



Nature Notes

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President's Corner

Rich Thoma

Dr. Paul McKenzie of the U.S. Fish and Wildlife Service gave a "first hand" account of his work monitoring birds in the Gulf of Mexico after last summer's BP oil spill at the November WGNSS general meeting. Dr. McKenzie is the federal endangered species coordinator in Missouri and may be best known for his work with the endangered Tumbling Creek Cave Snail. In August, he was sent for two weeks to the Mississippi River delta region of Louisiana to assist in the cleanup and monitoring efforts. Paul described four major areas of focus: the laying of oil booms to protect the delicate marshes; cleanup of the oil on beaches; soil and water sampling; and cleaning birds. Graphic photos of the oil and the damage being done to wetland habitats were shown during the presentation. Paul's job while in the Gulf was to monitor birds along the coast and to assess the damage the spill was causing. With long hours and temperatures around 110°F and 80+ percent humidity it was very exhausting work. Using local, out of work boat captains as guides, Paul joined a flotilla that went to where the birds were on the Louisiana coast. The good news is that most of the birds Paul saw (mostly pelicans, terns, gulls and herons) looked healthy and were not covered in oil. However, he did find some coated in oil. When found, the next job was to attempt to capture the oiled bird. Those birds that

were only slightly oiled easily evaded any attempt at being captured. Unfortunately, only the sickest and dead birds could be caught. We saw some very gruesome photos of how much harm oil can do to a bird. One bird was hardly recognizable under a thick coating of oil. Sick birds were taken to a rescue center for cleaning and possible rehabilitation. For the entire summer, over 2,000 oiled birds were captured and sent to rehabilitation centers. Over 4,000 birds were found dead. The true toll of dead birds and other animals is unknown. In conclusion, Dr. McKenzie left us with two points to ponder. The first is that the ultimate fate of the oil is unknown. Has it all been consumed by oil eating bacteria, as some speculate, or is it lurking in the depths of the Gulf, continuing to cause environmental harm? The second is that the BP oil spill is just the latest in a long list of environmental disasters that have destroyed wetlands and estuaries throughout the Gulf region.

Please join me in welcoming the **Nature Book Club** to the WGNSS organization. Historically, this book club has been an active organization for over 10 years meeting each month at Tyson Research Center. Recently the group was exploring new ways to attract new members and find a means to advertise future events. WGNSS has the ability to offer both and in return everyone now has a chance to take part in another natural history activity. The book club is led by Pat Brock Diener and meets on the second Tuesday of each month. Each month a new natural history book is

- In This Issue -

President's Corner.....	1
New WGNSS Natural History Group:	
Nature Book Club.....	2
September Bird Report.....	3
September Botany Report.....	4
October Entomology Report.....	10
Special Delivery.....	11
Flaming the Debate.....	12
St. Louis Zoo Lecture Series.....	14
Group Activity/Walk Schedules.....	14
Editor's Corner.....	15
Appendix 1: Fall Migration Sightings.....	16
Administrative Information.....	17

and tree identifications take on a new meaning when the leaves have fallen. In the winter, if you are feeling trapped indoors, why not try an exciting Botany field trip!



New WGNSS Natural History Group: Nature Book Club

Ann Earley

WGNSS is pleased to welcome a new group under the Society's umbrella, the Nature Book Club. This group of nature enthusiasts meets once a month to discuss a natural history-oriented book featuring topics ranging from botany to zoology. The group, coordinated by Pat Brock Diener, has been meeting since 1998 and was previously affiliated with Tyson Research Center. As resource and space limitations made it no longer possible for the group to continue this arrangement, WGNSS was approached about being the club's sponsoring organization, and the Society's Board enthusiastically endorsed this request at the October Board meeting.

Nature Book Club meetings are held on the second Tuesday of the month, from 1:30-3:00 p.m., at the homes of the members. All WGNSS members and friends are invited to attend; please contact the meeting host prior to the meeting date to RSVP and obtain additional information.

A list of books the Club has read and discussed during the last ten years is included below to show the wide range of selections the group has covered—something for everyone!

For the upcoming meeting on **December 14**, the Club has selected ***The Mountains of Saint Francis [Italy]: Discovering the Geological Events that Shaped our Earth***, by **Walter Alvarez**. For further details, and to reserve your spot at the Club's December meeting, please contact Pat Brock Diener at (314) 962-8665.

Mark your 2011 calendar for the Club's first meeting of the new year, which will be held on **January 11**. The selection for that month's meeting will be ***Green Metropolis*** by **David Owen**. The location for this meeting will be announced in the next issue of *Nature Notes*.

discussed. Participants are expected to have read the book prior to attending the event and will be given a chance to present their views about what was read. For the December meeting the book club will discuss *The Mountains of St. Francis*, by Walter Alvarez. See Ann Earley's article in this newsletter for a brief history of The Nature Book Club, details about its meeting schedule, and a list of books that the Club has read during the past ten years. Details of the meeting schedule can also be found in the "Group Activity/Walk Schedules" section of this newsletter.

Also, be sure to mark January 30 on your calendars for the **Joint Audubon Society/WGNSS Winter Party**. December seems to be an extremely busy month for most people so it was decided to have this annual gathering after the holiday season instead. This year's winter event will take place at the Green Center. Look to the January *Nature Notes* for further details.

Please note that just because the outdoor growing season has ended does not mean the end of Botany field trips. Botany field trips take place year 'round, no matter the season, no matter the weather. If one looks, plants can still be found

WGNSS welcomes the Nature Book Club members to the Society family and wishes everyone happy reading in the months ahead!

2008–2009

Gould, Stephen J. *Wonderful Life: The Burgess Shale*
 Allen, William *Green Phoenix*
 Jordan, William *The Sunflower Forest*
 Stewart, Rory *The Places in Between*
 Winchester, Simon *The Map That Changed the World*
 Stein, Sara *Noah's Garden*
 Stewart, Amy *The Earth Moved*
 Weidensaul, Scott *Of a Feather: A Brief History of American Birding*
 Safina, Carl *Song of the Blue Ocean*

2007–2008

Logan, William Bryant *Oak: The Frame of Civilization*
 Safina, Carl *The Voyage of the Turtle*
 Kingsolver, Barbara *Animal, Vegetable, Miracles*
 Bonner, Jeffrey *Sailing With Noah*
 Quammen, David *The Reluctant Mr. Darwin*
 Stutchbury, Bridget *The Silence of the Songbirds*
 Lockwood, Jeffrey A. *Locusts*
 Preston, Richard *The Wild Trees*

2006–2007

Winchester, Simon *The Crack in the Edge of the World*
 Diamond, Jared *Guns, Germs and Steel*
 Sacks, Oliver *Oaxaca Journal*
 Pollan, Michael *The Omnivore's Dilemma*
 Quammen, David *Monster of God*
 Mittelbach, Margaret *Carnivorous Nights*

2005–2006

Botkin, Daniel D. *Our Natural History: The Lessons of Lewis and Clark*
 Heinrich, Bernd *Mind of the Raven*
 Whittle, Tyler *The Plant Hunters*
 Hubbell, Sue *Broadsides from Other Orders*
 Carson, Rachel *Lost Woods or Sense of Wonder*
 Muir, John *The Mountains of California*
 Safina, Carl *The Eye of the Albatross*
 Lambrecht, Bill *Big Muddy Blues*

2004–2005

Quammen, David *Song of the Dodo*
 Lawton, Barbara Perry *Seasonal Guide to the Natural Year*
 Lewis and Clark (Reader's choice)
 Janovy, Jr. John *Keith County Journal*
 Weidensaul, Scott *The Ghost with Trembling Wings*
 Matthiesson, Peter *Birds of Heaven: Travels with Cranes*

2003–2004

Houle, Marcy *The Prairie Keepers*
 Sabbagh, Karl *A Rum Affair*
 Lyon, Thomas J. *This Incomparable Land*
 Quammen, David *Song of the Dodo* (Chapters 1–3)

Alcock, John *The Masked Bobwhite Rides Again*
 Bernhardt, Peter *Wily Violets and Underground Orchids*
 Hooper, Judith *Of Moths and Men*
 Weiner, Jonathan *Time, Love, and Memory*

2001–2002 (authors designated—read books of choice)

Durrell, Gerald
 Anderson, Edgar *Plants, Man and Life*
 Thoreau, David
 Zwinger, Ann
 Olson, Sigurd
 Darwin, Charles *Voyage of the Beagle*

2000–2001

Weiner, Jonathan *The Beak of the Finch*
 Lopez, Barry *Crossing Open Ground*
 Logan, William Bryant *Dirt*
 Muir, John *A Thousand-Mile Walk to the Gulf*
 Stevens, William K. *Miracle Under the Oaks*
 McKibben, Bill *Hope, Human and Wild*

1999–2000

Schoolcraft, Henry R. *Rude Pursuits and Rugged Peaks*
 Stegner, Wallace *The Sound of Mountain Water*
 Thomas, Lewis *The Lives of a Cell*
 Grange, Wallace B. *Those of the Forest*
 McPhee, John *Oranges*
 Carson, Rachel *The Sea Around Us/Silent Spring*
 Wilson, E. O. *Naturalist*

1998–1999

Hubbell, Sue *A Country Year*
 Dillard, Annie *Pilgrim at Tinker Creek*
 Easley, Loren *Immense Journey*
 Krutch, Joseph Wood *The Desert Year*
 Leopold, Aldo *Sand County Almanac*
 Abbey, Edward *Desert Solitaire*
 Beston, Henry *Outermost House*



September Bird Report

Compiled by Jim Ziebol

WGNSS is looking for a new person to take over the Bird Report. I would like very much to thank all the people who have supplied information for this report over the past 12 years. I also would like to very much thank Yvonne Homeyer for compiling MoBirds sightings and typing the reports. Thanks also to Chris McClarren for her almost-daily reports from TGP. This data will be extremely important in years to come.

Please see Appendix 1 (p. 16) for fall migration: early arrival dates/last dates seen/high counts.



September Botany Report

Compiled by George Van Brunt

September 6, 2010 - Forest 44 Conservation Area, St. Louis County, MO (Contributed by Steve Turner)

Time: 9:00 - 11:30 am.

Conditions: Sunny, temperature mid 80°s F.

Participants: Nancy Clark, Wayne Clark, Juanita Feigenbaum, Scott George, Rick Gray, Jack Harris, Martha Hill, Rex Hill, Nels Holmberg, Alan Hopefl, Sylvia Hosler, Maggie Hover, Louise Langbein, Larry Morrison, Burt Noll, John Oliver, Fr. Sullivan, Ruth TenBrink, Steve Turner, George Van Brunt, Gwyn Wahlmann.

The near-record group of 21 assembled in the parking area along Hillsboro Rd. a short distance south of Meramec Station Rd., and over the next 2-1/2 hours covered a roughly rectangular loop of about 1.8 miles. The terrain included open grassland, small stream corridors, and springs. The conservation area also supports significant equestrian activity, with several surrounding stables, and many riders were enjoying the fine weather on this Labor Day.

Botanizing began at the border of the large field immediately adjacent to the parking lot. Common species observed in this area included *Quercus palustris* (pin oak, probably planted), *Ambrosia trifida* (giant ragweed), *Eupatorium serotinum* (late boneset), *Xanthium strumarium* (cocklebur), *Phyla lanceolata* (northern fog fruit), and a thriving population of *Erechtites hieracifolius* (pilewort). As we moved southward down the path, additional species came into view, including *Cirsium discolor* (field thistle, at least one specimen towering at least 7' high and sporting at least a couple dozen inflorescences), *Ipomoea hederacea* (blue morning glory), *Bidens frondosa* (beggar-ticks), *Eclipta prostrata* (yerba de tajo), *Verbesina alternifolia* (yellow ironweed), *Apios americana* (groundnut), *Humulus japonicus* (Japanese hops), *Solidago altissima* and *S. gigantea* (tall and giant goldenrod, respectively), and *Rudbeckia triloba* (brown-eyed Susan), among others.

Numerous specimens of *Physalis sp.* (ground cherry), later keyed by Nels Holmberg to *P. angulata*, were observed. These members of the Solanaceae family have edible fruits enclosed in a papery husk, similar to the Mexican sauce staple, tomatillo. Nels collected a number of these fruits for use in salsa. Another Solanaceae family member also observed was *Datura stramonium*, which is definitely *not* edible, and is instead described as poisonous and hallucinogenic. The physiological effects are due to tropane alkaloids, notably atropine and scopolamine. One recent study found GC-MS (gas chromatography-mass spectrometry) evidence of 29 different tropane alkaloids contained in leaves, roots, and/or seeds of this plant. Used properly, the alkaloids contained in this and related plants have significant and widely varied medical utility.

We soon rounded a bend and moved into a stream corridor, which had as its centerpiece a nicely flowing spring. As is common with springs, this one was filled with *Nasturtium officinale* (water cress), which was not visibly blooming at the time. According to Scott George, who lives nearby and serves as an environmental consultant, this spring flows year-round, at a rate which varies from about 100-150 gpm (gallons / min) during the dry season, through 300-400 gpm during the wet season, to over 1000 gpm following storm activity. In this moist and shaded environment, we observed several plant species adapted to these conditions, including *Lobelia siphilitica* (great blue lobelia), *Lobelia cardinalis* (cardinal flower), *Penthorum sedoides* (ditch stonewort), *Impatiens capensis* (jewelweed), *Solanum ptycanthum* (black nightshade), *Fallopia scandens* (false buckwheat, formerly *Polygonum scandens*), *Hackelia virginiana* (stickseed), *Ageratina altissima* (white snakeroot), and others.

The spring-fed creek also provided an opportunity to examine some aquatic fauna. With the help of Scott, two species of sculpin were observed: *Cottus bairdi* (mottled sculpin) and *Cottus carolinae* (banded sculpin). Sculpins are small bottom-dwelling fish which typically live in spring-fed creeks. They are able to change their color and can therefore be difficult to detect among the rocks of their habitat.

A bit later in our walk, thanks to the sharp eyes of Father Sullivan, a few of us were also treated to the (fleeting) sight of a cave salamander (*Eurycea*



Cave salamander (*Eurycea lucifuga*). Photo by Steve Turner.

lucifuga). This small (~4-5") amphibian is orange in color with black speckles. It was found in an area of dry creek bed and seemed to have little interest in posing for photographs.

Continuing from the spring creek area, we passed through more open grassland, woodland border, and dry stream bed. In these areas were observed many additional common plants, such as *Euphorbia cyathophora* (painted leaf), *Acalypha rhomboidea* (three-seeded mercury) *Pseudognaphalium obtusifolium* (sweet everlasting), *Scrophularia marilandica* (late figwort), *Cuphea viscosissima* (blue waxweed), *Agalinis tenuifolia* (common gerardia), *Conoclinium coelestinum* (mist flower), *Lactuca floridana* (Florida lettuce), and *Commelina communis* (dayflower). A member of a group of sunflower specimens was keyed out to *Helianthus tuberosus* (Jerusalem artichoke); the inflorescences of these plants were mildly fragrant with an aroma resembling chocolate. A representative specimen of the abundant *Desmodium* found in the area keyed to *D. perplexum*.

Although the small segment of the Forest 44 conservation area that we examined shows a reasonably rich floral diversity, it also harbors a number of aggressive species. In particular, we observed *Lonicera maackii* (bush honeysuckle), *Lonicera japonica* (Japanese honeysuckle), *Lespedeza cuneata* (sericea lespedeza), *Microstegium vimineum* (Japanese stiltgrass), *Sorghum halepense* (Johnson grass), and *Carduus nutans* (musk thistle). Efforts have been underway since June 2009 to eradicate or at least control some of these invasives, particularly in the spring branch area.

September 13, 2010 - KATY Trail, Missouri

Research Park Access, St. Charles, MO

(Contributed by Jack Harris)

Time: 9:30 am — 12:40 pm (+/-).

Conditions: Mostly sunny, temp: 65 — 80 degrees, wind: calm.

Participants: Rev. Jim Sullivan, Wayne Clark, Nancy Clark, George Van Brunt, Jack Harris, Nels Holmberg, Phil Koenig, Burt Noll, Connie Campbell, Jeannie Moe, Larry Morrison, Louise Langbein, and John Oliver.

This 3/4 mile paved access trail leading to the KATY Trail State Park follows the winding, narrow floodplain of an unnamed minor tributary to the Missouri River. The perennial flow of the upper parts of the small creek is now artificially maintained by the effluent of the water treatment plant that serves the Missouri Research Park on the nearby uplands. This flow now supplements what appear to be one or two minor springs in the lower areas. The adjacent terrain of steeply cut loess/dolomite slopes are sheltered by the canopy of the oak / hickory forest. This all adds up to a relatively well watered, undisturbed (until the trail) area where a good diversity of plants and animals find living quarters to their liking. While down on this access trail, one can soon, briefly, feel that urban sprawl, mega farms and traffic jams are far away. But just up over the top of the ridge

A good diversity of native plants in bloom was present on the relatively dry slopes adjacent to the access trail including *Cunila origanoides* (dittany), a plant that will soon be performing its duty of producing frost flowers; *Prenanthes altissima* (tall white lettuce), at least three blue asters, i.e., *Symphyotrichum turbinellum* (prairie aster) with its smooth, long, narrow receptacle, *Symphyotrichum patens* (spreading aster) with its strongly clasping leaves, and *Symphyotrichum anomalum* (many rayed aster). Representatives from the yellow petaled clan included, *Solidago altissima* (tall goldenrod), *Solidago ulmifolia* (elm-leaved goldenrod), and *Aureolaria grandiflora* (big-flowered gerardia), whose long tubes were the largest and showiest on the slope.

While the area has avoided disturbance to some degree because the terrain roughness makes exploitation difficult (i.e., expensive), the presence of invading non-native species was abundant in a

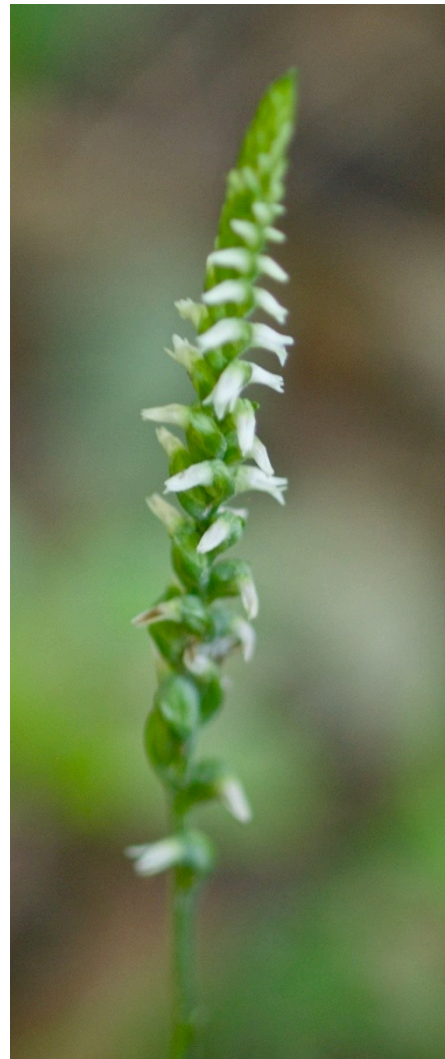
few spots. These were mostly in the small but rich bottom lands along the creek. These included **Lactuca saligna* (willow-leaved lettuce), **Perilla frutescens* (beefsteak plant), **Persicaria longisetata* (knotweed), **Rumex patientia* (patience dock), and **Verbascum thapsus* (mullein).

Also occupying the wetter, creekside terrain were the showy native species such as *Verbesina alternifolia* (yellow ironweed), *Bidens vulgata* (beggarticks), *Heliopsis helianthoides* (ox-eye), and *Mimulus alatus* (sharpwing monkey flower). Surprisingly we found *Lobelia siphilitica* (blue cardinal flower), *Impatiens capensis* (spotted touch-me-not), and *Impatiens pallida* (pale touch-me-not) in flower and growing side-by-side. The climbing vine *Fallopia scandens* (crested buckwheat) seemed intent on retaking territory conceded to trail construction by clambering over parts of a small bridge railing and *Elephantopus carolinianus* (Carolina elephant's foot) likewise was occupying disturbed ground along side of the paved trail. Last but not least, in the nearby bottomland was the find of the day: *Spiranthes ovalis* var. *erostellata* (oval ladies' tresses orchid). This small white orchid with a terminal cylindrical spiral of small white flowers, while not rare, is uncommon and scattered widely over the state. This plant had not been previously reported from St. Charles County and is therefore a county record.

The diversity of plants (with over 60 on the day's casual list) occupied the attention of most to the degree that by the time the group reached the KATY there was limited time remaining and travel on the Trail proper was brief. A few of the plants noted on this short sortie were: *Polymnia canadensis* (pale-flowered leaf cup), *Sicyos angulatus* (bur cucumber), *Vitis aestivalis* (summer grape), and *Vitis riparia* (grape).

Phil Koenig (Co-chair, WGNSS-Entomology Group) joined the Botany Group for the trip. Butterflies were very active on this warm sunny day and Phil patiently answered many questions about butterfly identification and their life histories. The following is a list of butterfly and moth species that was compiled by Phil while on our trek of September 13, 2010:

Ancyloxypha numitor (Least Skipper), *Papilio t. troilus* (Spicebush Swallowtail), *Phoebis sennae eubule* (Cloudless Sulphur), *Cupido c. comyntas* (Eastern-tailed Blue), *Celastrina neglecta* (Summer Azure),



Spiranthes ovalis var. *erostellata* (oval ladies tresses orchid) (Orchidaceae). MO Research Park Access, KATY Trail, St. Charles Co., MO, 9/13/2010. Photo by Jack Harris.



WGNSS Botany Group field trip at Rockwoods Reservation, 20 September 2010. L-R: Bill Summers, Kathy Thiele, Louise Langbein, Pat Harris, Larry Morrison, George Van Brunt (kneeling), Rev Jim Sullivan, Steve Turner. Photo by Jack Harris.

Phyciodes t. tharos (Pearl Crescent), *Polygonia comma* (Comma, winter form), *Polygonia p. progne* (Gray Comma), *Limenitis arthemis astyanax* (Red-Spotted Purple), *Limenitis a. archippus* (Viceroy), *Asterocampa c. celtis* (Hackberry Butterfly), *Danaus p. plexippus* (Monarch), and *Actias luna* (luna moth).

On the return trip Nels Holmberg discovered *Phaeoceros carolineanus* (a hornwort) on the ground surface near the access trail. He subsequently confirmed the ID with John Atwood, Missouri Botanical Garden.

Those with committed virtual holiday calendar schedules (remember those last year's good intentions?) determined in order to stay ahead of the upcoming holiday season's obligations should take heed. One of our culture's iconic holiday symbols, i.e., brilliant red berries, was present on *Lindera benzoin* (spicebush), *Lonicera maackii*¹ (bush honeysuckle), and *Arisaema dracontium* (green dragon). All were observed in robust abundance as of the date of this trip.

Is it later than you think?

September 20, 2010 - Rockwoods Reservation,
St. Louis, County, MO (Contributed by George Van Brunt)

Ten botanists met on a warm, sunny morning after a weekend of heavy rain. Fr. Sullivan, Jack Harris, Pat Harris, Steve Turner, Bill Summers, Larry Morrison, Kathy Thiele, Kara Thiele, Louise Langbein, and George Van Brunt walked the 1.5-mile *Trail Among the Trees* through a wet, misty, forest. Several people commented that it "was like a rainforest".

Our stated goal on this field trip was to search for asters in bloom. We found only one, *Symphotrichum patens* (spreading aster), but the day was far from being a failure. We found many other species of interest in the forest. We found arthropods including a 4 inch long orange and brown millipede, fungi including one that looked like a bright red strawberry, and plants in bloom and in fruit. Having no mycologists with us, we were not able to identify most of the fungi, but lack of identification did not keep us from appreciating them. A couple of fungi that we did identify were a turkey tail and a chicken-of-the-



Millipede. Photo by Steve Turner.



Hygrocybe coccinea (scarlet waxy cap). Photo by George Van Brunt.

woods. With the help of the sharp eyes of Bill Summers, author of *Missouri Orchids*, we found three very interesting species of plants. The first was *Corallorhiza odororhiza* (late coral root), a small, woodland orchid which was in bloom. Most flowers of this species are cleistogamous (the flowers do not open, there is no lip, and they are self-fertilizing). Some of the flowers of this species may be chasmogamous, being distinguished from the cleistogamous flowers by a 2-4mm long white lip with purplish spots. The chasmogamous flowers open and are cross pollinated, possibly by flies. The other two plants species were *Monotropa hypopitys* (pinesap) in bloom and Indian pipe *Monotropa uniflora* (Indian pipe) in fruit. These close relatives are now classified in the blueberry family, Ericaceae.

Life depends on macromolecules (nucleic acids, proteins, carbohydrates, and lipids) that are polymers of smaller building block molecules (nucleotides, amino acids, sugars, and fatty acids). Most plants are autotrophs (self-nourishing); they use sunlight energy and simple molecules to synthesize the building blocks and the

¹ Non-native



Corallorhiza odorhiza. Photo by George Van Brunt.

organisms. Many other living things cannot synthesize the building blocks (or at least not all of them) and thus depend on being able to digest (break down the macromolecules) other living things or once living things. These organisms are termed heterotrophs (other-nourishing). There are many subcategories of autotroph and heterotroph such as chemotroph, parasite, saprobe, etc. One of these subcategories, saprobe, involves exporting digestive enzymes from the cell into a surrounding organic substrate where digestion takes place. The building block molecules are then absorbed and used to supply energy and build the organism's own macromolecules. Many bacteria and fungi, like the specimens we found, are saprobes. For many years, it had been thought that some plants like *Corallorhiza odorhiza*, *Monotropa hypopitys*, and *Monotropa uniflora* were also saprobes (or saprophytes, an older term). Now it is known that these plants do not digest organic matter or even absorb organic matter, water, and other nutrients directly from the soil. Instead they are parasites on soil fungi from which they obtain their water and nutrients. The terms used to describe their lifestyle are now mycotrophic (fungus-nourishing) and



Monotropa hypopitys. Photo by Steve Turner.

mycoparasitic. (George Yatskievych, personal communication). *Corallorhiza odorhiza* plants also contain a small amount of chlorophyll and carry on some photosynthesis.

Included in the many species in bloom that we identified were *Verbesina alternifolia* (wingstem), *Ageratina altissima* (white snakeroot), *Geum canadense* (white avens), *Hydrangea arborescens* (wild hydrangea), *Allium stellatum* (cliff onion), *Rudbeckia triloba* (brown-eyed Susan), *Agrimonia pubescens* (soft agrimony), *Bidens frondosa* (sticktight), *Cunila origanoides* (dittany), *Hieracium gonovii* (hairy hawkweed), *Desmodium rotundifolium* (round-leaved tick trefoil), *Brickellia eupatorioides* (false boneset), *Eupatorium altissimum* (tall boneset), and *Liatris aspera* (rough blazing star). Notable fruiting plants included *Panax quinquefolius* (ginseng), *Aralia racemosa* (American spikenard), *Lobelia inflata* (Indian tobacco), *Symphoricarpos orbiculatus* (coral-berry), *Smilax tamnoides* (bristly greenbrier), and *Lindera benzoin* (spicebush). We also identified a number of ferns including *Adiantum pedatum* (maidenhair fern), *Polystichum acrostichoides* (Christmas fern), and *Phegopteris hexagonoptera* (broadbeech fern).



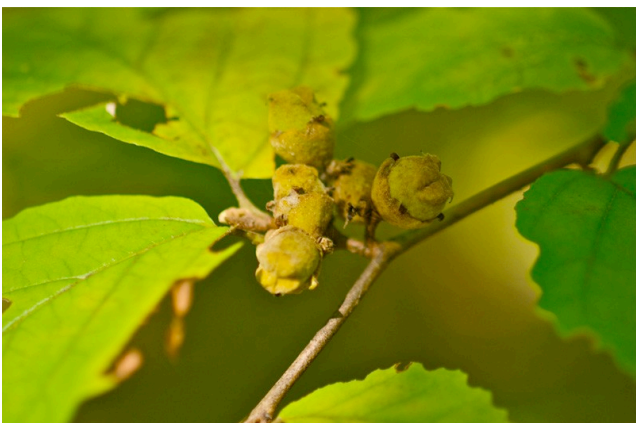
Rhexia virginica seed capsules. Photo by Jack Harris.



Trichostema dichotomum (blue curls). Photo by Jack Harris.



Rhexia virginica seed capsules. Photo by Nancy Clark.



Hamamelis virginiana fruits. Photo by Jack Harris.

September 27, 2010 Taum Sauk Mountain State Park, Iron County, MO (Contributed by Fr. Sullivan)

Participants: Nancy and Wayne Clark, Pat and Jack Harris, Maggie Hover, Louise Langbein, Linda Ledebuhr, Fr. Sullivan, Bill Summers, Ruth TenBrink, Steve Turner, and George Van Brunt.

The meadow beauty bed was fantastic. *Rhexia virginica* (wingstem meadow beauty) had a great year for blooming. No flowers were present today, but the urn-like seed capsules were everywhere.

It was aster time, and *Symphotrichum anomalum*, *S. turbinellum*, and *S. patens* were big and blue and beautiful. *Solidago petiolaris* (downy goldenrod) was showy, and Bill Summers pointed out *S. juncea* (early goldenrod), whose ground leaves were smooth to the touch, and had teeth in their apical half, but not basally.

We saw *Hamamelis virginiana* (the fall-blooming witch hazel) with last year's fruits and this year's flower buds. It wasn't in bloom yet, but its time was near. *Hypericum gentianoides* (orange grass) was in bloom on a glade and *H. mutilum* (dwarf St. John's wort) was present where seepage crossed

the trail. *Trichostema dichotomum* (the famous blue curls) was still in bloom. *Acalypha monococca* (one-seeded mercury) was in fruit. *Athyrium filix-femina* (lady fern) was in the woods, and *Phyllanthus carolinensis* (leaf-flower) was growing from the sandy edge of the trail.



October Entomology Report

Jane Walker

The Entomology group met Sunday evening, October 24, at the City Museum. Our speaker was WGNSS member **Anne McCormack**, speaking to us about Flickr. Flickr is a photo sharing website through Yahoo for members to share, view, organize, and store photos. Anne gave us a great overview on how the website works and how joining members can use the website. The permutations seem endless!

Flickr has over four billion images and 1 million images are added each day. Most of the viewers are outside of the United States. One can join Flickr by opening an account through Yahoo [\[http://www.flickr.com\]](http://www.flickr.com). Free basic membership allows members to upload 10 pictures per month for a maximum of 200 pictures. For \$24.95/year the Pro membership gives the user unlimited storage of pictures and uploads. Membership is not required to view pictures, but non-members cannot upload pictures, add comments, join groups, or use pictures.

Members can choose from a wide array of options on the website. One can personalize their account with an icon identifier and personal user name. You can choose the viewers of your pictures: family, friends, children, or the public. You can add descriptions, tag lines, and comments to pictures. Tag lines allow you to organize and sort your photos. By commenting and receiving comments you can have a dialogue with viewers. Posting pictures can also serve as a great forum for identification. Flickr automatically copyrights your photos, with all rights reserved. However, you can choose to use Creative Commons whereby you choose different options for public use of your photos, i.e. non-commercial use of your pictures with attribution and no derivatives. As members,



WGNSS Entomology Group meeting participants, 24 October 2010. L-R: Burt Noll, Ryan Fairbanks, Phil Koenig, Abby Lee, John Christensen, Rich Thoma, Jane Walker, George Diehl, Sue Gustafson, Ted MacRae. Photo by Anne McCormack.

one can search Flickr pictures to use for presentations. By going to compfight.com one can search for pictures by subject and compfight will search the Flickr website for pictures with that subject tag line available for non-commercial use through Creative Commons.

Flickr allows members to start and join groups. Groups share pictures around a theme or topic. Each group defines its own ground rules for joining, that is what kind of pictures it will accept. Anne has started a WGNSS group “Nature Study with WGNSS” [\[www.flickr.com/groups/wgnss\]](http://www.flickr.com/groups/wgnss). With 46 members already, 406 photos have been added to the WGNSS Flickr site. Anne has a link to Flickr from the website she maintains for WGNSS [\[http://www.wgnss.org\]](http://www.wgnss.org) “events update”. Ted MacRae was so impressed with Anne’s presentation, he has joined and his great pictures of tiger beetles and other insects have already received several comments. To entice further use of “Nature Study with WGNSS”, Anne welcomes those who join by adding a comment to their pictures. As the group grows, she would like help with adding these welcome comments. Be sure to check out Flickr and join today.

It was a great night. The City Museum was fun. Thanks go to George Diehl for hosting our meeting. He took us up to see the roof and a fantastic thunder storm. What a wild venue! Thanks again George for hosting our meeting, and Anne for a wonderful presentation.



Special Delivery

Ted C. MacRae¹



Entomology is, of course, a wide and varied discipline that touches any number of human endeavors – from the practical (agriculture, food production, public health) to the esoteric (genetics, ecology, cultural symbolism). Despite this far-reach, however, entomologists themselves are not all that common, and the number of people who know a fair amount about insects without actually being an entomologist is rather small. Compare this to ornithology, where the number of people who know a good deal about birds exceeds by great measure the number of actual ornithologists.

This is merely an observation and not a criticism – insects are just simply too small and too diverse for most lay people to even attempt identification.

That’s good for me, as those who have an interest in insects but not the expertise to identify them often turn to me for help. For most of my adult life, I’ve been “the bug guy” at social gatherings, often leading to questions such as, “I’ve got this green bug on my bushes – what is it?” Sometimes the insect or its situation are described well enough that I can offer a guess (just a guess!), more often I can only say, “I’d have to see it to know for sure.”

Despite not always being able to answer the question, I really do enjoy serving as this very direct link between the science of entomology and the general public, as it gives me a chance to

present insects and their study in a favorable light and with a sense of passion.

The level of this interaction has increased greatly during the past two years since launching **Beetles in the Bush**. Now, my “clients” include not just family, friends, their friends, etc., but an unrestricted internet audience. I am regularly contacted by those who stumble upon this blog during a Google search in their attempt to identify some insect they’ve encountered. Again, I’m not always able to answer their queries, but I do try to offer my best guess. Such was the case recently when I was contacted by a resident of southwestern Missouri, who had this to say:

While messing around here in the yard this morning I came upon a beetle I thought interesting. First time I have seen one like this. I Have a Simon and Schusters Guide to insects guide and attempted to look up the beetle. Closest thing I could find was a flat-headed borer (BUPRESTIS GIBBSII) from the Pacific Northwest. Emerald green with yellow slash or stripe along the side of the head. four matching yellow spots on the wing covers, first pair closest to the front of the covers elongated. Second set smaller, third set smaller yet and then tiny spots on the wing cover tips. Yellow center pattern along the bottom from head to tail. Beetle length almost 2.5 cm. I am not much of a insect man but when I get something stuck in my head I need to know what I have. Can you help me and if you do not have one in your collection do you want this one?

This is perhaps the best, most detailed description of an insect I’ve ever received from a non-specialist wanting an identification, but the reference to it resembling *Buprestis gibbsii* was enough to immediately bring to mind an eastern U.S. relative – *B. rufipes*. I responded that it was likely the latter, and since they had offered to send it to me I would be happy to receive it and confirm its identity. I instructed them to wrap the beetle loosely in a square of toilet paper, put that in a film canister or other small, sturdy box, and slip that inside a padded envelope and mail it to me. A few days later a small padded envelope arrived at my office, and inside was a film canister. I popped the lid to find it stuffed full with tissue paper, but I noted that the tissue seemed all chewed up. I pulled out the tissue and unfolded it, and there was no beetle – oh no, was it alive, and did it chew its way out? I looked inside the canister, almost expecting to see a hole chewed

¹ Reprinted from an article posted July 13, 2010 on the author’s website: <http://beetlesinthebush.wordpress.com>. All photos by the author.



though it, and there at the bottom sat a most stunning example of *B. rufipes* (literally meaning [red-legged buprestis](#)). I hadn't expected the specimen to be sent alive when I gave my mailing instructions (but I did not, after all, specify that it should be otherwise), and I felt a little sorry for the beast when I saw it drinking eagerly after I put it in a terrarium with wood chips and a stick and misted it with water. Once it was rehydrated, I was glad to have this unexpected opportunity to photograph a living individual of this beautiful species.

Buprestis rufipes is not a rare species, but it is certainly not very commonly encountered either.

For many years the only specimens in my collection were two dead adults that I found in Japanese beetle traps that I monitored during my early days with the Department of Agriculture. I finally cued into this species when I chopped some big buprestid larvae out of the trunk sapwood of a very large, standing dead slippery elm (*Ulmus rubra*). They resembled the larvae of *Chrysobothris* but were larger and not so flattened, so I retrieved my chain saw from the truck and extricated the lower 6ft of the 6-8" diameter trunk from the swamp in which it was growing. My efforts were rewarded with a nice series of this species, and I have since reared it from even larger trunk sections of *Acer saccharum* and *Quercus palustris*. In each case, the wood was in early stages of decay with the bark partly sloughed and the outer wood layer slightly softened (MacRae and Nelson 2003, MacRae

REFERENCES:

2006). Knull (1925) recorded this species breeding in a variety of other hardwoods, thus, it would seem that the size and condition of the wood are more important than the species.

[Knull, J. N. 1925.](#) The Buprestidae of Pennsylvania (Coleoptera). *Ohio State University Studies* 2(2):1-71.

[MacRae, T. C., and G. H. Nelson. 2003.](#) Distributional and biological notes on Buprestidae (Coleoptera) in North and Central America and the West Indies, with validation of one species. *The Coleopterists Bulletin* 57(1):57-70.

[MacRae, T. C. 2006.](#) Distributional and biological notes on North American Buprestidae (Coleoptera), with comments on variation in *Anthaxia* (*Haplantboxia*) *viridicornis* (Say) and *A. (H.) viridifrons* Gory. *The Pan-Pacific Entomologist* 82(2):166-199.



Flaming the Debate

*Ted C. MacRae*¹

As my interest in prairie insects has increased over the past few years, so has my interest in their conservation. Many insects are restricted to prairies through dependence upon prairie plants or their unique physical and trophic characteristics. Thus, preservation of not only prairie plants but their insect associates as well is a major goal of conservationists. The task is daunting – for example only ~1% of tallgrass prairie remains in the central U.S., the rest long ago converted to agriculture or otherwise irreparably altered.

Prairies are dynamic natural communities that rely upon disturbance – this need to “disturb to preserve” creates an oxymoronic conundrum for restoration ecologists that is made even more difficult by the fragmented nature of today's prairie



Eastern redcedar encroaching loess hilltop prairie, a critically imperiled natural community in Missouri.

¹ Reprinted from an article posted September 5, 2010 on the author's website: <http://beetlesinthebush.wordpress.com>
All photos by the author.

landscape. The situation here in Missouri is even more difficult, as nearly all of our grassland preserves (tallgrass prairie, sand prairie, loess hilltop prairie and glades) are exceedingly small and highly disjunct relicts not connected as parts of larger systems.

In recent years, prescribed burning has become the management tactic of choice for restoring and maintaining grassland preserves. There are good reasons for this – not only are increased floral diversity and reversal of woody encroachment well-documented responses to fire, but burning is also highly cost-effective (a critical consideration in today's climate of shrinking public budgets). As the use of prescribed burning on grassland preserves has become widely adopted, however, concerns about the impacts of fire on invertebrate populations have been raised. The subject is now an area of intense research, but studies are hampered by the limited availability of large, long-unburned tracts of native prairie, and no scientific consensus has yet emerged. Regrettably, the debate has polarized into "pro-" and "anti-fire" camps that seem unable to communicate with each other constructively. This is unfortunate, since both ends of the spectrum offer ideas that could be used to achieve the goal of preserving prairie remnants while mitigating concerns about invertebrate impacts. I have previously expressed [my own views](#) on the subject, a position that I suspect some might mistakenly characterize as "anti-fire." While I do support the use of prescribed burning, I do not support its use with no consideration of other prairie management strategies such as haying and light grazing (not to be confused with the heavy, abusive, unmanaged kind of grazing that has degraded so much of our landscape). All of these tools (as well as parcels that receive no management at all) have potential value in prairie management and should be considered.

Those interested in potential fire impacts on prairie invertebrates will be interested in this latest salvo by Scott Swengel and colleagues, who used metadata analysis to correlate declines of prairie butterflies in the Midwest with the widespread adoption of prescribed burning as a management tactic. The authors present convincing evidence that tallgrass prairie butterfly populations are not co-evolved with fire regimes currently used for

prairie management, although their conclusions will no doubt be challenged. Nevertheless, until a firmer scientific consensus can be achieved, prudence should dictate some measure of caution in the use of fire as an exclusive prairie management tactic.

Dear Colleagues:

*We are pleased to announce a new article by Scott Swengel, Dennis Schlicht, Frank Olsen, and Ann Swengel, based on long-term data that has just been published online, **Declines of prairie butterflies in the midwestern USA**. This paper is available free from Springer Open Choice at <http://www.springerlink.com/content/rv6k823m46226563/> or by going to the Journal of Insect Conservation Online First section and scanning through the articles in ascending number order until getting to articles posted 13 August 2010.*

The trends of tallgrass prairie skippers shown here, although disastrous, underestimate the decline in Iowa and Minnesota for several reasons:

- 1. In statistical testing we only include sites with adequate data for testing, which eliminates many sites from inclusion that had 100% declines of a specialist we know about.*
- 2. Nearly all sites with long time series were the top sites to begin with, which are likely to take a longer time to show large declines than medium or low-quality sites.*
- 3. Recent government sponsored surveys not included here show another round of huge declines for Poweshiek Skipperling in Iowa and Minnesota.*
- 4. Some species went undetectable by the late 1980s and early 1990s, so didn't register as a presence when the study began. Hence, they cannot show a decline since then.*

Some good news is that conservation based on existing knowledge of specialists' management responses gets far better results (as shown by Regal Fritillaries and Karner Blues in Wisconsin than typical management. So declines like this are not inevitable.

The Ecological Interpretations and Conservation Conclusion section of Discussion contain some of our new insights explaining the observed about land-use effects on prairies and butterflies.

Scott Swengel

My thanks to Scott Swengel for giving me permission to reprint his introduction.

REFERENCE:

Swengel, S. R., D. Schlicht, F. Olsen & A. B. Swengel. 2010. Declines of prairie butterflies in the midwestern USA. *Journal of Insect Conservation*. DOI 10.1007/s10841-010-9323-1.

St. Louis Zoo Lecture Series

*Jim Jordan*¹

The St. Louis Zoo presents two lecture series, *Science Seminar Series* and *Conservation Conversations*, co-sponsored by the Academy of Science – St. Louis. Programs are held in the Living World, with free parking available in the North parking lot. These lectures are **FREE** and open to the general public, no reservations required. Visit www.stlzoo.org or call (314) 646-4544 for more information.

SCIENCE SEMINAR SERIES

Wednesday, December 1, 7:30 – 9:00 p.m.

“Flipping the Switch: Brain Science Potentials for Smart Grid Technology” – Ganesh Kumar Venayagamoorthy, Ph.D., 2010 St. Louis Outstanding Scientist Award recipient, Academy of Science – St. Louis; Associate Professor, Department of Electrical and Computer Engineering, and founder, Real-Time Power and Intelligent Systems Laboratory, Missouri University of Science and Technology.

No program in January.

CONSERVATION CONVERSATIONS

No program in December.

Tuesday, January 18, 7:30 – 9:00 p.m.

“Aiding Armenian Vipers” – Jeff Ettling, Curator of Herps/Aquatics; Project Manager, Armenian Viper Conservation Center.

¹ Curator of Education, Saint Louis Zoo.

Group Activity/Walk Schedules

ORNITHOLOGY GROUP

Chair – David Becher

Saturday Bird Walks (Leader – David Becher).

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. If you have questions, contact David at (314) 576-1146 or DavidBecher@msn.com

Thursday Bird Walks (Leader – Jackie Chain).

Jackie Chain will be leading Thursday birding trips from Des Peres Park parking lot (east side of Ballas Rd. just north of Manchester Rd.). Meeting time is 8:30 a.m., and return is usually by 3:30 p.m. (but you may leave at your convenience). Bring lunch, beverage, binoculars and if you have one a scope/tripod. If you have questions, contact Jackie at (314) 644-5998 or chainjac@sbcglobal.net

BOTANY GROUP

Chair – George Van Brunt

Monday Botany Walks (Leader – Fr. James Sullivan; now in his 44th year as Botany Walk Leader!). 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 following Monday's trip.

ENTOMOLOGY GROUP

Co-Chairs – Phil Koenig and Jane Walker

Thursday, November 18, 7:00 – 9:00 p.m.

Mike Arduser will host the meeting at Bush Memorial Conservation Area. Rich Thoma will give a talk on the “Evolution of Insect Flight.” Please note this meeting is on a Thursday night.

There will be no meeting in December.

January meeting details to be announced.

NATURE BOOK CLUB

Chair – Pat Diener

The Nature Book Club is a group of naturalists who meet once a month to discuss a book chosen for its general interest from botany to zoology. The group meets at members' homes on the second Tuesday of the month from 1:30–3:00 p.m. Hosts would appreciate a call in advance of the meeting. All are welcome – especially newcomers!

Tuesday, December 14, 1:30 – 3:00 p.m.

The Mountains of Saint Francis [Italy]: Discovering the Geological Events that Shaped our Earth, by Walter Alvarez. Pat Diener, (314) 962-8665.

Tuesday, January 11, 1:30 – 3:00 p.m.

Green Metropolis, by David Owen. Meeting place TBD.

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

Editor's Corner

Ted C. MacRae

MORE COLOR FOR NATURE NOTES

Email subscribers may notice a touch of color in this issue's masthead. My thanks to Phil Koenig, Entomology Group Co-Chair, for sprucing up the black and white version we've used for many years. The small amount of color in this version evokes the stark beauty of the winter months; however, we've created additional versions to reflect the vibrancy of spring and summer and crispness of autumn – these will appear in future issues to reflect the season. We hope you like the new designs and (as always) welcome your feedback.

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 can always print your electronic copy of *Nature Notes* if you wish (if you do, please be sure to use both sides of the paper ☺). The electronic newsletter is sent as a PDF, which can be opened 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 articles from other sources requires permission from the copyright holder. Previous *Nature Notes* 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!

Appendix 1: Fall Migration Sightings

Early Arrival Dates/Last Dates Seen/High Counts

DATE	SPECIES	LOCATION	OBSERVER(S)
9/1	Nashville Warbler, Black-throated Blue	Tower Grove Park	Chris McClarren
9/2	2 Ospreys	Riverlands	Jackie Chain, Thursday Group
9/2	Gray-cheeked Thrush, Wood Thrush	Tower Grove Park	Chris McClarren
9/2	300 Nighthawks, flying at eye level	Jefferson County	Mark Peters
9/2	Veery	TGP	Chris McClarren
9/3	Pintails	Mitchie Road	Bill Rudden
9/5	Ruddy Turnstone	Mitchie Road	Chris McClarren, Tom Bormann
9/7	Yellow-crowned Night Heron	Horseshoe Lake	Frank Holmes
9/8	10 Chestnut-sided Warblers	TGP	Chris McClarren
9/9	Northern Harrier	Riverlands	Jackie Chain, Thursday Group
9/10	10 Black-and-white Warblers	TGP	Chris McClarren
9/11	4 Blackburnian Warblers	TGP	Chris McClarren
9/12	Golden Plover	Monroe County	Bill Rudden
9/14	Ruby-crowned Kinglet, Brewster's Warbler	Tower Grove Park	Chris McClarren
9/14	White-faced Ibis	Simpson Lake	David Marjamaa
9/15	Summer Tanager	Tower Grove Park	Chris McClarren
9/16	Laughing Gull, Franklin's Gull, Herring Gull (all first winter)	Riverlands	Bill Rudden
9/16	Yellow-bellied Sapsucker, Rose-breasted Grosbeak	Tower Grove Park	Chris McClarren
9/17	Baird's Sandpiper	Confluence SP	Bill Rudden
9/17	20 Redstarts	TGP	Chris McClarren
9/18	American Pipit	Monroe County	Bill Rudden
9/19	Lesser Black-backed Gull	Horseshoe Lake	Bill Rudden
9/20	Hundreds of Coots	Horseshoe Lake	Frank Holmes
9/20	Blackpoll Warbler	TGP	Chris McClarren, JZ
9/21	Parasitic Jaeger, Sabine's Gull	Carlyle Lake	Pat Lueders, Dan Kassebaum
9/22	Cave Swallow	Carlyle Lake	Dan Kassebaum
9/23	Merlin	Carlyle Lake	Jackie Chain, Thursday Group
9/23	Ruby-throated Hummingbird	TGP	Chris McClarren
9/24	Red-breasted Nuthatch	Tower Grove Park	Jim Ziebol
9/24	Yellow-breasted Chat	TGP	Chris McClarren
9/25	Yellow-rumped Warbler, Golden-crowned Kinglet, Brown Creeper	Tower Grove Park	Chris McClarren, Mike Treffert
9/25	854 Broad-winged Hawks, 4 Cooper's Hawks	Jefferson County	Mark Peters
9/26	Common Tern	Horseshoe Lake	Bill Rudden
9/26	14 Nashville Warblers, 12 Ruby-crowned Kinglets	TGP	Chris McClarren
9/27	Winter Wren	Tower Grove Park	Chris McClarren
9/27	Swamp, Clay-colored, and Lincoln's Sparrows, 250 Pelicans, 65 Pied-billed Grebes	Horseshoe Lake	Frank Holmes
9/27	30+ Black-throated Green Warblers	TGP	Chris McClarren
9/28	Palm Warbler, 40+ Golden-crowned Kinglets	TGP	Chris McClarren
10/1	Junco, White-throated Sparrow	TGP	Chris McClarren
10/2	White-crowned Sparrow	BK Leach	Josh Uffman
10/3	40 Cattle Egrets	Horseshoe Lake	Yvonne Homeyer, JZ
10/4	Northern Parula	TGP	Chris McClarren
10/7	50+ Swamp Sparrows, Catbird	TGP	Chris McClarren, JZ
10/11	5 Purple Finches, 100 Yellow-rumped Warblers, 50 Tennessee Warblers	TGP	Chris McClarren
10/12	3 Cape May Warblers	TGP	Jim Ziebol
10/13	Yellow-billed Cuckoo	Bridgeton	Al Smith
10/13	Blackburnian Warbler, 3 Ovenbirds	TGP	Chris McClarren
10/14	Le Conte's Sparrow, Pewee	TGP	Chris McClarren
10/15	Woodcock, Magnolia Warbler	TGP	Chris McClarren
10/16	Sharp-tailed Sparrow	Riverlands	David Becher, Saturday Group
10/16	2 Redstarts	TGP	Chris McClarren
10/18	Stilt Sandpipers	Riverlands	Bill Rudden
10/20	Northern Parula, 2 Turkey Vultures	TGP	Chris McClarren
10/23	Chestnut-sided Warbler	TGP	Chris McClarren
10/25	Wilson's Warbler	TGP	Chris McClarren
10/30	Horned Grebe	Creve Coeur Lake	Yvonne Homeyer, Sue Gustafson
10/31	Tennessee Warbler, Orange-crowned Warbler, Black-throated Green Warbler	TGP	Jim Ziebol
10/31	30 Franklin's Gulls	Horseshoe Lake	Frank Holmes
11/1	2 Surf Scoters	Riverlands	Jackie Chain, Jean Cook
11/3	20+ Sandhill Cranes, 3 Whooping Cranes	St. Louis County	Bill Heady