



SCAN *South Carolina Association of Naturalists*
Post Office Box 5651, Columbia, South Carolina 29250-5651

May 2012

Hello, SCANners,

Our last fieldtrip on April 28, 2012, started at Kalmia Gardens of Coker College. We were met by Dan Hill, assistant director of the gardens, who explained that this garden is on the former city dump. However, Mrs. David Coker ("Miss May") acquired the land in the mid-1930's and took it upon herself to convert the dump to gardens in only a year, designing the trails, importing trees and plants, and doing much of the work herself.

The day started with a fog above the roads, but that fog lent an air of fairyland to the dense clusters of perfect Mountain Laurel flowers overhanging the trail and a Wood Thrush singing overhead. We saw the endangered *Torreya taxifolia*, or Stinking Cedar; we did not notice any odor when we sniffed the needles and wondered why it was so named. That tree is found in the wild only in the Florida panhandle, but the Kalmia gardeners are propagating it in an attempt to establish the tree in South Carolina.

Around the pond were toads mating, leaf beetles chewing on alder foliage, and sedges blooming, and in the pond were several species of fish and a Yellow-bellied Slider. Some spectacular flowers in full bloom included large white *Magnolia macrophylla*, brilliant orange Pomegranate, and a curious small-leaved purple-and-white-flowered *Kalmia*. Birds were singing throughout the morning, and by the river we spotted a Prothonotary Warbler. Some of us looked diligently for salamanders under logs but failed to find them; the accompanying list will show whether or not other members were luckier.

After following the loop trail along the river, we crossed the boardwalk and bridge over Black Creek to the Segars-McKinnon Heritage Preserve, accessible only through Kalmia Gardens. This preserve has been much developed since our previous visit by adding both long (3-mile) and short loop trails and additional boardwalk, but otherwise has been kept completely natural. The trails led through a swamp, up through bottomland forest, to a sandy area with Longleaf Pines and several species of oak. In the forest we saw the Atlantic White-cedar, for which the preserve has been established. The Cinnamon Ferns were displaying their central fertile stalks of spores, and we spotted a tree trunk literally crawling with tiny (1/2-inch) millipedes. Some of the Horse-sugar bushes were decorated with large strange-shaped galls resembling octopus or florets of cauliflower.

We thank regional director Claudia Rainey for arranging this fine trip. Participating were Kathy Boyle, Jan Ciegler, Mary G. Douglass, Wayne Grooms, Phil Harpootlian, Tom Jones, Paul Kalbach, Greg Mancini, Kim McManus, Claudia and Malcolm Rainey, Lynn Smith, Quentin Webber, and Charlie and Lydia Williams. Weather was perfect, with a cloud cover that kept the temperature pleasant, well below the 90 degrees predicted.

The day was memorable for our first meeting with Malcolm Rainey, and for Charlie Williams surviving his first Asian meal at the Bow Thai Restaurant in Hartsville after the trip.

Jan Ciegler, VP SCAN

Quentin update

Quentin experienced a fall at Kalmia. Below is his update:

Just an update! Several of you called or e-mailed about my condition since I fell at Kalmia Gardens. I did visit my regular doctor. She ordered a CT scan and remarked that generally the sternum flexes and is damaged vertically. Mine is horizontal. She further prescribed a bone scan which was performed today. According to the radiologist, this will show her exactly how much damage was done. I have an appt. with her for May 24. I do some walking and very light activity, but no lifting or straining. I'm hoping to make the SCAN trip to Biedler Forest. My main problems are lying down, getting up, and controlling a sneeze!

Mallards Lake / Four Hole Swamp – 10:30 A. M.

Geomorphology. The typical form of river flow in South Carolina is the 'meandering stream,' a series of broad loops formed by erosion on the river's outer bank and deposition on the inner one, causing the channel to slowly migrate outward. Four Hole Swamp is the less common 'braided stream' with multiple interconnected channels resembling the strands of a braid. Formed by rivers that have highly variable discharge and easily eroded banks, braided systems generally feature broad valleys and well-defined floodplains in which overland flow is frequent during winter and spring. In South Carolina, other braided streams are the Salkehatchie and Little Salkehatchie Rivers.

Mallards Lake is a section of broadened river channel, about three-quarters mile in length, where the southward-flowing stream takes a sharp eastward turn. From the south a sandy bluff overlooks the lake, and at the base of the bluff a series of seepage areas flow year-round. The water comes from precipitation that soaks into the 'Blanton fine sand' of the surrounding upland and, at 44-80 inches in depth, encounters a less permeable layer of sandy clay loam. Redirected laterally, some water is returned as seepage that creates a home for small animals such as this three-lined salamander:

<https://picasaweb.google.com/lh/photo/fxF5wS7BP-xcX8cnrMG9hf51GoY9b75ceGtIJfYG3lg?feat=directlink>

Other Mallards Lake photos:

<https://picasaweb.google.com/lh/photo/PA2zIT7H9IKuK3tPY9xbUv51GoY9b75ceGtIJfYG3lg?feat=directlink>

<https://picasaweb.google.com/lh/photo/gaZ6u1v17SWQoFgs85xoFf51GoY9b75ceGtIJfYG3lg?feat=directlink>

Natural Communities. In Four Hole Swamp small changes in topography result in considerable variation in the frequency of flooding and therefore in dominant vegetation. In 1981, Richard Porcher identified five natural communities:

Swamp Forest. In the lowest and most frequently flooded areas, the familiar association of *Taxodium distichum* / *Nyssa aquatica* ("cypress-tupelo") dominates. Some of the cypress are estimated to be 700-800 years old. In standing water, the buttressed bases of these large old trees provide sites for a number of other species, as do floating logs.

Hardwood Bottom. Occupying slightly higher ground than Swamp Forest, this community is characterized by a canopy of *Carya aquatica*, *Quercus lyrata*, *Q. nigra*, *Q. phellos*, *Q. laurifolia*, *Acer rubrum*, *Liquidambar styraciflua*, *Ulmus americana*, *Nyssa aquatica*, *Nyssa sylvatica* var. *biflora*, *Fraxinus tomentosa*, and *Celtis laevigata*. The shrub and herbaceous layers are relatively sparse, except for dense stands of *Sabal minor*.

Ridge Bottom. Often located within a Hardwood Bottom area but on rarely-flooded 'islands' of higher ground, Ridge Bottom is identified by characteristic canopy species: *Quercus michauxii*, *Q. alba*, *Pinus glabra*, *P. taeda*, *Carya glabra*, and *Cornus florida*. The herbaceous plants of this community are of special interest because they sometimes include the rare *Trillium pusillum*.

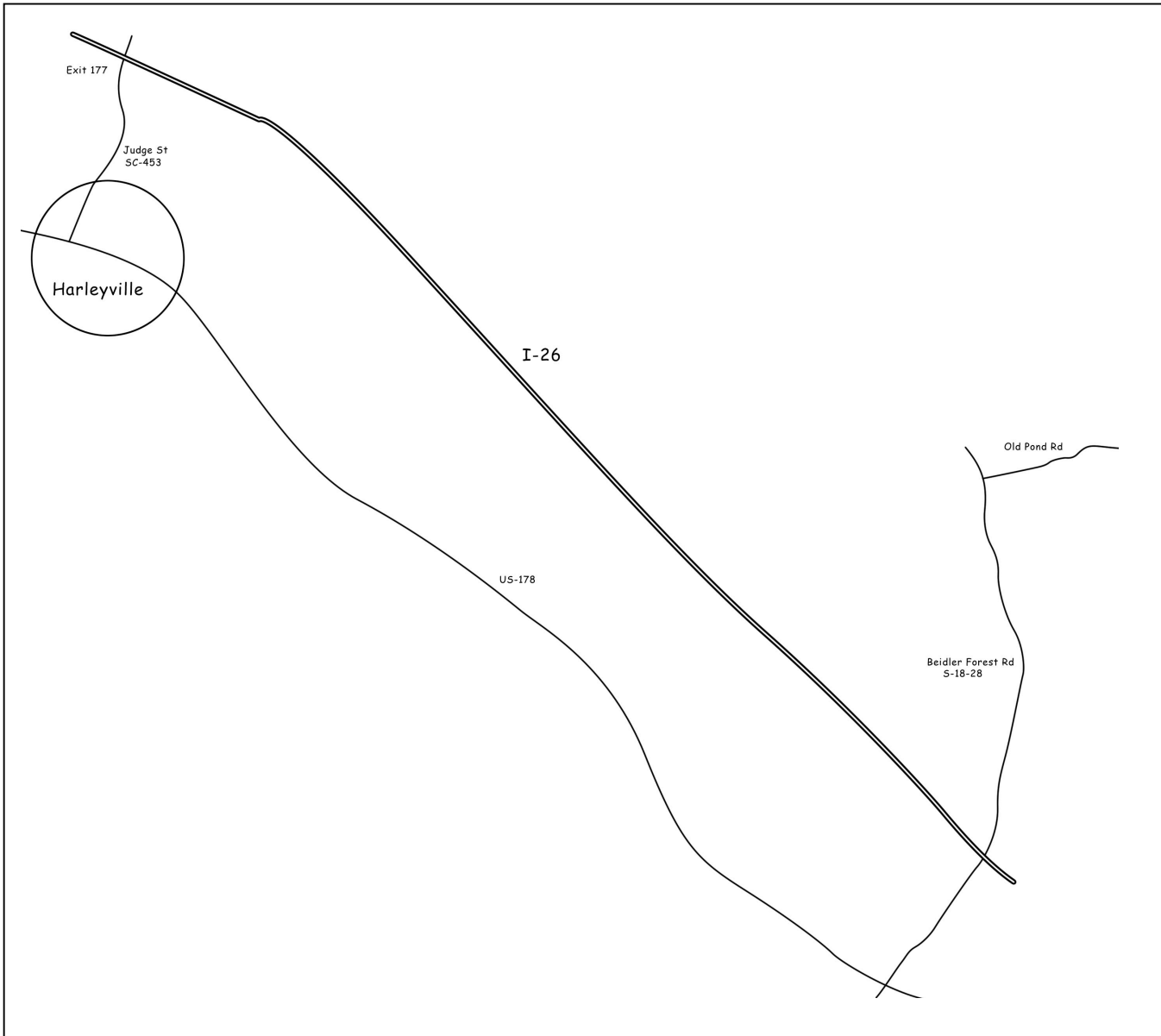
Mixed Mesophytic Hardwood Forest. Situated on the bluffs and identified by a canopy of *Fagus grandifolia*, *Quercus michauxii*, *Q. falcata*, *Q. alba*, *Q. nigra*, *Q. shumardii*, *Liquidambar styraciflua*, *Liriodendron tulipifera*, *Juglans nigra*, *Acer rubrum*, *Nyssa sylvatica*, *Ulmus americana*, *Carya tomentosa*, and *C. glabra*. A mature and stable community with a number of large trees, this forest also has a diverse shrub and herbaceous layer.

Seepage Bog. At the base of the bluffs, with three herbaceous species not found elsewhere in the swamp: *Gratiola virginiana*, *Micranthemum umbrosum*, and *Cardamine pennsylvanica*.

Conservation. Mallards Lake is part of the Audubon Society's Francis Biedler Forest (16,000 acres), a registered National Natural Landmark that is said to be the world's largest virgin cypress-tupelo swamp forest. A visitor center and a 1.75-mile boardwalk trail are also on the property (from Mallards Lake, go north on Mims Road and follow signs).

Bring lunch, liquid and bug repellent.

Directions: From Columbia, get on I-26 east toward Charleston. Take exit 177 ("Harleyville") toward Harleyville: turn right onto SC-453 (Judge Street). Go 1.2 miles and turn left onto US-178 (East Main Street). Go 7.2 miles and turn left onto S-18-28 (Beidler Forest Road). Go 3.5 miles and turn right onto Old Pond Road; stop at gate.



FLORA

Common Ground-pine

*Dendrolycopodium
obscurum*

Cinnamon Fern

Osmunda cinnamomea

Royal Fern

*Osmunda regalis
spectabilis*

Bracken

Pteridium aquilinum

Netted Chain Fern

Woodwardia areolata

Ebony Spleenwort

Asplenium platyneuron

Southern Lady Fern

Athyrium asplenoides

Resurrection Fern

*Pleopeltis polypodioides
michauxiana*

Loblolly Pine

Pinus taeda

Atlantic White-cedar

Chamaecyparis thyoides

Pond-cypress

Taxodium ascendens

Golden Club

Orontium aquaticum

Green Arrow-arum

Peltandra virginica

Giant Cane

Arundinaria gigantea

Common Cattail

Typha latifolia

Curlyleaf Yucca

Yucca filamentosa

Bamboo-vine

Smilax laurifolia

Ladies'-tresses

Spiranthes sp.

Tulip-tree

Liriodendron tulipifera

Sweetbay

Magnolia virginiana

Ashe's Magnolia

* *Magnolia ashei*

Small-flowered PawPaw

Asimina parviflora

Sweet-shrub

Calycanthus floridus

Swamp Bay

Persea palustris

Lizard's-tail

Saururus cernuus

Broadleaf Pondlily

Nuphar advena

White Water-lily

*Nymphaea odorata
odorata*

Sycamore

Platanus occidentalis

ccidentalis

Witch-hazel

Hamamelis virginiana

Sweet Gum

Liquidambar styraciflua

Southern Hackberry

Celtis laevigata

False-nettle

Boehmeria cylindrica

White Oak

Quercus alba

Southern Red Oak

Quercus falcata

Swamp Chestnut Oak

Quercus michauxii

Water Oak

Quercus nigra

Willow Oak

Quercus phellos

Post Oak

Quercus stellata

Tag Alder

Alnus serrulata

Primrose-leaf Violet

Viola primulifolia

Ti-ti

Cyrilla racemiflora

Coastal Sweet Pepperbush

Clethra alnifolia

Mountain Laurel

Kalmia latifolia

Shining Fetterbush

Lyonia lucida

Sourwood

Oxydendrum arboreum

Gorge Rhododendron

Rhododendron minus

Sparkleberry

Vaccinium arboreum

Elliott's Blueberry

Vaccinium elliotii

Deerberry

Vaccinium stamineum

Southern Blueberry

Vaccinium tenellum

Horsesugar

Symplocos tinctoria

Virginia-willow

Itea virginica

Carolina Laurel Cherry

Prunus caroliniana

Black Locust

Robinia pseudoacacia

Flowering Dogwood

Cornus florida

Swamp Tupelo

Nyssa biflora

Hearts-a-burstin'-with-love

Euonymus americanus

Big Gallberry

Ilex coriacea

American Holly

Ilex opaca opaca

Virginia-creeper

Parthenocissus quinquefolia

Muscadine

*Vitis rotundifolia
rotundifolia*

Red Maple

Acer rubrum

Red Buckeye

Aesculus pavia pavia

Eastern Poison Ivy

*Toxicodendron radicans
radicans*

Cross-vine

Bignonia capreolata

Trumpet-creeper

Campsis radicans

Partridge-berry

Mitchella repens

Arrow-wood

Viburnum dentatum

Southern Wild Raisin

Viburnum nudum

Horsesugar Gall Fungus

Exobasidium symploci

Earthstar

Geastrum sp.

FAUNA

Witch Hazel Cone Gall (aphid)

Hormaphis hamamelidis

Red Imported Fire Ant

Solenopsis invicta

Patent-leather Beetle

Odontotaenius disjunctus

Cylindrical Leaf Beetle

Pachybrachis luridus

Alder Leaf Beetle

Chrysomela interrupta

Common Carp

Cyprinus carpio

Southern Toad

Anaxyrus terrestris

Slider Turtle

Trachemys scripta

Eastern Fence Lizard

Sceloporus undulatus

Northern Water Snake

Nerodia sipedon

Mourning Dove

Zenaidura macroura

Ruby-throated

Hummingbird

Archilochus colubris

Belted Kingfisher

Ceryle alcyon

Red-bellied Woodpecker

Melanerpes carolinus

Blue Jay

Cyanocitta cristata

American Crow

Corvus brachyrhynchos

Fish Crow

Corvus ossifragus

Carolina Chickadee

Parus carolinensis

Tufted Titmouse

Baeolophus bicolor

Carolina Wren

Thryothorus ludovicianus

Wood Thrush

Hylocichla mustelina

Gray Catbird

Dumetella carolinensis

White-eyed Vireo

Vireo griseus

Prothonotary Warbler

Protonotaria citrea

Northern Parula

Parula americana

Yellow-rumped Warbler

Dendroica coronata

Pine Warbler

Dendroica pinus

Northern Cardinal

Cardinalis cardinalis

Summer Tanager

Piranga rubra