  
+ Quercus michauxii  
* Quercus muehlenbergii  
+ Quercus rubra  
* Ulmus americana

**Shrubs and Vines:**
* Aesculus sylvatica  
* Arundinaria gigantea tecta  
* Bignonia capreolata  
* Euonymous atropurpureus  
+ Gelsemium sempervirens
*Lonicera japonica  
*Parthenocissus quiquefolia  
*Sambucus canadensis  
+Smilax sp.  
*Staphylea trifolia  
+Viburnum rufidulum

**Herbs:**
*Actaea pachypoda  
Amsonia tabernaemontana  
*Arisaema triphyllum  
Botrychium virginianum  
Asarum canadense  
+Asplenium platyneuron  
*Botrychium virginianum  
Carex blanda  
*Caulophyllum thalictroides  
Clematis virginiana  
*Collinsonia canadensis  
*Corydalis flavula  
*Cynoglossum virginianum  
*Dentaria lacinata  
Duchesnia indica  
*Erythronium americanum  
Festuca obtusa  
Fragaria virginiana  
*Galium aparine  
+Galium circaeazans  
*Galium triflorum  
Geranium maculatum  
Geum canadense  
*Hexastylis sp.  
Hybanthus concolor  
*Osmorhiza longistylis  
Panax quiquefolium  
Phacelia maculata  
Phlox stolonifera  
*Podophyllum peltatum  
*Polygonatum biflorum  
*Polystichium acrostichoides  
+Prenanthus sp.  
+Ranunculus sp.  
Rudbeckia laciniata  
*Sanguinaria canadensis  
*Sanicula gregaria  
Senecio glabellus  
+Smilacina racemosa  
Smilax herbacea  
*Stellaria pubera  
*Tiarella cordifolia  
+Tipularia discolor  
*Tovaria virginiana  
Trillium catesbaei  
Trillium cernuum  
Valerianella sp.  
+Viola canadensis  
*Viola tripartita  
+Woodwardia areolata
#11. Forty Acre Rock

**Location:** Lancaster County, SC; Taxahaw Quadrangle; 34°40'05"N, 80°31'40"W.

**Significance:** Forty Acre Rock is the most extensive flatrock exposure in the eastern piedmont of South Carolina. The outcrop covers 5.6 ha and is part of the 581 ha Flat Creek Heritage Preserve. A number of the classic flatrock endemics are present, though the area has been damaged by decades of recreational activity.

**References:**

South Carolina Heritage Trust.
http://www.dnr.state.sc.us/wild/heritage/hp/fortyar/default.htm
http://web.infoave.net/~piedmonthp/farmain.html
Species List:
The asterisk (*) denotes species that were observed in 2003 as well as during previous visits to the site. All other species listed below were recorded for the first time during the 2003 trip.

**Successional wood**

**Trees:**
- Acer rubrum
- Cercis canadensis
- Cornus florida
- Ilex opaca
- Juniperus virginiana
- Liquidambar styracifolia
- Pinus ecinaeda
- Pinus serotina
- Pinus taeda
- Pinus viriniana
- *Prunus serotina
- Quercus nigra
- Quercus rubra
- Quercus velutina
- Vitis rotundifolia

**Herbs:**
- Apocynum sp
- Arundinaria gigantea.
- Chimaphila maculate
- Hypericum hypericoides
- Packera anoma
- Phlox divaricata
- Polygonatum biflorum

**Shrubs and Vines:**
- Bignonia capreolata
- Lonicera japonica
- Smilax glauca
- Smilax rotundifolia
- Vaccinium fuscatum

**Trail to Outcrop (Ascending):**

**Trees:**
- Carpinus caroliniana
- *Quercus montana
- *Ulmus elata

**Shrubs and Vines:**
- Philadelphus indorus
- Vaccinium arboreum

**Herbs:**
- Antennaria plantaginifolia
- Arabis laevigata
- Arnoglossum atriplicifolium
- Collinsonia canadensis
- *Phlox nivalis hentzi
- Sanguinaria canadensis

**Outcrop:**
Outcrops are xeric, high-light, thin-soiled areas of mostly open rock, where vegetation is restricted to pockets or depressions of soil. The plants occupying these vegetation mats are often zoned according to soil depth within the depression. Outcrops are noted for their high number of endemic and disjunct species.

**Trees:**
- Carya sp.
- Juniperus virginiana
- Pinus taeda

**Shrubs and Vines:**
- Gelsimium sempervirens
- Opuntia sp.
- Vaccinium sp.

**Herbs:**
- Amphianthus pusillus
- Crotonopsis elliptica
- *Diamorpha smallii
- Dicranthium sp.
- *Erythronium americanum
- Eupatorium capillifolium
- Hypericum gentianoides
- *Hypericum lloydii
- Isoetes sp.
- *Juncus georgianus?
- Krigia virginica
- *Minuartia uniflora
- *Minuartia glabra
- *Nothoscordium bivalve
- *Phacelia maculate
- Rumex acetosella
- Rumex hastatus
- *Sedum pusillum *Packera tomentosus
- *Viola pedata
- Yucca filamentosa

**Descent from Outcrop (Stream area):**

**Herbs:**
- Athyrium asplenioides
- Hieracium venosum
- Hexastylis sp.
- Sanguinaria canadensis
- Viola sp.
Several additional species were observed prior to (but not on) the 2003 trip:

Agrostis hyemalis
Amsonia tabernaemontana
Arabis missouriensis
Carex styloflexa
Desmodium rotundifolium
Fragaria virginiana
Heuchera sp.
Luzula echinata

Lee Anne Jacobs, Brooke Wheeler, Amanda Senft, & Jeff Ott