Early November was a busy time for WGNSS members, with Election Day, followed on November 5 by the Whitney and Anna Harris Conservation Forum at the St. Louis Zoo. WGNSS was represented at this event by Education Chair Rich Thoma, who staffed our display table and educated many attendees about WGNSS and our scholarship program. Many thanks to Rich for attending the Forum and helping to spread the word about WGNSS, in spite of his broken leg!

On November 6, our general program meeting featured our members' “show and tell” evening. Again this year, members shared their adventures and talents, with presentations on botanical travels in Missouri and Arkansas, nature exploration in Central and South America, travels to Yellowstone National Park and Colorado, enlightening photos of lightning, and handmade screen prints of wildflower art. Thank you to all who attended and shared your skills and experiences.

There will be no program meeting in December. Instead, as in years past, WGNSS will be celebrating the holidays with the St. Louis Audubon Society. This year’s event will be held on Sunday afternoon, December 7 from 1:30-4 p.m. at The Green Center in University City. Further details may be found elsewhere in this newsletter. We look forward to seeing you there!

WGNSS continues to seek a newsletter editor to succeed Jim Adams, who has announced he will be retiring from this position in December. If you are interested in being Nature Notes editor, know someone who might be interested, or would like more information about what is involved, please let me know.

Best wishes to all WGNSS members for a holiday season filled with all the things you enjoy!
Celebrate the Holidays with WGNSS at The Green Center
Sunday, December 7, 2008 from 1:30-4:00 p.m.

The Webster Groves Nature Study Society will once again be gathering with the St. Louis Audubon Society to celebrate the holidays, this year at The Green Center in University City. This special event will be held on Sunday, December 7 from 1:30 to 4:00 p.m. Parking is available in the Kaufman Park lot next to The Green Center.

Please bring a ready-to-serve appetizer or dessert to share. Beverages will be provided.

Drawings will be held during the afternoon for attendance prizes, so remember to register for the drawings when you arrive.

Directions to The Green Center at 8025 Blackberry Avenue:
From Hanley Road: Traveling north on Hanley Road, cross Delmar Blvd. Continue on Hanley Road to Blackberry Avenue, the fourth street north of Delmar. Turn left (west) on Blackberry Avenue.
From Interstate 170: Take the Delmar Blvd. Exit from I-170. Go east on Delmar three stoplights to North and South Road. Turn left (north) and proceed to Blackberry Avenue. Turn left (west) on Blackberry Avenue.

We hope to see you there!

HISTORIAN’S CORNER – Jim Adams

This month’s article features Aldo Leopold (1887-1948), an American naturalist whose eloquent natural history essays are equated by many with those of John Muir and Henry David Thoreau. He is best known for his journals of field trips in lower California, New Mexico, Canada and Wisconsin. He taught natural history at the University of Wisconsin and was author of a *Sand County Almanac*. He died in 1948 while fighting a brush fire on a neighbor’s farm. He was posthumously awarded the John Burroughs Medal in 1978 for his lifetime achievements in the field of conservation. At the time of his death he was an advisor on conservation for the United Nations.

He is a favorite outdoor writer of mine because of his humorous accounts of outdoor camping and attendant mishaps. On the serious side, his essays on land use ethics are profound and thought-provoking.

OCTOBER BIRD REPORT
Jim Ziebol & Yvonne Homeyer

Introduction: This fall, Horseshoe Lake was the place to see LeConte’s Sparrows. Every weekend in October, birders got great photos and video of LeConte’s on Walker’s Island and the wet field near Nichols Pond. It was also an above-average year for Vesper Sparrows.

Sightings: A Common Loon appeared at HL on 10/29 (FH). A Horned Grebe found at HL on 10/5 was somewhat early (FH) and on 10/19, a Horned Grebe was seen there along with several Bonaparte’s Gulls (DB, Saturday Group). Keith McMullen reported an Eared Grebe at the Reider Rd. sewage lagoon on 10/18. Two thousand Pelicans were estimated at Two River NWR on 10/11 (MT) and 500+ were found at HL on 10/23 (FH). On 10/19, a flock of 150 Cormorants was seen along the north shore of HL (FH). On 10/5, 25 Little Blue Herons, 2 Snowy Egrets, 5 Black-crowned Night Herons, a Green Heron, and 6 Franklin’s Gulls were present at HL (FH, JZ). A Little Blue Heron and a Cattle Egret were seen at Two Rivers NWR on 10/11 (MT). On 10/12, 25 Great Egrets and a Black-crowned Night Heron were still being seen at HL and the last date for a Little Blue Heron was 10/24 (JZ, FH). Jerry Ingles reported 4 White-faced Ibis at Two Rivers NWR on 10/11. On 10/30, the Thursday Group reported Greater White-fronted Geese at CC (J Chain). A Piping Plover, found at CL on 10/19, was somewhat late (DK, MS). On 10/20, David Rogles had a terrific day at BK Leach and Clarence Cannon, observing 17 species of shorebirds. At BK Leach, he counted 60+ Stilt Sandpipers, 100 Dunlin, 60+ Pectoral Sandpipers, 1 Semipalmated, 1 Western Sandpiper, a probably Red Knot, 2 Baird’s Sandpipers, 60+ Wilson’s Snipe, 150 Killdeer, a few Long-billed Dowitchers, 2 Sanderling, a Ruddy Turnstone, and a Black-bellied Plover. At Clarence Cannon, he observed a Red-necked Phalarope, 9 Black-bellied Plovers, and 183 Long-billed Dowitchers. A very large flock of Killdeer, numbering around 240 individuals, was found at HL on 10/23 (FH). Bill Rudden reported a Golden Plover on Bend Road, HL, on 10/23. On 10/25, a Black-bellied Plover and 2 Dunlin were observed at Riverlands (CA, CK). Two more Black-bellied Plovers, 8 Snipe, and a Lesser Yellowlegs were also seen at Riverlands on 10/26 (D Rogles). Four Greater Yellowlegs and 2 Horned Grebes were good birds at Riverlands on 10/26 (MR).

Nick Barber observed a Sharp-shinned Hawk at Resurrection Cemetery on 10/17. A Swainson’s Hawk was seen at CL on 10/27 (DK). The Harlan’s Hawk returned to its perch at Sand Prairie Lane and Bischoff Road on 10/15 (FH). Bill Rudden encountered a Merlin chasing two N. Harriers in Monroe County, IL on 10/25 (photos on MoBirds). Another Merlin was seen at School House Road and Orton Road on 10/26 (CA). A somewhat late Yellow-billed Cuckoo was found at HL on 10/16 (FH). On 10/1, Sherry McCowan found a Yellow-bellied Sapsucker in FP. On 10/11, Mike Thelen estimated 400 each of Tree Swallow and Rough-winged Swallow at Two Rivers NWR. An Olive-sided Flycatcher was a good bird at TGP on 10/4 (Red & Louise Campbell). Connie Alwood saw 2 Winter Wrens in TGP on 10/1. A late evening run through Riverlands on
10/26 turned up 100 American Pipits, 2 Vesper Sparrows, 2 Franklin’s Gulls, 2 Bonaparte’s Gulls, and a first winter Laughing Gull (D Rogles).

On 10/9, a Black-and-white Warbler and several Nashville Warblers were seen in FP (SM). A Black-throated Blue Warbler, found in TGP on 10/10, remained there until 10/13, to the delight of numerous birders (B Rudden). An apparent Worm-eating Warblers was reported from Two Rivers NWR on 10/12 (MT). On 10/1, Charlene Malone reported the following from TGP: 50 Yellow-rumped Warblers, Bay-breasted, Black-and-white, Nashville, Tennessee, plus Red-eyed and Blue-headed Vireo. On 10/16, Sherry McCowan saw 6 warbler species in FP, including an Orange-crowned. Vesper Sparrows have been seen regularly on the road by Nichols Pond, HL. In addition, Connie Alwood and Chris Kirmayer saw 2 Vesper Sparrows on Schoolhouse Road on 10/26 and 5 were seen at Orton Road by David Rogles that same day. On 10/16, Sherry McCowan found 5 species of sparrows at FP and on 10/24, she added 2 additional species, Chipping and White-crowned. On 10/5, several LeConte’s, 2 Vesper, a Grasshopper, 50+ Swamp, 6 Song, and Savannah Sparrows were seen on Walker Island (JZ, FH). On 10/11, Yvonne Homeyer spotted a Lincoln’s Sparrow at HL/203 side, and on 10/12, Jim and Yvonne found 10 LeConte’s, 1 Grasshopper, 2 White-crowned, many Swamp, Vesper, and Savannah, Sedge Wren, Common Yellowthroat and Indigo Bunting on Walker Island. On 10/10, Bill Rudden found a Sharp-tailed Sparrow along Nichols Road, HL, which was re-found the following day by Sherry McCowan who showed it to several birders, including two visitors from Columbia, MO. On 10/24, Sherry McCowan reported 7 Pine Siskins in FP. The Thursday Group visited CC on 10/30 and good birds included Greater White-fronted Goose, American Black Duck, Greater and Lesser Yellowlegs, American Pipits, and Vesper Sparrows (J Chain).

Backyard Birds: A Winter Wren appeared in Linda Virga’s yard on 10/23. Margy Terpstra reported Hermit Thrush, 2 Black-throated Green Warblers, 3 Tennessee, 2 Nashville, Orange-crowned, 2 Golden-crowned Kinglets, and a Brown Creeper at her Kirkwood home on 10/14. Dennis Bozay had a Blackburnian Warbler visit his pond in early October. Clarence Zacher reported an E. Phoebe at his home on 10/14 and on 10/24, he saw 8 Juncos and a Field Sparrow. Connie Alwood observed a hummingbird in his yard for 3 days at the end of October. Connie also saw 10 Pine Siskins on 10/30. Lori Vitt counted as many as 30 Pine Siskins at the end of October. Mike Grant found 15 Pine Siskins at his feeder on 10/25. The first Junco in Anne McCormack’s Kirkwood garden arrived on 10/18, and the last hummingbird she saw was on 10/27. On 10/26, she counted a flock of 70+ Snow Geese flying over in the evening. Her first Pine Siskin was seen on 10/27. Jim Ziebolz found a novel way of counting birds at the swale by the Jack Van pond in TGP. He set up a chair and videotaped birds bathing in the swale, and the totals for 10/11 were 26 Tennessee, 14 Black-throated Green, 8 Nashville, 6 Yellow-rump, 2 Magnolia, 1 Bay-breasted, 2 House Finch, and a few Goldfinch, all in about 30 minutes’ time. Snow Geese were flying over Frank Holmes’s house in Granite City on 10/23.

Contributors: Connie Alwood, Nick Barber, David Becher, Tom Bormann, Jackie Chain, Frank Holmes, Yvonne Homeyer, Jerry Ingles, Dan Kassebaum, Chris Kirmayer,
Charlene & Jim Malone, Sherry McCowan, Keith McMullen, Mick Richardson, David Rogles, Bill Rudden, Mark Seiffert, Mike Thelen, Clarence Zacher, Jim Ziebol.

Abbreviations: BCA, Busch Conservation Area; CC, Clarence Cannon NWR; CL, Carlyle Lake; CSP, Castlewood State Park; CBCA, Columbia Bottom Conservation Area; FP, Forest Park; HL, Horseshoe Lake; LCCL, Little Creve Coeur Lake; MBG, Missouri Botanical Garden; MTC, Marais Temps Clair; RMBS, Riverlands Migratory Bird Sanctuary; SNR, Shaw Nature Reserve; TGP, Tower Grove Park.
September 1, 2008 Botany Field Trip

Twelve botanists assembled in St. Genevieve County at Hawn State Park on a very warm, sunny morning. We explored two areas of the park. First, we botanized a glade/savannah at the northern edge of the park on Bauer Road, then we walked in forest on and near the Whispering Pines Trail.

The glade/savannah was on a south facing slope with exposed LaMotte Sandstone bedrock. LaMotte sandstone is the oldest sedimentary rock in Missouri dating back to the Cambrian (544 to 505 mya). The sediments of which these rocks are composed weathered from igneous rocks in the Ozark region. There is no calcium in the sandstone and thus the soil produced from it is acidic. The glade/savannah had areas that were completely open (glade) and areas that were sparsely populated by trees (savannah), mostly Pinus echinata (shortleaf pine) and Quercus marilandica (blackjack oak). One interesting species we found was Selaginella rupestris (rock spike moss). The genus Selaginella is closely related to Lycopodium, and they are both relatives of ancient coal forest plants. The species epithet, rupestris, means "rock-loving" which is certainly appropriate for the plant we found growing on the rocky glade. Selaginella rupestris is widely distributed in the eastern two thirds of North America and can be found as far north as Greenland. Blooming plants included Solidago nemoralis (gray goldenrod), Ambrosia bidentata (toothed ragweed), Diodia teres (rough buttonweed), Hypericum gentianoides (pineweed), Croton wildenowii (rushfoil), Spiranthes lacera (slender ladies' tresses), Polygonum tenue (slender knotweed), and Symphyotrichum patens (spreading aster). Other species growing on the slope were Vaccinium arboeum (farklberry), Vaccinium pallidum (lowbush blueberry), Talinum calycinum (large-flowered flower-of-an-hour), and Opuntia humifusa (common prickly pear).

Our forest botanizing started on the south loop of the Whispering Pines Trail and very quickly went off-trail to follow a dry, sandy streambed in search of Malaxis unifolia (Adder's-mouth orchid). Unfortunately, we never found this orchid, but we did note Lobelia cardinalis (cardinal flower), Lobelia inflata (Indian tobacco), Elephantopus carolinianus (Carolina elephant's-foot), Ageratina altissima (white snakeroot), and Cunila origanoides (dittany) in bloom. Ilex verticillata (winterberry) was covered with strikingly red fruits.

In the parking area, we discovered Pyrenanthemum albescens (white mountain mint) and Pseudognaphalium obtusifolium (sweet everlasting, fragrant cudweed) in bloom.

September 8, 2008 Botany Field Trip

On a sunny, rather warm morning, 15 botanists met at Washington State Park in Washington County. We explored a dolomite glade near the petroglyph area. One exciting find was Malvastrum hispidum (hispid false mallow), a species of conservation concern in Missouri. We found 4 of these plants in fruit on the "petroglyph" glade. Later, at another glade across the road from a bluff overlooking the Big River, Nels Holmberg found at least 12 more. This species has been reported from 10 states including Missouri, Iowa, Illinois, Kentucky, Tennessee, Arkansas, Oklahoma, Kansas, Alabama, and Virginia. In many of these states it has been reported from only a few counties. In Missouri, hispid false mallow has been reported from 52 counties; Missouri seems to be the species' "epicenter." This annual herbaceous species usually inhabits prairies, limestone and sandstone glades, and edges of bluffs. Single yellow flowers appear in the leaf axils in July and August and fruiting takes place from mid August to late October. The Latin name "malva" means mallow plant, while "-aster" is a suffix that forms nouns with perjorative sense; hence "Malvaster" means incomplete or false mallow. The ending "-um"
makes Malvaster an adjective, so *Malvastrum* means "incompletely resembling a mallow". The species epithet means hairy or bristly.

We observed *Brickellia eupatorioides* (false boneset) in flower and attended by many large black fulgorid planthoppers of the species *Poblicia fuliginosa*. In addition to false boneset, species in flower belonging to the family Asteraceae were *Cirsium altissimum* (tall thistle), *Silphium integrifolium* (rosinweed), *Helianthus hirsutus* (hairy sunflower), *Eupatorium altissimum* (tall boneset), *Rudbeckia triloba* (brown-eyed Susan), *Solidago gattingeri* (Gattinger's goldenrod), *Solidago ulmifolia* (elm-leaved goldenrod), *Prenanthes aspera* (rattlesnake root), *Symphyotrichum oblongifolium* (aromatic aster), and *Coreopsis lanceolata* (tickseed coreopsis). The latter species usually blooms in late spring and early summer. Euphors in bloom included *Euphorbia cyathophora* (painted leaf), *Chamaesyce nutans* (nodding spurge), *Euphorbia corollata* (flowering spurge), *Croton capitus* (woolly croton), and *Croton monanthogynus* (croton). Other species blooming on the glade were *Gaura longiflora* (long-flowered bee-blossum), *Lobelia spicata* (spiked lobelia), *Hedyotis nigricans* (slender-leaved bluts), *Heliotropium tenellum* (slender heliotrope), *Trichostema brachiatum* (fluxweed), *Calaminthia arkansana* (low calamint), and *Linum sulcatum* (wild flax). Monocots were represented by *Allium stellatum* (cliff onion) which was blooming all over the glade as well as *Manfreda virginica* (American agave) which was in fruit.

September 15, 2008 Field Trip. Contributed by Wayne Clark
Katy Trail State Park at Weldon Spring, MO

Nine botanists gathered at the parking lot of the Weldon Spring access to the Katy Trail State Park. Plant identification around the parking lot began before the scheduled meeting time. Plants identified included *Solidago altissima* (tall goldenrod), *Cirsium discolor* (field thistle), *Ipomoea lacunosa* (small white morning glory), *Ambrosia trifida* (giant ragweed), *Ambrosia artemisifolia* (common ragweed), and *Setaria faberi* (nodding foxtail). Near the scheduled meeting time our leader, Father Sullivan, wandered across the access road into an old cornfield. There we found *Solanum ptycanthem* (black nightshade), *Xanthium strumarium* (common cocklebur), *Spermacoce glabra* (smooth buttonweed), *Cyperus esculentus* (yellow nutgrass), and *Heterotheca subaxilars* (camphor weed). A work crew mowing a pipeline right-of-way was concerned about our presence in the field, so we proceeded to the Katy Trail and headed west. There we found *Ageratina altissima* (white snakeroot), *Equisetum hyemale* (common scouring rush), *Euphorbia dentata* (toothed spurge), *Sicyos angulatus* (bur cucumber), *Sida spinosa* (prickly sida), and *Phytolacca americana* (pokeweed) with its leaves eaten by insects. *Solidago drummondii* (Ozark goldenrod) was growing on the side of the bluff and a *Juglans nigra* (black walnut) had lost most of its leaves, leaving the fruit conspicuously hanging. A *Cornus drummondii* (rough leaved dogwood) was in fruit and a *Campanula americana* (tall bellflower) was in bloom. Continuing on the Trail we saw *Solidago gigantea* (late goldenrod), *Lactuca floridana* (Florida lettuce), *Apios americana* (ground nut), and *Ruellia strepens* (wild petunia). We explored a couple of short vehicular trails that led to water quality test wells. There we found *Plantago rugelii* (Rugel's plantain), *Plantago lanceolata* (English plantain), *Cichorium intybus* (common chicory), *Daucus carota ssp. carota* (Queen Anne's lace), *Rudbeckia triloba* (brown-eyed Susan), *Helianthus tuberosus* (Jerusalem artichoke), and *Lactuca canadensis*. Pat Harris pointed out *Phyla lanceolata* (northern frog fruit). Returning to the trail we saw *Cuphea viscosissima* (clammy cuphea), *Quercus shumardii* (Shumard oak), and *Hydrangea arborescens*
(American hydrangea). We turned around at the bridge that crossed the flooded Femme Osage Creek.

Field trip participants
Fr. Sullivan, John Oliver, Jack & Pat Harris, Larry Morrison, Tina Mathes, Jeannie Moe, Jim Wiant, Wayne Clark

September 22, 2008 Botany Field Trip

Recently WGNSS President Ann Earley received the following e-mail which she forwarded to the Botany Group.

My name is Dan Rowe and I am the Plant Manager at Unimin Corporation’s sand mine outside of Pevely Missouri. David Knisely, Private Land Conservationist for the MO Department of Conservation suggested I contact your group for assistance in conducting species inventories on a 120 acre tract that Unimin purchased in 2006. The existing Pevely plant site is a Wildlife Habitat Council certified site and (we) now have a management plan in place to certify the new property over the next couple of years. The first step in improving the property is to determine what we have to work with. If you can give me a call I can describe what we are planning on doing and how your group can participate if interested.

We responded by scheduling our field trip to explore some of this site and begin an inventory of species. Fourteen botanists (one also an entomologist, Dr. James Trager) met first at the Unimin Plant Office and drove from there to the new property. The Unimin Corporation mines sandstone in this area and crushes it to make sand. The exposed bedrock is St. Peter's formation and the loosely cemented grains of the top 40 to 60 feet of is of such high quality that the sand made from it is 99.9% silicon dioxide (SiO₂), ideal for use in making glass bottles. We parked at the previous owner's house and walked down a long, steep, grassy grade to a trail which followed the circumference of an artificial pond. The pond apparently had been created many years ago by damming a sandstone box canyon. The trail passed through forested areas and open areas, sometimes on moist soil and sometimes on sandstone bedrock. We made a good start on our inventory, listing more than 160 species of plants, insects, and amphibians.

Most of the plants we identified were in the flowering stage, but some were still blooming. These included Solanum ptycanthum (black nightshade), Silphium integrifolium (rosinweed), Symphyotrichum pilosum (white heath aster), Symphyotrichum oblancefolium (aromatic aster), Erigeron annuus (daisy fleabane), Ruellia humilis (wild petunia), Ageratina altissima (white snakeroot), Erichites hieracifolius (fireweed), Samolus parviflorus (brookweed), Solidago buckleyi (Buckley's goldenrod), Eupatorium serotinum (late boneset), Solidago petiolaris (downy goldenrod), Cunila origanoides (dittany), Agalinis tenuifolia (narrow-leaved false-foxglove), Rudbeckia triloba (brown-eyed Susan), Prenanthes alissima (tall white lettuce), Hedyotis nigricans (slender-leaved bluelets), and Cuphea viscosissima (clammy cuphea). Other plants of note were Hypericum drummondii (nits-and-lice), Acalypha rhomboidea (rhombic copperleaf), Catalpa speciosa (northern catalpa), Polygonum tenue (slender knotweed), and Strophostyles umbellata (wild bean).

Solanum ptycanthum (black nightshade) is a member of the family Solanaceae, a family of about 3000 species which have a wide geographic distribution, especially in South America. Notable members of Solanaceae include tomato (Solanum lycopersicum), potato (Solanum tuberosum), chili peppers (Capsicum sp.), eggplant (Solanum melongena), tobacco (Nicotiana tobacum), mandrake (Mandragora officinarum), jimsonweed (Datura stramonium), petunia (Petunia sp.), and belladonna or deadly nightshade (Atropa belladonna). Many plants in this family are poisonous or have some poisonous parts; some of the toxic products like atropine, have applications in medicine. Solanum ptycanthum is no exception having poisonous leaves and fruits. Black nightshade is an annual plant with hairy but not prickly stems like its close
relative *Solanum caroliniense* (horse nettle). The flower of *Solanum ptycanthum* has a star-like white corolla with 5 tapering petals that curve backward. There are 5 stamens with large yellow anthers that are appressed against the pistil. Each flower produces a single berry about 1/3 of an inch in diameter. The unripe fruit is green, turning black as it matures, hence the common name black nightshade. The leaves and unripe fruits contain the toxic alkaloid solanine and are avoided by mammalian herbivores. Birds eat the ripe fruits and scatter the seeds. The species epithet, *ptycanthum*, means having a folded flower. In the photograph below, the petals of the flower on the right are folded back, while those of the flower on the left are not.

September 29, 2008 Botany Field Trip

Ten botanists met at the Shaw Nature Reserve Office in Franklin county on a mild, but rainy fall morning. We drove to a parking area near the Dana Brown Center at the eastern end of the reserve and spent about 3 hours botanizing on the Janes Trail, Whitneys Deer Trail, Quarry Road, and Freund Ridge Road. Fortunately, the rain stopped after the first hour. Asters and their relatives dominated the plants in bloom. Asters in bloom included *Symphyotrichum turbinellum* (prairie aster), *S. lateriflorum* (white woodland aster), *S. pilosum* (white heath aster), *S. urophyllum* (blue aster), *S. oblongifolium* (aromatic aster), *S. patens* (spreading aster), *S. anomalum* (blue aster), *S. oolentangiense* (azure aster), and *S. novae-angliae* (New England aster). Other blooming members of the Asteraceae included *Heliopsis helianthoides* (sunflower heliopsis), *Solidago nemoralis* (gray goldenrod), *Brickellia eupatorioidea* (false boneset), *Eupatorium altissimum* (tall boneset), *Pseudognaphalium obtusifolium* (fragrant cudweed), *Bolonia asteroides* (false aster), *Helenium autumnale* (yellow sneezeweed), *Ageratina altissima* (white snakeroot), and *Solidago speciosa* (showy goldenrod).

We found an abundant population of *Malvasium hispidum* (hispid false mallow) with their inflated red fruits along the trails. Other plants in bloom were *Spiranthes magnicamporum* (prairie ladies' tresses), *Nothoscordum bivalve* (false garlic), *Trichostema brachiatum* (fluxweed), *Hedyotis nigricans* (slender-leaved bluets), *Cuphea viscosissima* (clammy cuphea), *Allium stellatum* (cliff onion), and *Agalinis tenuifolia* (narrow-leaved false foxglove).

Near the end of our walk, Dr. James Trager, Shaw Nature Reserve naturalist, noticed a dead caterpillar firmly affixed to a dried flower near the top of a plant. He commented that the insect had "Summit Disease". Summit Disease is a fascinating interaction between host insects and parasitic fungi of the genus *Cordyceps* of the Division Ascomycota. There are 400 species in this genus, all parasitic, mostly on insects. The insect, often a social insect like an ant, eats the
spores of the parasite. The spores germinate in the infected insect’s gut and the fungal hyphae
grow through the gut wall and into the body cavity of the insect. The insect’s behavior is
affected often manifesting itself as incessant grooming and uncontrollable twitching. The insect
climbs a plant, fastens itself near the top with its mouth, and dies. The fungal hyphae sprout
from the insect's body and firmly anchor it in place. Then the fungus sends up its fruiting body
through the insect’s exoskeleton. The fruiting body is called an ascocarp, or stromatic clava, and
its ascospores are blown away in the wind or washed away by raindrops. Social insects like ants,
bees, and termites normally leave their colonies when infected with parasites. This behavior
helps to prevent infection of the rest of the colony. It is possible that in the evolution of this
parasite-host relationship, the parasitic fungus took advantage of this innate behavior and further
modified it so that the insect not only leaves the colony, but also climbs to a high point where
wind and water can disperse the spores more effectively.
**Webster Groves Nature Study Society**
*Founded 1920*

**GROUP ACTIVITY/WALK SCHEDULES**
*November 2008 Update*

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<td>Dec. 13</td>
<td>Des Peres Park</td>
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**ORNITHOLOGY – SATURDAY BIRD WALKS** – David Becher (314-576-1146)
*(If destination not given, it’s “Where the Birds Are”. Always bring lunch.)*

**ORNITHOLOGY – THURSDAY BIRD WALKS** – Jackie Chain – Leader (314-644-5998)

A change for fall/winter trips. The Thursday group will meet at 8:30 AM at Des Peres Park for fall/winter trips beginning with the Sept. 4th trip. On birding days my cell phone will be turned on at 314-497-1628. Possible changes will be advised as necessary.

**ORNITHOLOGY - ADDITIONAL BIRD WALKS** – Jim Ziebol (314-781-7372)
*(New birders are cautioned to dress for the weather. Bring binoculars if you have them.)*

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**BOTANY WALKS** – Jeannie Moe – Co-Chair, Co-Leader (636-946-9802)

George Yatskievych – Co-Chair (314-577-9522) – Work Phone Leader – Fr. James Sullivan (starting his 42nd yr. in January, 2008)

Botany walks are on Monday. The Botany group visits many of the same locations as the Bird and Butterfly Groups: 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 Botany Group E-mails from Jack Harris (jahar@mac.com) or 314-368-0655 and receive an E-mail every Sunday, sometimes earlier, about the next Monday’s trip.

**ENTOMOLOGY GROUP ACTIVITIES** – Rich Thoma, Chair (314-965-6744)