



Nature Notes

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President's Corner

Rich Thoma

John Muir once said, "*In every walk with nature one receives far more than he seeks*". As John Muir describes it, nature is a great way to rejuvenate. Hopefully, everyone followed John Muir's example this past summer and had a chance to get out in nature to recharge the batteries, relax and spend some time outdoors. Maybe you took some time this summer to go on one of the WGNSS botany or birding field trips? If not, you may have seen us on the news recently. Mike Roberts from KSDK Channel 5 did a piece for the 10:00 news. One of the things that made this news piece special was that it illustrated all the great qualities of WGNSS. Jack Harris and Fr. Jim Sullivan led a botany field trip to Klondike Park in St. Charles, and the Channel 5 news crew tagged along. Mike Roberts pointed out that WGNSS is open to all, young and old alike who are interested in learning about the outdoors. As Mike Roberts said, "The focus is on the connection all on the field trip had to each other and the wonders of a world filled with breathtaking beauty only found when moving very slowly, looking very close, with a very good shepherd as a guide". If you would like to see this news piece, go to the Botany Walks section of the WGNSS website

<http://sites.google.com/site/neverenoughnature/Home/wgnss-calendar>.

If you want to find out what else WGNSS has been up to, be sure to check out the new WGNSS Facebook

<http://www.facebook.com/group.php?gid=150365395220&ref=ts> and Flickr

<http://www.flickr.com/groups/wgnss/> sites set up by Anne McCormack. The Facebook site offers the opportunity to interact with fellow naturalists and learn about what others enjoy. The Flickr site is a great place to see photos of the many plants and animals WGNSS members have seen on their field trips.

WGNSS has many activities planned for September. Join us for our General Meeting on September 1. George Yatskievych, WGNSS 1st Vice President and author of the revised editions of "Flora of Missouri," will be speaking about his recent botanical trip to the rainforests of Brazil. If the outdoors is what you have in mind, be sure to go on one of the many botany and birding field trips scheduled in September. Times and places for these field trips can be found in this newsletter and at the WGNSS web site. Did you collect or photograph an insect or other small creature this summer? The entomology group's first meeting for the year will be a "Show and Tell" night where you can bring this summer's treasures to learn more about what you found.

In October, WGNSS has scheduled a canoe float on the upper Meramec River to learn about freshwater mussels and snails. Mussel and snail expert, Ron Oesch will be our guide on the river. Our host for the day will be Nels Holmberg, who

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is organizing is the float trip. Reservations are required, and the number of people allowed to attend this trip is limited. For more information, see the field trip notice in this issue of Nature Notes. Be sure to contact Nels as soon as possible if you want to go.

There's a lot to do in WGNS. Now's the time to get involved!



April Botany Report

Compiled by George Van Brunt

April 5, 2010 – Washington State Park,
Washington County, MO (contributed by Steve
Turner).

Time: 9:30 - 11:30 a.m.

Conditions: partly sunny, temperature about 80° F

Participants: Wayne and Nancy Clark, Jeanne
Clauson, Jack and Pat Harris, Linda Hedebuhr,

Rex Hill, Burt and Carolyn Knoll, Jeannie Moe,
Larry and Nancy Morrison, Fr. Sullivan, Ruth
TenBrink, Kathy and Kera Thiele, Steve Turner,
and George Van Brunt.

In striking contrast to the year's first trip to this area three weeks earlier, this visit was characterized by a veritable explosion of wildflowers. The day's group of eighteen botanists explored three distinct ecological areas within the park boundaries. The first was a small glade adjacent to the petroglyphs parking area, where the most notable find was a few specimens of *Leavenworthia uniflora* (leavenworthia, or Michaux's gladecress). This diminutive member of the Brassicaceae is easily overlooked, and has a recorded North American distribution which includes only a few Midwestern and southern states. The plant forms a basal rosette of sharply pinnately compound leaves, with the small white flowers rising on long stalks from the basal rosette. Nearby was observed a specimen of *Cornus florida* (flowering dogwood) which was just beginning to spread its petaloid bracts for the showy display for which this species is renowned. Also found blooming in the same general area were *Glandularia canadensis* (rose verbena), *Viola pedata* (bird's foot violet), *Lithospermum canescens* (orange puccoon), *Sanguinaria canadensis* (bloodroot), *Antennaria parlinii* (pusseytoes), *Anemonella thalictroides* (rue anemone), *Rhus aromatica* (aromatic sumac), and *Carex eburnea* (bristle-leaved sedge).

The group next moved to a nearby woodland trail, located near the eastern entrance to the park, and which descends a moist, north-facing slope. A great profusion of flowering plants were found in this area, including *Cardamine concatenata* (toothwort), *Viola pubescens* (yellow violet), *Viola sororia* (common violet), *Claytonia virginica* (spring beauty), *Dicentra cucullaria* (Dutchman's breeches), *Uvularia grandiflora* (large bellwort), *Corydalis flavula* (pale corydalis), *Ranunculus abortivus* (small-flowered crowfoot), *Ranunculus micranthus* (another small-flowered buttercup), and *Camassia scilloides* (wild hyacinth, foliage only). Also found along the path were large numbers of *Erythronium albidum* (white dogtooth violet) blooms, which can be distinguished from other species of *Erythronium* by their white color and recurved tepals. Many *Trillium* specimens were found in this area, and although these were not yet quite in bloom, they

appeared to represent mostly *T. recurvatum* (purple trillium) with a few examples of *T. sessile* (wake robin) also present. A less common prize was found a bit farther down the slope, where specimens of *Anemone acutiloba* (sharp-lobed hepatica) having beautiful powder-blue blooms were located. Numerous additional white-flowered specimens of the same species were later located along a nearby rock face.

The third area of interest was a trail through a bottomland environment along the base of the same north-facing hillside. In addition to most of the woodland species mentioned above, flowering species observed in the bottomland area included *Mertensia virginica* (bluebells, just beginning to open), *Stylophorum diphyllum* (celandine poppy), *Collinsia verna* (blue-eyed Mary), and *Enemion biternatum* (false rue anemone, genus formerly *Isopyrum*). The prize of the day from the bottomland area was *Dicentra canadensis* (squirrel corn). This plant strongly resembles the closely related Dutchman's breeches (*D. cucullaria*), but differs by having "pant legs" (petal spurs) which are shorter, more rounded, and less spreading than the Dutchman's variety. In addition, just beneath the soil surface near the base of *D. canadensis* can usually be found small nodule-like yellow tubers having the appearance of corn kernels, giving rise to the common name. Squirrel corn is much less common in Missouri than Dutchman's breeches, though it grows in the same type of rich, moist woodland environment, and the two can sometimes be found growing together.

Returning to the parking lot through a grassy field, the group observed several other common species, such as *Stellaria media* (chickweed), *Viola bicolor* (Johnny jump-up), *Lamium amplexicaule* (henbit), *Glechoma hederacea* (ground ivy), *Microthlaspi perfoliatum* (perfoliate penny cress), *Thlaspi arvense* (field penny cress), and *Rumex sp.* (dock). In addition to these herbaceous species, numerous highly conspicuous displays of *Cercis canadensis* (redbud), *Amelanchier arborea* (serviceberry), and *Prunus sp.* (wild plum) were observed at points throughout the park. Finally, as an added note, upon exiting the park at the western entrance, the author of this report noticed a prodigious display of buttercups along the roadside. These keyed to *Ranunculus fascicularis* (early buttercup), with

distinguishing characters being silky, appressed hairs on the stems and pinnately divided leaves.



Dicentra cucullaria (Dutchman's breeches): long, spreading petal spurs. Photo by Steve Turner.



Dicentra canadensis (squirrel corn): short, rounded petal spurs. Photo by Steve Turner.

April 12, 2010 – Pacific Palisades

Conservation Area, St. Louis County, MO
(contributed by Burt Noll).

This morning's walk was attended by 14 botanists: J. Clausen, R. Coffing, J. Harris, P. Harris, S. Hosler, J. Moe, L. Mueller, B. Noll, J. Sullivan, J. Trager, S. Turner, G. Van Brunt, J. Wiant.

The special goal of the 14 botanists this sunny day was to explore for north-facing sandstone bluffs and their special plants. The group passed through second growth woods and the wet Meramec bottom looking for sandstone. We encountered many of the usual spring flowers, many at the peak of their bloom. We passed one large clone of *Podophyllum peltatum* (May apple) that was about 100 feet across. Steyermark (1963) reports that a clone in his garden grew "a couple of yards" in about 12 years. How old might this one be?

At the base of a sandstone bluff were *Mitella diphylla* (miterwort) in bloom. The plants were arranged at intervals on the vertical surface. Also noted was *Saxifraga pensylvanica* var. *forbesii*, also dispersed along the vertical bluff.

The shady slope below the bluff was covered with two kinds of waterleaf. Father Sullivan gave a brief lesson on how to differentiate *Hydrophyllum canadensis* from *H. appendiculatum* by their leaf veining. The five veins of the former all arise from the same point, and those of the latter have two of the veins arising separately. [The illustrations in the latest edition of Denison (2008) do not show this distinction, but those in Steyermark (1963) do.]

April 19, 2010 – Packwood Park, St. Louis County, MO (contributed by Jeannie A. Moe).

Father James Sullivan, George Van Brunt, Jack and Jackie Mitchell, Burt Noll, Jeanne Clauson, Charlotte Lehmann, Jack and Pat Harris, Ed and Gladys Kullman, Bob Coffing, Peter Hoell, John Oliver, Steve Turner, Ruth TenBrink, Larry Morrison, and Jim Wiant assembled at the parking lot for the Al Foster Trail on a beautiful spring morning for Botany walk into two parts of Packwood Park. The first area was to be the Glencoe unit which has the Al Foster Trail running through it. The second area is the Rock

Hollow unit known to the Botany Group as Bean Shooter's Gulch. For a history of the park go to:

<http://www.co.stlouis.mo.us/parks/parkhistory/PackwoodHistory.pdf>

We started out by walking through the Wabash, Frisco, and Pacific Railroad area. Along the way we noticed several plants in bloom including *Fraxinus pennsylvanica* (green ash), *Ranunculus abortivus* (small-flowered crowfoot), *Taraxacum officinale* (dandelion) and *Viola sororia* var. *sororia* (common violet).

We turned the corner and walked along the Al Foster Trail which follows the Meramec River. The birds we observed included Cardinals, Pileated woodpecker and American goldfinches. Barn swallows were flying up and down the Meramec River. We heard Parula warblers singing in the trees along the trail. *Prunus serotina* ssp. *serotina* (black cherry) tree had flower buds that hadn't opened yet. The paired nectaries at the base of every leaf on the petiole were observed. Many plants along the trail were in bloom including *Cercis canadensis* var. *canadensis* (eastern redbud), *Ribes missouriense* (Missouri gooseberry), *Lonicera maackii* (bush honeysuckle) (I¹), *Glechoma hederacea* (Gill-over-the-ground), *Phacelia purshii* (Miami mist), *Duchesnea indica* (Indian strawberry) (I), *Lamium purpureum* (dead nettle) (I), *Boechera shortii* (rock cress) (also in fruit), *Allaria petiolata* (garlic mustard) (I), *Ranunculus harveyi* var. *harveyi* (Harvey's buttercup) (it has narrow petals). Remnant plants of *Perilla frutescens* (beefsteak plant) had the remnants of last year's fruits. Along the trail the group encountered one of Father Sullivan's goal plants *Arabidopsis thaliana* (mouse-ear cress) in bloom.

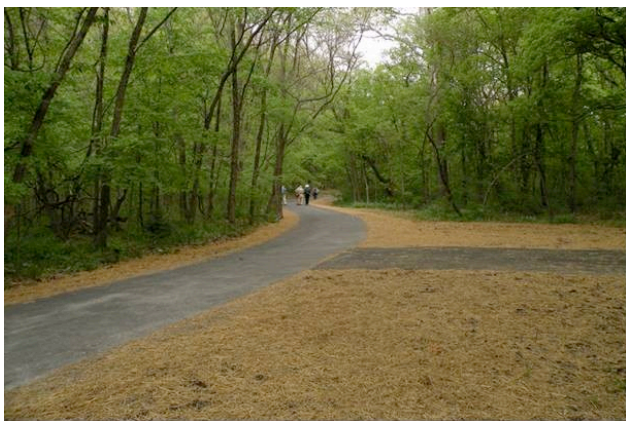
Next we came to a big sandy area at the base of the bluffs and noted species such as *Opuntia humifusa* (eastern prickly pear) and *Lespedeza cuneata* (sericea lespedeza) (I). We heard a White-eyed Vireo singing from the trees.

Finally we came to the main objective of our trip which was Bean Shooters Gulch. The botany group did a plant survey of the gulch for the St. Louis County Park System a few years ago. Since then the gulch has been renamed Packwood

¹ Introduced

Park, Rock Hollow Unit. I think Bean Shooters Gulch is a neater name. Father Sullivan explained when we were doing the plant survey that the gulch had been named for the horsetails *Equisetum hyemale* var. *affine* (common scouring rush). The rush's stem is hollow and can be used as a bean shooter. I remember meeting *Asplenium rhizophyllum* (walking fern) on my first survey trip into the gulch. The walking fern grows on rocks and the tips of its long leaves root and create a new plant which also roots at the tip. This is where it gets the common name walking fern. We also talked about how we found *Silene virginica* (fire pink) growing in a glade overgrown by cedars up on the rim of the gulch on one of the plant survey trips.

By the time we reached the gulch the large group of 19 people had become scattered along the Al Foster Trail. We regrouped at the mouth of Bean Shooters Gulch. When we did the plant survey, the trail up the gulch was an old paved road from the 19th century that was mostly eroded away and had been swept away completely where it crossed the stream in several places. It was a sleepy little gulch that it seemed time had forgotten. When we turned the corner to go up the Gulch we were confronted with a modern road that was wide enough to easily drive a semi-truck down the road. The soil, on either side of the road, had been graded to make a shoulder scraping off many of the wildflowers we had to come to see. The railroad had run its tracks up the gulch creating more disturbance. The disturbance reminded me of the song "Paved Paradise" by Counting Crows. The lyrics to the song are as follows: "They paved paradise and put up a parkin' lot" – or in this case a road.



Road into Beanshooter's Gulch. Photo by Jeannie A. Moe.

As we walked further up the gulch we finally started to see the floor of the forest carpeted with the spring flower show we were expecting. The *Collinsia verna* (blue-eyed Mary) is the plant the gulch is famous for. They were blooming in abundance. A few of the blue-eyed Marys were even pink and white instead of the usual blue and white. Father Sullivan pointed out that this was still the same species. There is another species of *Collinsia* that blooms pink but it occurs further south. We all wondered if this plant should be renamed a pink-eyed Mary? Other plants in bloom included *Asarum canadense* (wild ginger), *Phlox divaricata* (wild geranium), *Galium aparine* (catchweed bedstraw), *Mertensia virginica* (bluebells), *Claytonia virginica* (spring beauty), *Viola striata* (white violet), *Ranunculus hispidus* (hispid buttercup), and *Oxalis corniculata* (creeping lady's sorrel) (I). Father Sullivan pointed out that *Phacelia purshii* (Miami mist) was no longer present among the wildflowers of the gulch. He explained that the trees in the gulch were bigger and provided more shade and had shaded out *Phacelia purshii*.



Mertensia virginica (bluebells). Photo by Jeannie A. Moe.



Collinsia verna (blue-eyed Mary). Photo by Jeannie A. Moe.

John Oliver had walked along the Railroad tracks, the trains aren't running this early in the year, up to Bean Shooter's Gulch, instead of the Al Foster trail. He had discovered *Delphinium tricorne* (dwarf larkspur) growing along the bluffs above the tracks. The larkspurs varied in color from the usual dark purple to light purple and some were pure white. I wanted to see the larkspurs so I walked back alone along the Railroad tracks. Other plants in bloom along the railroad tracks included *Hybanthus concolor* (green violet). I noticed leaves of *Arisaema dracontium* (green dragon) and the fruits of *Cardamine concatenata* (toothwort). There was a Pearl crescent butterfly nectaring on a dandelion and a blue-gray gnatcatcher scolding me from a tree.



Delphinium tricorne (dwarf larkspur). Photo by Jeannie A. Moe.

I rejoined the botany group when the railroad tracks rejoined the Al Foster trail. We noted the leaves of *Hydrophyllum appendiculatum* (woolen breeches) and *Humulus lupulus* (common hops). In bloom we noticed *Enemion biternatum* (false rue anemone), *Maianthemum racemosum* ssp. *racemosum* (false Solomon's seal), *Trillium viride* (green trillium), and *Staphylea trifolia* (bladdernut) (also in fruit).

The group returned to the cars in small groups. Many of the participants had left when I returned to the parking lot. Pat Harris had faithfully put notes on our rear-view mirrors announcing that we were going to Eureka to Joe Boccardi's Restorante for lunch. I had errands to run so I did not join the group for lunch.

April 26, 2010 – St. Joe State Park, St. Francois County, MO (contributed by George Van Brunt).

Seven botanists met at St. Joe State Park in St. Francois County on a morning that, after several weeks of temperatures in the 70°Fs and 80°Fs, felt like a return to winter. It was heavily overcast and drizzly with a temperature in the 50°Fs. Fr. Sullivan led Jack Harris, Pat Harris, Louise Langbein, John Oliver, Burt Noll, and George Van Brunt south on the Harris Branch Trail from the Trailhead Parking Area on Pimville Road. We found 32 species in bloom on the trail and in the surrounding area.

Among the species in bloom we found *Silene virginica* (firepink), *Scutellaria leonardii* (small skullcap), *Rhamnus lanceolata* (lanceleaf buckthorn), *Thaspium barbinode* (hairy meadow parsnip), *Salvia lyrata* (lyre-leaved sage), *Packera plattensis* (prairie ragwort), *Viburnum rufidulum* (southern black haw), *Baptisia bracteata* (long-bracted wild indigo), *Eleocharis compressa* (flat-stemmed spike rush), *Lithospermum canescens* (orange puccoon), *Sisyrinchium campestre* (blue-eyed grass), *Hedyotis longifolia* (long-leaved bluets), *Nemastylis geminiflora* (prairie iris), *Viola pedata* (bird's foot violet), *Castilleja coccinea* (Indian paintbrush), *Viola palmata* (three-lobed violet), *Astragalus crassicaarpus* (ground plum), *Penstemon pallidus* (pale beard-tongue), *Zizia aurea* (golden Alexanders), *Phlox pilosa* (downy phlox), *Dodecatheon meadia* (shooting star), *Hypoxis hirsuta* (yellow star grass), and *Delphinium tricorne* (dwarf larkspur). One of the plants not yet in bloom was *Galium virgatum* (dwarf bedstraw).

John Oliver found the cedar-apple gall shown in the photograph below. It was growing on a branch of *Juniperus virginiana* (eastern red cedar). This gall was produced by a juniper-rosaceous rust fungus, *Gymnosporangium juniperi-virginianae* or possibly *G. globosum*. Rust fungi, so-called because of their rusty appearance, belong to the order Uredinales, an order consisting of 13 families and 133 genera. Rusts are parasitic fungi that have very complex life cycles consisting of several distinct reproductive stages. *Gymnosporangium* species are heteroecious; they require two hosts to complete their life cycles. The species of *Gymnosporangium* are all very similar, differing mainly in the hosts which they parasitize.



Gymnosporangium juniperi-virginianae gall with telial spore horns on *Juniperus virginiana*. Photo by George Van Brunt.

The gall, minus the “telial spore horns”, is composed of cedar tissue penetrated by fungal mycelium. The fungus overwinters in this stage. In the spring, after a rain (it had rained heavily on Friday through Sunday before our Monday field trip), telia absorb water and expand into long finger-like reddish gelatinous structures (telial spore horns, seen in the photo) which contain hundreds of teliospores. Each teliospore has two cells, each with two haploid (see glossary below) nuclei; each teliospore is dikaryotic ($n+n$). The teliospores germinate on the surface of the telial spore horns, nuclear fusion (cellular nuclei, not atomic nuclei) takes place and diploid ($2n$) basidia are formed. Meiosis occurs, forming haploid (n) basidiospores. Each basidiospore carries a gene which determines whether it will be a + strain or a – strain. A single gall like the one shown produces about 7.5 billion basidiospores which are carried away by wind. These spores can only grow on *Malus* ssp. (apple, crabapple), or in the case of *G. globosum*, *Crataegus* ssp. (hawthorn). Rust basidiospores have been known to travel up to 15 miles but usually travel no more than a mile.

If basidiospores of *G. juniperi-virginianae* land on a leaf of *Malus* ssp., they germinate and form hyphae (n) which penetrate the leaf and form sexual reproductive structures called spermagonia. These can be observed as yellow-

orange lesions on the upper leaf surface. Haploid (n) cells of + and – strains fuse and form new dikaryotic ($n+n$) cells. These form hyphae ($n+n$) which further penetrate the leaf and develop into reproductive structures called aecia on the lower surface of the leaf. The aecia produce dikaryotic ($n+n$) spores, aeciospores, which are carried by wind and can only infect cedar trees. The fungus cannot overwinter on apple trees and the galls on cedar trees only produce basidiospores one year, so to be successful the fungus must reinfect cedar trees every year.

SUMMARY OF LIFE CYCLE

Basidiospores (n) infect apple leaves. Cellular fusion (without nuclear fusion) of + and - cells form dikaryotic ($n+n$) aeciospores. Aeciospores infect cedars, forming overwintering galls. In spring, galls form teliospores ($n+n$) in which nuclear fusion takes place forming basidia ($2n$). Meiosis takes place in basidia forming basidiospores (n).

GLOSSARY

- Haploid (n) – with one set of chromosomes in the nucleus
- Diploid ($2n$) – with two sets of chromosomes combined into one nucleus
- Dikaryotic ($n+n$) – with two distinct nuclei in each cell, the nuclei are each haploid
- Basidiospore – a uninucleate haploid (n) spore formed by meiosis, can only infect *Malus* ssp.
- Teliospore – a dikaryotic ($n+n$) spore produced by the cedar gall
- Aeciospore – a dikaryotic ($n+n$) spore produced as a result of fusion of two cells but not fusion of their nuclei, can only infect *Juniperus virginiana*
- Hypha (pl. hyphae) – a microscopic thread of fungal cells which branches in all directions and spreads over and in the fungal food source
- Mycelium – the entire mass of hyphae constituting the body of the fungus



May Botany Report

Compiled by George Van Brunt

May 3, 2010 – Hawn State Park, Ste.
Genevieve County, MO (contributed by Jack Harris).

9:30 a.m. - 2 p.m.

Temp: 65 - 75 degrees, partly cloudy.

Participants: Rev. Jim Sullivan, Wayne Clark, Nancy Clark, John Oliver, Jack Harris, Pat Harris, Burt Noll, George Van Brunt, Larry Morrison, Steve Turner, and Louise Langbein. Rex Hill and Nevin Aspinwall joined us briefly at the gathering but elected to leave the group to explore nearby areas of particular interest to them.

From the road the day's hiking route (no trails) led from the high ground wending through the wooded slopes and down to the bottom lands, then along the small tributary drainage pattern. This led the group through various habitat types, e.g., upland woods, micro patches of glade-like areas, sandstone cliffs, small seeps, and stream side mesic woods. The following is a short sampling from the longer list of plants noted during the field trip.

Acer rubrum (red maple), *Adiantum pedatum* var. *pedatum* (northern maidenhair fern), *Asclepias quadrifolia* (whorled milkweed), *Asimina triloba* (pawpaw), *Botrichium virginianum* var. *virginianum* (rattlesnake fern), *Cardamine concatenata* (cut-leaved toothwort), *Coreopsis lanceolata* (tickseed coreopsis), *Dennstaedtia punctilobula* (hay-scented fern), *Dryopteris marginalis* (marginal shield fern), *Equisetum arvense* (common horsetail), *Goodyera pubescens* (downy rattlesnake plantain), *Galearis spectabilis* (showy orchis), *Krigia biflora* var. *biflora* (orange dwarf dandelion), *Lindera benzoin* (spicebush), *Mitchella repens* f. *repens* (partridge berry), *Morus rubra* (red mulberry), *Nyssa sylvatica* (black gum), *Onoclea sensibilis* (sensitive fern), *Opuntia humifusa* (eastern prickly pear cactus), *Osmunda cinnamomea* (cinnamon fern), *Osmunda regalis* var. *regalis* (royal fern), *Penstemon pallidus* (pale beard tongue), *Pinus echinata* (short-leaf pine), *Pteridium aquilinum* (bracken fern), *Ranunculus recurvatus* (hooked crowfoot), *Rhododendron prinophyllum* (mountain azalea), *Rosa multiflora*

(multiflora rose), *Tradescantia virginiana* (Virginia spiderwort), *Ulmus alata* (winged elm), *Vaccinium stamineum* (highbush blueberry), and *Viola palmata* (cleft violet).

The imperatives of the clock prompted the return trip even though we had explored only a small part of the area of interest. It was soon impressed upon the group that the casual stroll down the slopes into the valley had a price: a long, steep, climb back up to the top of the local high ground and then through the woods back to the cars, which made it seem like we had traveled much farther from the cars than a map check would confirm. Arriving back, however, all were present and accounted for. The day's field trip ended successfully and several hungry participants headed for the usual gourmet restaurant.

May 10, 2010 – Kullman property, Warren County, MO (contributed by John Oliver).

Long-time members and botany enthusiasts Ed and Gladys Kullman purchased a piece of property in rural Warren County in the 1970's and have maintained a delightful and comfortable "home-away-from-home" on the site ever since. They arrived just as the Innsbrook Resort lake community began to gobble up much of the adjoining acreage (eventually comprising over 7400 acres and 96 lakes with condos, stables, and a golf course), and a visit in early May gave us a glimpse of what the whole area must have looked like prior to the "A-frame invasion." In addition to our hosts, those in attendance were Fr. Jim Sullivan, George Van Brunt, Burt Noll, Jeannie Moe, Jean Clausen, Tom Kullman, Michael Kullman, Alan Kullman, Karen Staloch, and John Oliver.

Ed and Gladys have kept a plant species list for several years, and with that as a reference, we were able to quickly determine if we had discovered anything new for the property. In all, we were able to add 27 species to their list. The light rain and overcast skies may have kept some flowers from opening, but we were able to observe a large number of spring-flowering species nevertheless. My final tally shows 118 species observed, and includes 18 which have never been collected from Warren County: *Acer saccharum* ssp. *saccharum* (sugar maple), *Ageratina altissima* (white snakeroot), *Antennaria neglecta* (field pussytoes), *Aristolochia tomentosa* (Dutchman's pipe), *Cirsium altissimum* (tall

thistle), *Coreopsis tripteris* (tall tickseed), *Cornus amomum* (swamp dogwood), *Dioscorea quaternata* (four-leaf wild yam), *Erigeron philadelphicus* (Philadelphia fleabane), *Galium concinnum* (shining bedstraw), *Galium triflorum* (fragrant bedstraw), *Helianthus mollis* (ashy sunflower), *Lonicera maackii* (bush honeysuckle, Amur honeysuckle), *Plantago rugelii* (Rugel's plantain), *Podophyllum peltatum* (May apple), *Rosa multiflora* (multiflora rose), *Symphyotrichum novae-angliae* (New England aster), and *Valerianella radiata* (corn salad). As you can see, these are not rare, nor in some cases even native plants, but are not represented in herbaria collections from Warren County.

Our tour of the property began in the woodland portion with a visit to several populations of *Cypripedium calceolus* var. *pubescens*, (large yellow lady's slipper orchid). Their scattered locations and healthy condition was indicative of a long period of stable habitat for the colonies and a reminder that this plant was once probably much more common in Missouri's woodlands. Many other forest species were present including *Arisaema dracontium* (green dragon), *Arisaema triphyllum* ssp. *triphyllum* (Jack-in-the-pulpit), *Asclepias quadrifolia* (whorled milkweed), *Ribes missouriense* (Missouri gooseberry), *Asimina triloba* (pawpaw), *Delphinium tricornis* (dwarf larkspur), *Phlox divaricata* ssp. *laphamii* (wild sweet William), *Geranium maculatum* (wild geranium), *Hydrastis canadensis* (goldenseal), *Lilium michiganense* (Michigan lily), *Thalictrum thalictroides* (rue anemone), and both *Maianthemum racemosum* ssp. *racemosum* (false Solomon's seal), and *Polygonatum biflorum* var. *commutatum* (Solomon's seal), close enough together to inspire an impromptu lesson on how to distinguish one from the other.

A small stream (a tributary of Charrette Creek) flows through the property and its banks are home to a number of plants typical of that habitat. Among the many we observed were *Physocarpus opulifolius* var. *intermedius* (ninebark), *Justicia americana* (water willow), *Blephilia ciliata* (Ohio horse mint), *Hydrangea arborescens* (American hydrangea), *Impatiens capensis* (jewelweed), and the swamp dogwood mentioned earlier. We were also taken to see other species of orchids which grew only in specific locations, as opposed to the scattered locations of the yellow lady's slippers. One of these, *Liparis liliifolia* (large twayblade orchid), was

in bud and represented in several small colonies near another conservative species, *Ophioglossum vulgatum* (southern adder's tongue fern). The adder's tongue was first discovered on this site by WGNSS members over 20 years ago. In a different location, we found several blooming colonies of *Aplectrum hyemale* (putty root, Adam and Eve orchid), two of which still had winter leaves attached (an unusual occurrence for this species), and near them, a number of large groups of *Triosteum aurantiacum* var. *illinoense* (red-fruited horse gentian).

After our walk, we visited with the Kullman's in their comfortable cabin surrounded by a few "invited invaders" like *Lonicera sempervirens* (trumpet honeysuckle). Many thanks to Ed and Gladys, brother Tom, and their sons Alan and Michael for their hospitality on this and other occasions. Their hideaway is truly an idyllic and inspiring place that rewards visits at any time of the year.

May 17, 2010 – Victoria Glade, Jefferson County, MO (contributed by Wayne Clark).

On a warm sunny day, 11 botanists, Fr. Sullivan, Jack Harris, Pat Harris, Jeanne Clauson, John Oliver, George Van Brunt, Louise Langbein, Ann Ketter, Wayne Clark, Nancy Clark, and Bob Coffey gathered to explore the MDC side of Victoria Glade. We crossed the road from the parking lot to the trailhead. The first plants observed were *Salvia lyrata* (lyre-leaved sage) and *Leucanthemum vulgare* (ox-eye daisy). Upon entering the glade the ever prevalent *Silphium terebinthinaceum* (prairie dock) was seen. A wetter than usual spring has provided us with lush and greener grasses than in previous years. Other plants in the immediate area were *Scutellaria parvula* (small skullcap), *Coreopsis lanceolata* (tickseed coreopsis), and *Hydrastis canadensis* (golden seal). Plants of *Castilleja coccinea* (Indian paintbrush) were showing off their brightly colored bracts, mostly yellow, a few red. The signature plant of the glade, *Clematis fremontii* (Fremont's leather flower), was mostly in fruit although a few latecomers were in full bloom. *Oenothera macrocarpa* (Missouri evening primrose) was also doing well. Less abundant plants were *Hypoxis hirsuta* (yellow star grass), *Baptisia australis* (blue false indigo), *Asclepias viridis* (green-flowered milkweed), *Dodecatheon meadia* (shooting star), *Amorpha canescens* (lead plant), *Comandra umbellata* (bastard toadflax), *Pedimelum esculentum* (Indian



Castilleja coccinea (overhead view). Photo by Nancy Clark.



Oenothera macrocarpa. Photo by Nancy Clark.

turnip), *Lithospermum canescens* (orange puccoon), *Monarda bradburiana* (horsemint), *Rosa carolina* (pasture rose), *Penstemon pallidus* (pale beard-tongue), *Orbexilum pedunculatum* (Sampson's snakeroot), *Asclepias syriaca* (common milkweed), *Tradescantia obiensis* (spiderwort), *Hedyotis longifolia*



Clematis fremontii with flower (L) and fruit (R). Photos by Nancy Clark.

(long-leaved bluets), and *Onosmodium molle* (western false gromwell).

The trail entered a wooded area near the south boundary of the conservation area. There we found: *Botrychium virginianum* var. *virginianum* (rattlesnake fern), *Polygonatum biflorum* (Solomon's seal), *Hydrastis canadensis* (golden seal), *Sanguinaria canadensis* (bloodroot), *Arisaema dracontium* (green dragon). Native Americans ate the corm of *A. dracontium* and its close relative *A. triphyllum* (Jack-in-the-pulpit). The corm is a thick, fleshy underground stem. Some authors use corm and root almost interchangeably, using corm as a description of a type of root. The corm can be eaten if properly prepared, otherwise it is poisonous. It can be slow roasted for three days and nights or thinly sliced and dried for 3–5 months. If chewed raw it will cause the mouth to feel like it is being pricked by countless needles (Phillips). The military lists *A. triphyllum* as poisonous on evasion charts carried by pilots who fly over enemy territory. I suppose a downed pilot doesn't have enough preparation time to make it safe. Additional plants found were *Galium concinnum* (shining bedstraw), *Matelea decipiens* (climbing milkweed), *Menispermum canadense* (moonseed), *Prenanthes altissima* var. *cinnamomea* (rattlesnake root), *Lilium michiganense* (Michigan lily), *Thalictrum dioicum* (early meadow rue), and *Hybanthus concolor* (green violet).

Back on the glade heading for the parking lot a few additional plants were noted: *Phlox pilosa* (downy phlox), *Parthenium integrifolium* (American feverfew), *Verbena simplex* (narrow-leaved vervain), *Trillium*

viride (green trillium), and *Zizia aurea* (golden Alexanders).

REFERENCES

1. Phillips, Jan, Wild Edibles of Missouri, 1989.
2. Yatskievych, G., Steyermark's Flora of Missouri, Vol. 1, 1999.

May 24, 2010 – Valley View Glades, Jefferson County, MO (contributed by Steve Turner).

Time: 9:30 - 11:30 a.m.

Conditions: Sunny, temperature upper 80s F, high humidity.

Participants: David Bruns, Nancy Clark, Wayne Clark, Jeanne Clauson, Toni Garrett, Jack Harris, Pat Harris, Martha Hill, Rex Hill, Louise Langbein, Michelle Lee, Melissa Leech, Tina Mathes, Jeannie Moe, Larry Morrison, Burt Noll, John Oliver, Fr. Sullivan, Ruth TenBrink, Steve Turner, George Van Brunt, Jim Wiant.

The day saw a record turnout of 22 botanists willing to brave the warm, muggy weather, despite having little prior opportunity for heat acclimatization, in search of glade flora. For some participants, the day's botanizing actually began prior to arrival at the glades, with the observation of many fine specimens of the yellow variety of *Verbascum blattaria* at several points along Highway B approaching the glade.

After a short walk along the access trail through the woods, the group emerged upon the glade proper, to be greeted by an immediate profusion of glade species. The large yellow blooms of *Oenothera macrocarpa* were everywhere to be found, making for yellow-speckled hillsides and picturesque vistas. Examination of specimens of these flowers in very early stages of opening showed that the style is exserted from the still-compacted corolla prior to the stamens, possibly as a mechanism to discourage self-pollination. Another abundant showy flower was *Coreopsis lanceolata*, and contrasting beautifully with these bright yellow flowers were the purple blooms of the glade coneflower, *Echinacea simulata*, which can be distinguished from the closely related pale coneflower (*E. pallida*) by its yellow pollen. Down near ground level were abundant inflorescences of the prairie turnip, *Pediomelum esculentum*, a plant notable for having once served as a major food source for plains-dwelling native peoples. Another

wild edible found nearby was the ground plum, *Astragalus crassicaarpus*, which was past blooming stage but loaded with fruits. Other plants observed near the end of their blooming season included *Castilleja coccinea*, *Clematis fremontii*, *Dodecatheon meadia*, and *Hypoxis hirsuta*. Examples of plants nearer their peak season were *Penstemon digitalis*, *Rosa carolina*, *Erigeron strigosus*, *Euphorbia corollata*, *Scutellaria parvula*, and two "green" milkweeds: *Asclepias viridiflora* and *Asclepias viridis*. These last two monickers seem destined to always promote confusion. *A. viridis* is variously known as "green-flowered" or "spider" milkweed, and generally has a more robust appearance, with the hood structure within each flower purple in color. *A. viridiflora* (literally, "green flowered," but most commonly known simply as "green milkweed") is the smaller plant with the bigger name, generally sprawling in habit, and with inflorescence heads positioned along the side of the main stem.



Oenothera macrocarpa, new bloom with exserted style. Photo by Steve Turner.

One observation of some concern was widespread disturbance of the flat rocks on the glade. Rock-flipping is an activity pursued by some in search of critters, such as tarantulas and scorpions, for use as pets or for commercial sale. Unfortunately, this activity compromises these animals' habitats and damages the natural character of the glade. According to MDC liaison Tim Smith, this practice is in violation of Missouri's Wildlife Code (3 CSR 10-4.110) and can result in a fine of up to \$1000. Anyone observing rock-flipping can call MDC's hotline at (800) 392-1111.

In the process of restoring some of these disturbed stones to their original positions, Dave Bruns accidentally disturbed a scorpion, which immediately gave notice of its displeasure by stinging him on the finger. Following Dave's impressive display of frenzied hand-flapping, a discussion ensued about the nature of the sting and its likelihood to lead to anaphylactic shock. Web sources, consulted later, indicate that scorpion stings contain proteinaceous venom and not simply the formic acid contained in ant stings. Although the MDC page claims that scorpion stings, while painful, are usually not dangerous to humans, there is always the risk of adverse reactions in susceptible individuals. Despite experiencing some numbness of the finger and lips, Dave was sanguine about the incident, remarking that the firsthand experience thus gained could be useful in the course of his employment with MDC.

The group continued into the wooded, streamside portion of the trail, observing examples of *Pycnanthemum pilosum* (not yet in bloom), *Uvularia grandiflora* (fruiting stage with conspicuous three-sided capules present on long stems), *Hedyotis longifolia*, *Hydrastis canadensis* (at the stage of unripe green fruits), *Polygonatum biflorum*, *Krigia biflora*, *Aquilegia canadensis*, *Cynoglossum virginianum*, and *Thaspium trifoliatum*. As the group meandered along this path it began to fragment (the group, not the path), prompting the observation that maintaining botanists in a group is akin to herding cats. A bit farther along the trail some impressive stands of *Swertia carolinensis* with magnificent inflorescences were found. The flowers of this species have unusual circular eruptions of hairs, one to each of the four petals, and four rigid stamens which project at angles between the petals. The plant grows as a basal rosette for several years before sending up the flowering stalk. After flowering, the plant dies and seeds are shed, from which new rosettes can germinate the following year.

Working back toward the entrance to the glade, a part of the group detoured to inspect a small stand of *Helianthemum* sp., probably *H. bicknellii*. Members of this genus, which belongs to the Cistaceae family, produce both chasmogamous (open) and cleistogamous (non-opening, self-pollinating) flowers, with the latter being relatively inconspicuous. In the colony that we observed,

perhaps a half dozen open flowers were noted among numerous (several score) of vegetative stems. The flowers are 2-3 cm in diameter, yellow, with five petals and numerous stamens.

Rounding out the return trip were observances of *Ceanothus americanus* (not yet in bloom), *Phlox pilosa*, *Apocynum cannabinum*, *Prunella vulgaris*, and *Triosteum angustifolium* (in fruit). Near the loop junction was found a small stand of ninebark, *Physocarpus opulifolius*, with its reddish angled fruits.

May 31, 2010 – St. Joe State Park, St. Francois County, MO (contributed by George Van Brunt).

Thirteen botanists (Steve Turner, Ruth TenBrink, Fr. Sullivan, Wayne Clark, Nancy Clark, Jeanne Clauson, Bob Coffing, Jack Harris, Pat Harris, John Oliver, Larry Morrison, Burt Noll, and George Van Brunt) met on a partly cloudy, warm Memorial Day at St. Joe State Park in St. Francois County. We parked in the Harris Branch Trail parking lot on Pimville Road and began our botanizing there. First, we explored a gently sloped area between the Harris Branch Trail and Harris Branch, a mostly dry creek. The upper part of the slope was glade/field while the lower part was forested. Later, we returned to the Harris Branch Trail and followed it south.

Our primary motivation for coming to St. Joe State Park was to see *Spigelia marilandica* (Indian pink) in bloom and see it we did. We found many plants in bloom near the edge of the forest and in the forest near Harris Branch. This species produces beautiful trumpet-shaped flowers, crimson on the outside and yellow on the inside.



Spigelia marilandica. Photos by George Van Brunt (L) and Steve Turner (R).

Spigelia is named for Adrian van der Spiegel, 1578-1625, a Flemish professor of anatomy at Padua,

Italy and author of *Isagoges in rem Herbarium* in which he published the first instructions on making dried herbarium specimens. *Spigelia* is a member of the Loganiaceae family, a family of mostly tropical plants. In Missouri, Loganiaceae is represented by only two species, both found in southeastern counties of the state; *Spigelia marilandica* is found in 10 counties while *Mitreola petiolata* (miter plant) is found only in Dunklin and Butler counties. *Spigelia marilandica* is a perennial plant reaching a height of 12 to 18 inches and flowering in May and early June. As one might expect from its color, it is pollinated by hummingbirds.

During our foray, we identified 38 species in full flower and 3 more with flower buds. Included in the flowering species were *Echinacea simulata* (glade coneflower), *Calamintha arkansana* (low calamint), *Matelea decipiens* (climbing milkweed), *Thaspium barbinode* (hairy meadow parsnip), *Rudbeckia hirta* (black-eyed Susan), *Frangula caroliniana* (Carolina buckthorn), *Galium circaeazans* (wild licorice), *Dioscorea quaternata* (wild yam), *Taenidia integerrima* (yellow pimpernel), *Thalictrum revolutum* (waxy meadow rue), *Ruellia pedunculata* (wild petunia), *Triodanis perfoliatum* (common Venus' looking glass), *Erigeron strigosus* (daisy fleabane), and *Vitis aestivalis* (summer grape). Three species with flower buds were *Clematis pitcheri* (leatherflower), *Verbesina helianthoides* (yellow crownbeard), and *Asclepias viridiflora* (green milkweed).



Tragia betonicifolia – look closely for the hairs. Photo by George Van Brunt.

Fr. Sullivan found and identified another interesting and unusual plant, *Tragia betonicifolia* (noseburn), of the family Euphorbiaceae. Four

plant families include species that produce stinging hairs: Euphorbiaceae, Hydrophyllaceae, Loasaceae, and Urticaceae. The stinging hairs of *Tragia* are unusual because a needle-like crystal of calcium oxalate is injected into the skin. The genus name, *Tragia*, honors Hieronymus Bock, 1498-1554, considered one of the three German “Fathers of Botany” along with Leonhart Fuchs and Otto Brunfels. The Latin version of Bock's name is Hieronymus Tragus, from which *Tragia* is derived. One meaning of the German word “bock” is goat, and the Latin word for goat is “tragus.”



WGNS May Banquet Report

Martha and Rex Hill



David Wagner speaks to a rapt audience.

The annual banquet was held on Thursday, May 13 and was a notable event on many fronts. First, and foremost, it was, as usual, an opportunity for area citizen natural scientists to gather in an evening of fellowship and exchange ideas and observations from the past year. The Webster Groves Nature Study Society (WGNS) has provided, for 90 years, the ability for amateurs and professionals in a number of natural history fields to gather and pursue their passions. The speaker this year was Dr. David L. Wagner from the Department of Ecology and Evolutionary Biology at the University of Connecticut. His name was well known to many in attendance from his book “Caterpillars of Eastern North America”. His book filled a huge void in available field guides. It has been used by many of us, not just the

entomologists, but also botanists who observe and study the interactions of caterpillars with their specific food plants, and ornithologists for whom the object of their study views the caterpillar as a vital food source. Dr. Wagner did not disappoint with his beautiful presentation of caterpillar images with all of their mechanisms for defending themselves in the natural world. His enthusiasm for the subject was infectious and sent many of us into the field with new respect and hopefully keener eyes in our attempts to observe and identify these creatures.

The banquet provided the opportunity to announce the winners of the competitions for the Menke and Mickey Scudder scholarships, awarded annually by WGNSS. Kaylan Kemink received the Menke scholarship and will use it to pursue her studies of the diminishing populations of the Missouri Greater Prairie Chicken. Kristen Powell will use the Mickey Scudder scholarship to study threats to understory plant communities.



Ann Earley presents the Lifetime Achievement Award to Pat and Jack Harris.



Fr. Sullivan talks about Pat and Jack.

A special award, the Lifetime Achievement Award, was made to Pat and Jack Harris, longtime members of WGNSS and many other natural history related organizations in the St. Louis area. Pat and Jack have, and remain, more than just members of these organizations, but are mainstays, always willing to contribute their time and talents to further the mission and influence of WGNSS, MONPS (Missouri Native Plant Society), MPF (Missouri Prairie Foundation), the Sierra Club, Powder Valley, MOBOT (Missouri Botanical Garden), to name a few. Ann Earley, as one of her last duties, made the award to Pat and Jack before passing the presidential gavel to Rich Thoma, the incoming President. George Yatskievych presented them with a beautiful framed print of Missouri orchids, one of their passionate pursuits in their botanical field studies.



President Rich Thoma and 2nd Vice President Jane Deschu.



Bruce Schuette, James Trager, and Kathy Thiele.

Finally, in what was a difficult year, with the change in venue from the traditional setting at Eden Seminary in Webster Groves to this year's

location, Orlando Gardens in Maryland Heights, Jane Deschu and her minions did a marvelous job in planning and organizing the banquet. Everyone had a great meal, the presentations were made in a comfortable setting and there was ample opportunity for attendees to interact, socialize, and enjoy each other's company.



Deceitful Ploys used by Caterpillars to Avoid being Identified – A Review of Dr. David Wagner's Visit to WGNSS

Rich Thoma

Caterpillars! Everyone knows what a caterpillar is. It's easy! Caterpillars come in a variety of colors, are long (some growing more than two inches), thin bodied, have many legs, feed on plants and turn into a butterfly or moth. The next question when one finds a caterpillar is more difficult. What species is it? Until recently, that question has been much more difficult to answer. Most of us are not caterpillar experts and cannot identify the species by sight alone. When we can't readily identify an animal, we typically rely on field guides for help. For caterpillars, this was a major problem because there were no comprehensive field guides on this group. The only way to identify most species was to ask an expert or raise the caterpillar to an adult butterfly or moth. Neither of these ways to identify a caterpillar is easy. This all changed in 2005, with the publication "Caterpillars of Eastern North America" by Dr. David Wagner. With over 450 species illustrated and discussed in detail, caterpillar identification became much easier. With this guide, one now has a reasonable chance to identify a caterpillar.

For this year's spring banquet, the Webster Groves Nature Study Society was very fortunate to be able to convince Dr. Wagner to join us and give a presentation on caterpillars and his new book. The audience found Dr. Wagner to be a most engaging speaker. Realizing that he had a mixed audience (botanists, ornithologists and entomologists), Dr. Wagner introduced caterpillars as the center of his story. He then pointed out that birds are one of the major predators of



Dr. Wagner looking for *Catacola* moth caterpillars. Photo by Rich Thoma.



Old wife underwing (*Catacola paleogama*) caterpillar. Photo by Rich Thoma.

caterpillars and are believed to be a major driver for many of the adaptations seen in caterpillars. He then folded botany into his presentation by describing the plants as the tapestry upon which the caterpillar story is told. Dr. Wagner described an amazing diversity of caterpillars in his presentation. Each caterpillar that was discussed came with a story about how it lived. In essence the life of a caterpillar is filled with danger. Of the hundreds of eggs that a moth lays, only a few live

long enough to produce eggs for the next generation. In the woods, just about everything, eat caterpillars. The predation pressure can be so intense that it is a wonder any caterpillars survive. Much of Dr. Wagner's talk was on the many adaptations caterpillars employ to avoid being eaten. Some caterpillar species hide from predators by blending in to the background. Many caterpillars hide in silken shelters or only feed at night. Others advertise their presence because they contain toxins and are inedible. The many predators employ a vast array of hunting techniques to find and overcome caterpillar defenses. For example birds have excellent eyesight for locating difficult to find caterpillars and many insect predators find caterpillars by smell. There truly is a co-evolutionary battle between predator and prey. Caterpillars are constantly evolving better ways of blending in to the background and/or new and improved behaviors to avoid being eaten. In turn, birds and other predators must constantly adapt to a prey that seems harder to find or develops new defensive behaviors. As the presentation progressed, Dr. Wagner weaved a complex picture of the world in which caterpillars live. The audience was enthralled for almost hour with many caterpillar stories. In closing, Dr. Wagner encouraged everyone to go out and discover the world of caterpillars for themselves. There is still a lot we don't know.

The next day, Dr. Wagner led a caterpillar hunting field trip at Cuivre River State Park. This was a rare opportunity to learn from an expert. Mid May is a great time to look for caterpillars in Missouri. Typically bad weather means poor insect collecting. The sky on this day was overcast and threatened rain. For caterpillar hunting, bad weather is not a problem. The caterpillars are out, no matter what the weather conditions. We learned that the best way to find a species of caterpillar was to search for its host plant. Jim Hull, a volunteer at Cuivre River State Park and plant expert made the job easy by taking the group to the best patches of each plant species Dr. Wagner was looking for. Everyone would then get down to the job of looking for caterpillars on the plant. All caterpillars were brought to Dr. Wagner for identification. Dr. Wagner invariably knew almost every species brought to him. Many he kept, to be raised to adulthood for species

verification or because the host plant was new for the caterpillar. Interestingly, a lot of the caterpillars we found today were parasitized. We learned from Dr. Wagner that parasitized caterpillars are very common. Typically caterpillars do not survive being parasitized. In the afternoon we hunted for *Catacola* moth caterpillars. *Catacola* moth caterpillar coloration matches the bark of hickory making them very difficult to find. In addition most of the caterpillars live in the canopy of the forest, far out of reach of us caterpillar hunters. To collect *Catacola* moth caterpillars, Dr. Wagner used a beating technique. A white bed sheet was spread out beneath a hickory tree. Dr. Wagner would then hit the tree with a long pole, knocking the caterpillars loose so they could fall on the sheet. We caught several species of *Catacola* moth caterpillars on today's field trip. When the day was over, all of Dr. Wagner's jars were full and he deemed the day a success. The rest of us on the field trip got lots of great photos and everyone came away feeling successful having learned a vast amount of information from an expert on caterpillars.



Join us on Flickr

Anne McCormack

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Here's what it's all about. [Flickr](http://www.flickr.com/) (<http://www.flickr.com/>) is a site that allows you to upload your photos to share with others. It's free and easy to do. If you can send an email attachment, you can upload photos to Flickr. One way to share your photos is to join a Flickr group. All that means is that someone has organized a page dedicated to a certain type of photo. WGNSS has a group for sharing nature photos, called "Nature Study with WGNSS." The address of is <http://www.flickr.com/groups/wgnss/>

If you're already a member of Flickr, just click "Join." Now you can comment on photos and post discussion items. We have 35 members, who

have posted almost 200 photos so far. We'd love to see your photos of WGNSS activities and of nature!

Not a Flickr member yet? If you already have a Yahoo! ID, just sign in with that, or just follow the prompts to join. You can have a free membership, which has pretty generous limits on how many photos you can upload per month. Paid or "pro" memberships are available for avid users.

Think about this: Even if you don't own a camera, you'll want to join Flickr. You can enjoy and sometimes "borrow" photos from other people – and we're talking about a pool of [4 billion images](#). Need a photo of a Unicorn Clubtail dragonfly for your presentation? How about Hairy Lip Fern, or LeConte's Sparrow?

Anyone who has an interesting photo of nature is invited to join the group and share. Just use the "Actions" menu above your photo to "Add to a group." Of course, you don't have to share a photo or be a member of WGNSS to join our Flickr group.

The next cool thing is to view the "slideshow." The group's home page will display 12 photos. At the bottom right is a link to ">>More." You can choose to look at one photo by clicking the thumbnail or – better yet – at top right, click "Slideshow." Flickr now shows each of the photos at full screen for a few seconds.



Northern Flicker. Photo by Matt Ward,
www.iseethelight.com

Some groups I like are: [The Ozarks](#), [Missouri Birds](#), [Birds of the Missouri Botanical Garden and Tower Grove Park](#), [Missouri Native Plants](#), and [Droplets on Leaves](#), just to name a few. With a free membership, you can join 10 groups. Maybe the most fascinating group is [ID Please!](#) People submit a photo of a bug, bird, fern, or fungus that they can't identify. Members from around the globe respond by commenting on the photo. Now, when I can't be out in the field arguing over an *Empidonax* flycatcher or a skipper butterfly, I can trade ideas and hear from experts online.

If you'd like to volunteer to help administer "Nature Study with WGNSS" on Flickr, contact Anne McCormack at annemccormack@sbcglobal.net.



Publications by Members

Darigo, Carl E. & Nels Holmberg. 2010.

Racomitrium aciculare (Musci: Grimmiaceae) new to Missouri and notes on *Hypnum lindbergii* var. *americanum*. *Evansia* 27(2):65–66.

Darigo, Carl E. 2010. Elizabeth Gault Fisher – A Maryland amateur bryologist. *Bryologist* 113(2):387–388.



Forest Park BioBlitz

*Steven Buback*¹

On September 10th and 11th, Forest Park will host the 4th Forest Park BioBlitz. The BioBlitz brings together scientists from around the region and members of the public to conduct a 24-hour biological exploration of the Park. The BioBlitz will begin with a006E introduction from incoming Missouri Botanical Garden president Peter Wise Jackson at 11:00 a.m. on Friday, September 10th. From there, specialists in plants, owls, bees and wasps, and many other taxa will explore different areas of the park and survey life over the next 24 hours. Participating institutions this year include the St. Louis Academy of Science, Forest Park

¹ Park Ecologist, Forest Park Forever.

Forever, Missouri Department of Conservation, Missouri Botanical Garden, the Missouri Department of Conservation, the Saint Louis Zoo, the Missouri Native Plant Society, the Webster Groves Nature Study Society, and many other groups from around town. WGNSS members are invited to lead a field expedition and help with inventory or tag along with an existing trip and assist with our understanding of the ecosystems of Forest Park. For more information, or to register to lead or join a group, please see www.stlbioblitz.com or contact Steve Buback at sbuback@forestparkforever.org.



WGNSS Float Trip & Snail & Muscle Survey

Nels Holmberg

WGNSS is sponsoring a canoe trip on the upper Meramec River on Saturday, October 16, 2010. This trip is designed to be an educational trip as we will be surveying snails and muscle under the guidance of Ron Oesch, not just going canoeing. We will have as guides Bill & Jody Miles of Earth's Classroom, and they will share their expertise on riparian habitat and ecology, as well as the cultural history of the area.

Gathering site (8:30 a.m.); *The Rafting Co. Access* (river mile 47.9). *This location is also our takeout point.* (5:00 p.m.). It is located on Hwy 19 on the south bank of the Meramec River, on the north edge of Steelville.

Start: River View Access, Hwy. O, south west of Cuba (we will car pool from the take out site).

Cost: \$20/person

Bill & Jody Miles will provide canoes, paddles, personal flotation devices, snorkels, hand nets, an aquarium, arrange car/canoes shuttle, no lunch, and of course they are expert guides as river naturalists. They will do a safety & paddling briefing if we have novices.

Send reservations by September 15 to Nels Holmberg at nholmbrg@fidnet.com or (636) 583-4551. Final details will be sent to those with reservations. There is enough room for 12-20 people.

For information on Earth's Classroom, see <http://www.earthclassroom.org>



The Nature Conservancy: Fall 2010 Conservation Speaker Series

*Anna Babcock*¹

The Nature Conservancy is hosting a speaker series at **Schlafly Bottleworks** in Maplewood starting in September. All lectures are free and open to the public, with topics ranging from the oil spill in the Gulf to ethnobiology in China.

Conservation Partner Spotlight - St. Louis Zoo WildCare Institute – Eric Miller, DVM, Director of St. Louis Zoo WildCare Institute
Tuesday, September 21st @ 7:00 p.m.

Native Bees & Natural Communities – Mike Arduer, Natural History Biologist, Missouri Department of Conservation
Tuesday, October 19th @ 7:00 p.m.

Khawa Karpo: Conservation in a Tibetan Landscape – Jan Salick, PhD, Curator of Ethnobotany, Missouri Botanical Garden and Bob Moseley, Director of Conservation Science, The Nature Conservancy in Illinois
Tuesday, November 16th @ 7:00 p.m.



Group Activity/Walk Schedules

ORNITHOLOGY GROUP

David Becher, Chair – (314) 576-1146

Saturday Bird Walks

David Becher, Leader – (314) 576-1146

All trips begin at 8:00 a.m. and normally go through early afternoon, so bring lunch if you wish to stay out. Everyone is welcome. The leader reserves the right to change the schedule if necessary. Walks are at Des Peres Park through December except on the following dates:

¹ Philanthropy Assistant, The Nature Conservancy in Missouri.

Sep 4 HQ Columbia Bottom
Sep 18 Gaddy Garden Tower Grove Park
Sep 25 Teal Pond Riverlands
Oct 9 Teal Pond Riverlands
Oct 16 HQ Columbia Bottom

Thursday Bird Walks

Jackie Chain, Leader – (314) 644-5998

Jackie Chain will be leading Thursday birding trips from Des Peres Park parking lot (east side of Ballas Rd. just north of Manchester Rd.). Bring lunch, beverage, binoculars and if you have one a scope/tripod. Return is usually by 3:30 p.m., but you may leave at your convenience. Meeting time will continue to be 8:00 a.m. at Des Peres Park lot Manchester Road on August 12th, 19th and 26th.

Change of time/meeting places:

Beginning in September and through the fall and winter we will change our meeting time to 8:30 a.m. because of increased school and commuter traffic. September 2nd, 13th and 27th we will meet in Tower Grove Park (TGP) at the Gaddy Garden in the northwest section of TGP. Suggest parking on Magnolia Avenue (north boundary of TGP). On September 9th and 23rd and through the rest of the fall and winter seasons we will meet at Des Peres Park.

Looking forward to the fall shorebird and warbler migrations!

For any questions please call Jackie Chain at (314) 644-5998 or email her at chainjac@sbcglobal.net.

BOTANY GROUP

George Van Brunt, Chair – (314) 993-2725

Botany Walks

Fr. James Sullivan, Leader

(now in his 44th year as Botany Walk Leader!)

Botany walks are every Monday. The WGNSS Botany Group visits many of the same locations as the Bird group: Busch Conservation Area, Shaw Nature Preserve, the Missouri Botanical Garden, Babler State Park and Cuivre River State Park. Learning plants will help you learn butterfly host plants. Sign up for WGNSS Botany Group emails from Jack Harris by contacting him at jahar@mac.com or (314) 368-0655 and receive an

email no later than Sunday about the next Monday's trip.

ENTOMOLOGY GROUP

Phil Koenig, Co-Chair – (314) 281-1313

Jane Walker, Co-Chair – (314) 965-6522

Upcoming Meetings

Sunday, September 26. WGNSS members can join the Entomology Group for its annual Show and Tell. Members share pictures, insects, and stories from their summer break. The meeting will take place 7:00 p.m. at the home of Entomology Group Co-Chair Phil Koenig, 823 Lauralee Dr., O'Fallon, MO 63366. Phone: (314) 281-1313.

Sunday, October 24. Anne McCormack will introduce members to the Flickr website and how it can be used. This may be a great opportunity for members to share photographs and create a WGNSS data base of pictures for identifications and use for programs. The meeting place is yet to be determined, but will be announced in the October Nature Notes.



Membership Renewal

Paul Brockland

It's time again to renew your membership in WGNSS. The majority of our memberships coincide with the school year – September through August.

If you have a question about your present membership status, look at the upper right corner of your address label. If it says "Exp. 31-08-10" your membership expires at the end of August this year. If it reads "31-12-99" you are a life member and we hope you live that long. For those who joined in the middle of the year, the label may indicate your membership expires at the end of a month other than August. We recommend that you send your renewal anyway (\$20) so you don't forget!

It's easy to renew. Complete the membership application form on the last page of this newsletter, write a check payable to 'WGNSS' and

mail it to: WGNSS, P.O. Box 190065, St. Louis,
MO 63119-6065.

Thanks for continuing your interest in nature study
with WGNSS!

For general information about WGNSS, contact
Membership Chairman Paul Brockland at
pbrockland@sbcglobal.net or (314) 961-4661.



Editor's Corner

Ted C. MacRae

NATURE NOTES BY EMAIL

Nature Notes is available not only by regular post,
but also by email. Not only does this save paper
and reduce mailing costs, it allows viewing of the
newsletter and the included photos **in full color**.
Embedded hyperlinks also allow instant navigation
to email addresses and websites. Of course, you
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using Adobe Reader (free download available at
<http://get.adobe.com/reader/>). Send your name
and email address to the Assistant Treasurer at
whittex@aol.com to receive *Nature Notes* by email.

CALL FOR SUBMISSIONS

We welcome all announcements of WGNSS or
other nature related events in the St. Louis area,
notices of published articles – especially those
authored by members, and original nature oriented
articles. Suggested topics include accounts of field
trips you have taken, information about local
natural areas, interesting nature sightings, or
reviews of nature related books. Reprinting of
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issues are a good source of ideas – copies of recent
issues can be provided upon request.

Please direct all submissions by email to the Editor
at ted.c.macrae@monsanto.com Limit text
formatting to bold for emphasis and italics for
scientific names. Additional formatting (e.g., use
of tabs and extra spaces, multiple hard returns,
underlining, etc.) should be avoided, since it must
be removed by the Editor during final formatting.
Photographs are encouraged and will be published
on a space-available basis. Contributions are
welcome from all but especially encouraged from
members – remember; this is your newsletter!

