



# Nature Notes

## Journal of the Webster Groves Nature Study Society March 2010, Vol. 82, No. 3

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### President's Corner

By Ann Earley

After what has seemed like a long winter, the arrival of spring in March is being eagerly awaited in the St. Louis area. Spring is a great time to get out and enjoy the many opportunities WGNSS provides to make the most of this season and learn more about the natural world. Please consider sharing your nature observations and experiences with fellow WGNSS members in *Nature Notes*; editor Ted MacRae reminds members that he is interested in receiving original articles and other submissions for upcoming issues.

February was a busy month for WGNSS members. Besides our annual joint program meeting with St. Louis Audubon, the month included two birding festivals, at the Missouri Botanical Garden and at Creve Coeur Park. WGNSS had a display table at both of these events. Many thanks to Paul Brockland and Rich Thoma for staffing our table during February and for helping to spread the word about WGNSS!

Our **March program meeting** will feature **WGNSS member Jack Harris**, who will provide **an update on the LaBarque Creek Watershed Conservation Plan**. Jack has been the WGNSS liaison to the LaBarque planning group as the plan was developed; he will discuss how the plan is being implemented and ways WGNSS members can be involved with future work in the area. This

meeting will be held on **Wednesday, March 3 at 7:30 p.m. at Powder Valley Nature Center**.

At our general program meeting in April, members will vote to elect Society officers and Board members. If you are interested in serving on the Board, please contact me.

New officers and Board members will be installed at the spring banquet to be held in May. Planning for the banquet is underway, and further details and registration information will be included in the next issue of *Nature Notes*.

Also at the April general meeting, WGNSS members will have the opportunity to vote on revisions to the Society Constitution and By-Laws. These documents were last revised in 1999. The Board has been reviewing both documents in recent months to change them to better reflect current practices, use of electronic communications, and to make both documents more usable by Society and Board members. The proposed revisions and additional information are included elsewhere in this newsletter.

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### March General Program Meeting

Plan to join other WGNSS members on **Wednesday, March 3 at 7:30 p.m.** at Powder Valley Nature Center for our March General Program meeting which will feature an update on the LaBarque Creek Watershed Conservation

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Plan. Jack Harris, WGNSS liaison to the LaBarque Creek Planning Group, will discuss the Conservation Plan adopted in late 2009 and will present an update on its implementation. WGNSS was instrumental in obtaining Holcim settlement funds, which allowed the Missouri Department of Conservation to purchase land in the LaBarque Creek area, and WGNSS members have been actively involved in the LaBarque Creek area in recent years with various types of research and survey work. You won't want to miss this recap of what has been going on, as well as ways you can become involved in future work there.



## November Bird Report

*Compiled by Jim Ziebol*

Late Sightings: A Vesper Sparrow at HL-FH and a Little Gull at CL-DK, both on 10/31.

On 11/1, 22 Common Loons were present at HL-FH and 20 were seen at CCL on 11/17-CM. Dan Kassebaum reported a Pacific Loon at CL on 11/7. Another one was found there by the Saturday Group-DB on 11/14. 7 Great Egrets were a good find at HL on 11/2-FH and Frank also had 5 Cattle Egrets near HL on 11/9. A Ross Goose appeared at HL on 11/15-FH. By early November, Ring-necked Pintail, Wigeon, Hooded M., Bufflehead and a Canvasback (on 11/12-FH) had all returned to HL. On 11/12-14, 14 Surf Scoters were seen at the Carlyle Sewage Lagoon-DK, CA. A Black Scoter was found at HL on 11/19-BR, FH. An adult Lesser Black-backed Gull was seen at the Causeway HL on 11/6-MT. 136 Franklin's Gulls were counted at the Borrow Pit on 11/1-FH. A 1<sup>st</sup> W Great Black-backed Gull appeared at HL on 11/21-BR.

On 11/1, 3 N. Harrier's were seen off Schoolhouse Rd. (HL)-JZ, FH. 2 Cooper's and 2 Sharp-shinned hawks were located in the HL area on 11/4-JZ. A Harlan's hawk, believed to be the same bird that wintered near HL the last several years, was seen on 11/15-BR and not seen again until 1/13-FH. Bill also recorded 2 Peregrine Falcons at HL on 11/13.

On 11/2, a Winter Wren was photographed in TGP-BR. On 11/4, Ann Kirkpatrick had a Red-breasted Nuthatch at CL. 11/14 was a very late date for a Catbird in Jefferson Co.-MP. Bill Rudden reported another Gambel's White-crowned Sparrow on 11/14. The first Lapland Longspurs were found in Monroe Co. on 11/10-BR. Both Brewer's and Rusty Blackbirds were seen near HL on 11/27-FH.

Contributors: C. Alwood (CA), D. Becher (DB), F. Holmes (FH), D. Kassebaum (DK), A. Kirkpatrick, C. Malone (CM), M. Peters (MP), B. Rudden (BR), M. Treffert (MT), J. Ziebol (JZ).

Abbreviations: CCL, Creve Coeur Lake; CL, Carlyle Lake; HL, Horseshoe Lake; TGP, Tower Grove Park.

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## December Bird Report

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*Compiled by Jim Ziebol*

On 12/3, both Tundra and Trumpeter Swans arrived at REDA-BR. A Sandhill Crane was found on Howell Island Conservation Area on 12/26-DR. On 12/19, a Cackling Goose was reported at HL-FH and another was a flyover in S. St. Louis City on 1/10-JZ. In early January, 2 Oldsquaw were seen at CL by Dan Kassebaum. Several massive flocks of Coots, estimated at 3300, remained at HL well into December-FH. By 12/20, the winter gulls were arriving at CL (Thayer's, Iceland, Glaucous, etc.)-BR. A possible partial Melanistic Bonaparte's gull was photographed by Bill Rudden on 12/25. Bill also recorded all ages of Lesser Black-backed, adult & 2<sup>nd</sup> W Thayer's, a Kumlein's Iceland and best of all a 3<sup>rd</sup> W California gull at REDA.

Two dark Morph Roughlegged Hawks were seen at CL-BR on 12/14, and on 12/15 a dark phase Red-tailed Hawk occurred there-BR. On 12/20, 3 Winter Wrens were reported from HL-FH. A Red-breasted Nuthatch was spotted at BCA on 12/1-BR. Frank Holmes reported the following late dates for HL: 12/7 Common Loon, 12/18 Cormorant and 12/15 Black-crowned Night Heron (Granite City).

Contributors: F. Holmes (FH), Dan Kassebaum, D. Rabenau DR), B. Rudden (BR), J. Ziebol (JZ).

Abbreviations: BCA, Busch Conservation Area; CL, Carlyle Lake; HL, Horseshoe Lake; REDA, Riverlands Environmental Demonstration Area.

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## December Botany Report

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*Compiled by George Van Brunt*

**December 7, 2009— Mastodon State Park,** Jefferson County, MO (contributed by George Van Brunt).

Six botanists (Jack Harris, John Oliver, Larry Morrison, Wayne Clark, Nancy Clark, and George Van Brunt) assembled on a cold (30s° F), cloudy morning at Mastodon State Park in Jefferson County. We decided to walk the Spring Branch Trail that winds through Rock Creek bottomland. Part of the trail parallels Spring Branch, which is a spring-fed (Bollefer Spring) tributary of Rock Creek. We walked the trail for a while and then went "off-trail" through the woods. We found one species in flower, a rather sad specimen of *Symphyotrichum pilosum* (white heath aster). Greenery was provided by the ground-hugging winter foliage of the natives *Rudbeckia laciniata* (goldenglow) and *Aplectrum hyemale* (Adam-and-Eve orchid), as well as the normal foliage of the invasive exotics *Duchesnea indica* (Indian strawberry), *Glechoma hederacea* (ground ivy), *Nasturtium officinale* (watercress), *Rosa multiflora* (multiflora rose), *Lonicera maackii* (bush honeysuckle), and *Euonymus alatus* (wintercreeper). The wintercreeper were quite large and well established; Wayne found the diameter of one vine to be 1.5 inches. We also found the green leaves of Christmas fern (*Polystichum acrostichoides*), so-called because it is still green at Christmas-time. Dormant woody plants which we identified from buds and bark included *Aesculus glabra* (Ohio buckeye), *Carya cordiformis* (bitternut hickory), *Lindera benzoin* (spicebush), *Platanus occidentalis* (American sycamore), *Celtis occidentalis* (hackberry), *Gleditsia triacanthos* (honey locust), *Acer saccharum* (sugar maple), *Acer negundo* (box elder), and *Maclura pomifera* (Osage orange). We found one Osage orange fruit lying on the ground and saw none in the trees.

Osage orange is a dioecious species (separate male and female trees) which produces a large yellow-green multiple fruit called a syncarp. A syncarp is formed when the fruits of many flowers in an inflorescence join together. Familiar edible examples of syncarps are mulberry, pineapple, and fig. Other non-edible syncarps are produced by sweetgum, tuliptree, sycamore, and magnolia. A plant's fruit serves as its seed dispersal organ. Many fruits are edible and the seeds are resistant to the digestive process. When an animal eats the fruit, the seeds travel through its digestive tract and pass out with its feces. Hopefully, from the plant's point

of view, the animal is far from the parent plant when this happens. Curiously, however, the large multiple fruit of the Osage orange is not eaten by any large animals although squirrels are known to tear the fruit apart to extract the seeds. It has been hypothesized that the natural dispersers of Osage orange seeds became extinct during the Pleistocene and may have included giant ground sloths, mastodons, horses, and camels. Somehow the species managed to survive in the Red River basin of Arkansas, Oklahoma, and Texas as well as in the Big Bend Area of Texas. Native Americans prized the hard, close-grained, dense wood for bows and modern farmers have used the trees as windbreaks and cattle barriers. The trees have been planted widely in North America by its new disperser, *Homo sapiens*.

The group made an interesting observation which none of us had seen before. A number of large wintercreeper vines growing on box elder trees had been "engulfed" by the box elder trees growing around and covering the vines. In each case, there was a thick protruding ridge on the box elder trunk marking the course of the vine. We knew the vine was beneath because in some places the vine was exposed, especially near the ground and sometimes higher up. This "engulfing" was not observed on other species of trees on which the wintercreeper vines were growing. We will continue to watch for this phenomenon on our winter field trips to see how widespread it is. It would be interesting to cut a cross section through one of these vine-tree complexes to see the microstructure and whether there are any vascular connections between the two species.

**December 14, 2009**— Greenway Trail, St. Louis County, MO (contributed by Wayne Clark).

It was a mostly cloudy day in the high 40s° F when fourteen botanists, one birder, and three Valley Park city officials assembled on the new trailhead parking lot on the Meramec River levee. Those present were Jack Harris, Katie Park, George Van Brunt, Fr. Sullivan, Paul Corley, Wayne and Nancy Clark, Jeannie Moe, Nels and Sandy Holmberg, Burt Noll, Bill Knight, John Oliver, Stephany Reynolds, Mitch Leachman (St Louis Audubon Society), Valley Park Mayor

Grant Young, and Aldermen Larry Mueller and Mike White.

This is the first time that the botany group has explored this new trail on the river side of the levee. The Mayor had the trailhead gate opened and led our carpool caravan down the paved trail/service road to the boat launching ramp parking lot. The ramp is across the river from Buder Park where we heard model airplanes in action. We explored the perimeter of this large parking lot. When we finished there we drove on the parking lot access trail a short distance and parked where the road made a sharp left turn. We explored the trail from there.

The plant list is as follows: *Euonymus alatus* (wintercreeper), *Chenopodium album* (pigweed, lamb's quarters), *Glechoma hederacea* (ground ivy), *Rudbeckia laciniata* (wild golden glow), *Symphotrichum lateriflorum* (white woodland aster), *Solidago altissima* (tall goldenrod), and *S. gigantea* (giant goldenrod) with bunch galls. The bunch galls are caused by the common gall midge, *Rhopalomyia solidaginus*. The midge attacks the leaf bud and causes a thick cluster of leaflets to grow at the end of the stem. Occasionally the stem may grow through the gall. This affects mostly *S. altissima* and *S. gigantea*. Continuing with the list there was *Helianthus tuberosus* (Jerusalem artichoke), *Smilax hispida* (bristly greenbrier, catbrier), *Menispermum canadense* (moonseed), *Lactuca floridana* (Florida wild lettuce), *Chasmanthium latifolium* (river oats), *Phytolacca americana* (pokeweed), *Perilla frutescens* (beefsteak plant). One *Perilla* plant was unusually tall, 62 in (1.5 m); the maximum height is usually 36 in (0.9 m). Many plants in the Meramec River floodplain exceed their published maximum height. *Symphotrichum pilosum* (heath aster) still in bloom, *Scrophularia marilandica* (figwort), *Oenothera biennis* (common evening primrose), *Rumex patientia* (patience dock), *Persicaria lapathifolia* (pale smartweed), *Alliaria petiolata* (garlic mustard), *Polygonum scandens* (climbing false buckwheat), *Verbascum thapsus* (mullein), *Verbena urticifolia* (yellow ironweed), *Verbesina alternifolia* (white vervain), *Ambrosia trifida* (giant ragweed), *Tridens flavus* (purpletop), *Sorghum halepense* (Johnson grass), *Campanula americana* (tall bellflower), *Rudbeckia triloba* (brown-eyed Susan), and *Chenopodium ambrosioides* (Mexican tea). Trees



noted were: *Acer negundo* (box elder), *Acer saccharinum* (silver maple), *Ailanthus altissima* (tree-of-heaven), *Celtis occidentalis* (northern hackberry), *Gleditsia triacanthos* (honey locust), *Gymnocladus dioica* (Kentucky coffee tree), and *Maclura pomifera* (Osage orange, hedge apple). *Maclura* is a genus that has only one species. The trees are either male or female, but the female does not need to receive pollen from a male tree to produce viable seeds. The fruit has been characterized as “An elephant fruit in a land without elephants”. The fruit is 3–4(–6) inches in diameter. When it falls it has a glow-green color. When cut it oozes a white latex sap that will melt in your mouth. If you get it on your fingers the sap will stick so tight that is best removed by a strong laundry detergent. After a few frosts, the fruit turns a bright yellow and will not ooze latex when cut. The fruit is compartmented inside like citrus and has one row of seeds at the end of the compartments about 2 cm below the surface. The wood is strong and the heartwood is the most rot resistant of the North American timbers. Native Americans used it to make bows. In the Nineteenth Century it was used to make railroad ties and hubs and rims of wagon wheels. Other trees noted were *Prunus serotina* (black cherry) and *Ulmus americana* (American elm).

At the end of the field trip most of us retired to the back room of Mayor Young’s restaurant for lunch.

#### REFERENCES:

Barlow, Connie, 2000, *The Ghosts of Evolution*, pp. 15, 119-128.

Levine, Carol, 1995, *A Guide to Wildflowers in Winter*, p. 240.

**December 21, 2009— Missouri Botanical Garden**, St. Louis, MO (text and photos contributed by Jeannie Moe).

Fourteen botanists joined at the entrance of the Ridgway Center to tour the Missouri Botanical Gardens.

We started with the holiday train show in the Floral Display Hall. The miniature trains were running around replicas of buildings at the gardens including the Climatron, Museum Building, Linnaean House, Henry Shaw’s tomb,



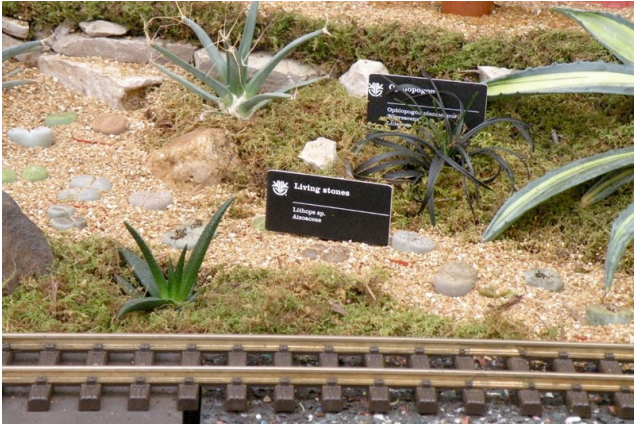
**Holiday Show in the Floral Display Hall.**

the Japanese Garden, and Shaw’s Country Home. Plants in bloom surrounding the display included *Cyclamen persicum* (Primulaceae); New Guinea impatiens, *Impatiens hawkeri* ‘Balcebsafo’ Celebrette Salmon Frost (Balsaminaceae); Pigeon berry, *Duranta erecta* ‘Gold Mound’ (Verbenaceae); *Hibiscus acetosella* ‘Haight Ashbury’ (Malvaceae); a spurge, *Euphorbia ammak* var. *variegata* (Euphorbiaceae); *Ophiopogon planiscapus* ‘Nigrescens’ (Liliaceae); *Begonia* ‘Lime Swirl’ (Begoniaceae); and Cape Primrose, *Streptocarpus* ‘Black Panther’ (Gesneriaceae). The plantings in front of the Linnaean House included many cacti and succulents. There was a stream made of gravel and living stones, *Lithops* sp. (Aizoaceae).



***Streptocarpus* "Black Panther".**

Other cacti and succulents included: *Leuchtenbergia principis* (Cactaceae); *Aloe* sp. ‘Fire Ranch’ (Liliaceae); and century plant, *Agave utabensis* subsp. *kaibabensis* (Agavaceae). ‘Eckadire’, ‘Prestige Red’, ‘Enduring Pink’, and ‘Polly’s Pink’ were the four varieties of blooming poinsettias, *Euphorbia pulcherrima*, used throughout the Holiday Show. Trees used in the



*Lithops* sp.

Holiday Show included: Japanese falsecypress, *Chamaecyparis pisifera* 'Tsumuko' (Cupressaceae); Japanese garden Hinoki cypress, *Chamaecyparis obtusa* 'Golden Sprite' (Cupressaceae); Norfolk Island pine, *Araucaria heterophylla* (Araucariaceae); and Australian tree fern, *Cyathea cooperi* (Cyatheaceae).

The botany group then moved on to the Climatron to identify plants using the book *Exotic Plants, A Golden Nature Guide* (Golden Press, New York, 1971). Many of the plants in the Climatron are in this book, including: bush clockvine, *Thunbergia erecta* (Acanthaceae) (BL<sup>1</sup>); flame of the woods, *Ixora coccinea* (Rubiaceae) (BL); powderpuff tree, *Calliandra haematocephala* (Fabaceae) (BL); bleeding heart, *Clerodendrum thomsoniae* (Verbenaceae) (BL); and sanchezia, *Sanchezia nobilis* (Acanthaceae) (BL). Plants we noted that were not in the book included: *Abutilon x hybridum* 'Albus' (Malvaceae) (BL); pitcher plant, *Nepenthes ventricosa* (Nepenthaceae) (BL); tree datura, *Brugmansia rosea* (Solanaceae) (BL); and Banana, *Musa acuminata* (Musaceae) (FR).

We made a quick tour of the Mediterranean House. I noticed *Streptocarpus* 'Black Panther' (Gesneriaceae) (BL) and *Cyclamen persicum* (Primulaceae) (BL) that we had seen in the Holiday Show. Other plants included: Mandarin orange, *Citrus reticulata* 'Dancy'; pomegranate, *Punica granatum* (Punicaceae); and asparagus fern, *Asparagus setaceus* (Liliaceae).

It was nearing noon and lunchtime, so we made a very quick tour of the Linnaean House to see the

<sup>1</sup> (BL) = in bloom; (FR) = in fruit.



Tree datura.

Camellias were in bloom, including several varieties of *Camellia japonica*: 'CrimsoCandles', 'Rosemary Kinser', 'Chic in Red' and 'Descanso Yultide' (which has a pretty, candy-stripe flower).



*Camellia japonica* "Descanso Yuletide"

Other plants in the Linnaean House included: daisy vine, *Pseudogynoxys cumingii* (Asteraceae) (BL), soft tree fern, *Dicksonia antarctica* (Dicksoniaceae); and *Streptocarpus* 'Something Special' (Gesneriaceae).

**December 28, 2009— Powder Valley Nature Center**, St. Louis County, MO (contributed by George Van Brunt).

Nineteen winter botanists assembled at the Powder Valley Nature Center for the last field trip of 2009. We began indoors with a show-and-tell by several of the members and ended with an hour-long walk on the trails.

Jack Harris began with a presentation on thorns, spines, and prickles. These terms for sharp plant structures are often used interchangeably by the layman, but they describe different botanical structures. We learned that thorns are modified



branches or stems, spines are modified leaves or stipules, and prickles are neither, but instead slender, sharp outgrowths from the epidermis or cortex. Both thorns and spines contain vascular tissue, while prickles do not. Whatever their origin, thorns, spines, and prickles are the plant's defense against herbivores. Jack backed up his explanations with many fine photos.

Next, Jeannie Moe showed us her photos of plants, insects, birds, and a tree frog, all taken at the Weldon Spring Site and Interpretive Center where she works as a horticulturist. Wayne and Nancy Clark showed us their photos of plants taken during the past 3 months in Missouri and in New Hampshire's White Mountains. Pat Harris then attempted to present her photos, but the equipment would not cooperate so we had to forgo her contribution. John Mitchell gave a short talk on geology and presented some samples of crystals, fossils, and geodes. Finally Jack Harris showed us an amazing YouTube movie of an encounter between a Lineated Woodpecker (looks very much like a Pileated Woodpecker) and a snake that had entered its nesting cavity. This encounter took place somewhere in South America and can be seen at

<http://www.youtube.com/watch?v=14yxYTOdL38>

On our walk, we practiced winter identification of shrubs and trees by examining their buds and bark. We saw *Fraxinus americana* (white ash – the brown-budded form), *Acer saccharum* (sugar maple), *Ulmus rubra* (slippery elm), *Asimina triloba* (paw-paw), *Acer negundo* (box elder), *Viburnum rufidulum* (southern black haw), *Cornus florida* (flowering dogwood), *Celtis occidentalis* (hackberry), *Platanus occidentalis* (sycamore), *Carya cordiformis* (bitternut hickory), *Cercis canadensis* (redbud), *Lindera benzoin* (spicebush), *Ptelea trifoliata* (wafer ash), *Sideroxylon lanuginosum* (woolly buckthorn), and *Ilex decidua* (deciduous holly). Paw-paw can be distinguished by its fine artist's brush-shaped black buds, while southern black haw has more rounded reddish fuzzy buds. Hackberry trees have warty bark, woolly buckthorns have thorns (they really are thorns), and box elders have opposite buds and twigs that are green at the terminal ends. Bitternut hickory has very distinctive fuzzy yellow buds. Spicebush has oppositely arranged, round flower buds and a very distinctive aroma which can be experienced

by scratching off a small amount of bark from a twig. Wafer ash is not an ash at all, but one of the few members of the citrus family in Missouri. We identified deciduous holly by its round, red fruits.



## January Entomology Report

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By *Richard S. Thoma*

Chris Hartley, entomologist at the Sophia M. Sachs Butterfly House was the guest speaker at the January WGNSS entomology group meeting. Chris was gracious enough to get permission for us to have our meeting at the Butterfly House, a most fitting place for the WGNSS Entomology Group. At the meeting, Chris introduced himself and talked about his graduate research at the University of Georgia on soil insects, in particular beetles from the family Latridiidae, in a talk titled, "Arthropod Life in the Leaf Litter Habitat with a Special Focus on the Beetle Family, Latridiidae".

As an introduction, Chris talked about the many different organisms that make up soil. We learned that the smallest creatures – bacteria, fungi, slime molds and nematodes – make up the most biomass in the soil. In fact, these organisms are so abundant that if one looked at the earth from space and were somehow able to remove all the inorganic material (rock), the living organisms that remained would leave a clear outline of where the earth had been. Bacteria, fungi, slime molds and nematodes are the major decomposers in the soil. It takes a very strong microscope to see most of these organisms. As a group, nematodes are the least understood taxonomically, and some have estimated that there are more species than any other group of organism on earth, including insects.

Chris next talked about the many arthropod groups that live in the soil. Arthropods tend to be a little bigger than the previous group. A hand lens or a dissecting microscope is all that is needed to see arthropods. The group includes mites, isopods, pseudoscorpions, millipedes, centipedes, springtails, and insects. As a group, arthropods occupy every ecological niche in the soil. Isopods and millipedes for example are herbivores, eating

any available plant material. Other arthropods such as pseudoscorpions and centipedes are fierce predators. Many different orders of insects make the soil habitat home. These include termites, earwigs, ants, fly larvae and beetles. Both the ants and termites are social insects that live in colonies that can number in the billions. We're familiar with the fact that bees and wasps care for the offspring within the nest, but did you know that earwigs also provide parental care for their offspring?

Chris' favorite group of soil animals are the beetles. Lots of different beetles live in the soil, including the predatory Carabidae and Staphylinidae, carrion-eating Silphidae, slime mold-eating Sphindidae and sap-eating Nitidulidae. However Chris' favorite group (on which he did his graduate research) is the beetle family Latridiidae, also known as minute brown scavenger beetles. There are about 1,000 species worldwide, most of which are small (>3 mm in length), brown or black, and eat mold spores. The larvae of only a few species of Latridiidae are known.

During the presentation, there was a brief discussion about how this family of beetles got its name. Several people in the audience were taught that the family name was Lathridiidae (with an "h"), as seen in several older insect text books. Chris was aware of the discrepancy and assured everyone that "Latridiidae" was the correct spelling. Apparently, a past taxonomist by the name of Illiger added the "h" because he felt the name, derived from Greek, had been improperly formed. Naming of species or groups of organisms can be a contentious issue, and the "law of priority" demands that the first person to describe a species, or in this case the family, get the naming rights. Issues arise, however, when several people describe a species at about the same time. A further complication is that names must be formed in proper Greek or Latin – an issue with the name Latridiidae. Taxonomy, as it turns out, is not the laid-back field where academics quietly organize species, but is instead one of heated discussions and even, at times, fighting. In the case of Latridiidae, many years of discussions were required before this name was settled upon, although some discussion still remains.

Within Latridiidae, Chris' Masters Degree work was on a genus of beetles known as *Alcalyptoisicion*

(see photo). Chris was able to identify 24 species, several of which were new to science, all living in the western United States. Identifying *Alcalyptoisicion* species at first was a challenge. These beetles produce a waxy exudate that makes identification difficult. The trick for Chris was to find the right organic solvent to remove the wax. With the wax gone, identification was much easier. He was able to find a series of diagnostic characteristics that allowed him to more easily identify each species. In addition, Chris' work extended the range of the family from the southwestern deserts to the non-mountainous west.



*Alcalyptoisicion atrichos* (family Latridiidae). Photo by Chris Hartley.

After the talk was over, Chris gave everyone the opportunity to look at a variety of soil insects under a microscope. This included representatives of the family Latridiidae.





## The Hermit

*By Steve and Corinne Vogel*

My wife and I have been interested in birds since 1981. We started by first learning that the little black and white bird coming to our lone feeder was indeed a Carolina Chickadee. Then of course we had to buy the common bird identification books. Wow! The color-coded U.S. maps showed there were all kinds of birds in our area just waiting for us to see. We hit the woods, the marshes, the lakes, and the open meadows. Our “life” list grew rapidly.

Then we concentrated on creating bird-friendly habitats around our yard to try to lure more “new” species for us to observe daily. Water, food, cover, and nesting areas were the key elements. We learned over the years exactly what foods were required to attract and keep the birds in our yard.

Woodpeckers, nuthatches, and brown creepers prefer suet... we have nine stations out for them. All six local woodpecker species are here daily during the winter months. Blue birds also love the suet shavings that get spilled to the ground. Peanut butter-laced cornmeal also works great.

Ground feeding birds such as sparrows (five species here) prefer white millet. We sprinkle about 12 oz on the ground daily. Juncos, mourning doves, and cardinals, love the millet. Black sunflower seed attracts a host of species including finches, blue jays, cardinals, woodpeckers, and titmice. Avoid cracked corn near the primary feeding area since it attracts squirrels. We have also designed and built suet feeders and sunflower feeders that the squirrels can't get to. We are not pestered by starlings or house sparrows since our property is deep in the woods.

On December 29, 2009, we were blessed with a very special “new” bird to our feeding area..., a Hermit Thrush. We named him “Hermit”. He was the first bird to arrive at the ground feeding area every morning for the next two weeks. Hermit was truly the proverbial early bird! We lured him to also eat peanut butter-laced cornmeal, which we placed in our outside window-ledge planter. On the 9<sup>th</sup> of January, we finally got some good movies of Hermit during the day at the



ground feeding area. We were ecstatic to have Hermit here, and we were so anxious to see his early appearance every morning to confirm that he was still here. How is he surviving since overnight temperatures approached zero? Any normal Hermit would be in Florida this time of year.

Oh! Did I mention that during the winter months, it's not unusual to have Cooper's and Sharp Shinned Hawks strafe the feeding area trying to secure a live meal? When this happens, the birds dive for cover in the adjacent brush-pile and shrubs, or simply explode into the sky to escape becoming a meal.



Well it happened! At 7:15 a.m. on the morning of January 13, 2010, the Sharp-Shinned Hawk arrived. I heard a thud against the window that overlooks the feeding area. I quickly ran to the window. To my horror, there was Hermit lying motionless in the snow on the ground. We quickly retrieved Hermit and brought him into the house. We tried to nurse him back to life by storing him in a covered shoe box for most of the day. But no life came. Hermit was indeed deceased.





Below is a link to a short video of Hermit while he was the pride of the neighborhood (the photos in this article were taken from this video). What will be our next rare visitor? Nature goes on!

<http://s13.photobucket.com/albums/a298/rockoutgr11/?action=view&current=20100109151344.flv>



## Crystallofolia (“Frost Flowers”)<sup>1</sup>

By Ted C. MacRae

While hiking the middle stretch of the Ozark Trail’s Wappapello Section, Rich Thoma and I witnessed a bounty of crystallofolia, or “frost flowers”. These fragile, yet exquisite formations are, of course, not flowers at all, nor are they true frost (which forms directly from water vapor without first condensing), but rather are thin layers of ice that form as water is drawn from cracks in plant stems and freezes upon contact with cold air. As the water continues to be drawn from the plant by capillary action, newly forming ice pushes older ice further out, creating delicate, folded, curling ribbons of ice that resemble many-layered flower petals. Air trapped within the ice upon freezing imparts a frothy white appearance.

Frost flowers are not an uncommon phenomenon, and I have seen them on more than a few occasions during my frequent off-season hikes. However, never before had either Rich or I seen

<sup>1</sup> Reprinted from an article posted January 23, 2010 on the author’s website: <http://beetlesinthebush.wordpress.com>  
All photographs by the author and Rich Thoma.



Crystallofolia (frost flowers) on dittany (*Cunila origanoides*).

the numbers that we saw during our hike on this, the second day of the New Year. Frost flowers are normally encountered during the first hard freezes of fall when the ground is not yet frozen. Water in the stems of certain plants expands as a result of the freezing air temperatures, causing vertical cracks to form along the length of the stem through which the ice ribbons are extruded. The formations are rather ephemeral, usually melting or sublimating away by late morning in fall’s typically mild daytime temperatures. As fall progresses to winter, water stores in the plant stems become depleted after several freezes or locked up when the ground itself freezes, and as a result frost flowers are rarely seen later than December in Missouri. However, it has been a wet and mild fall and early winter, and after an extended period of moisture during December, Missouri was finally gripped by a severe cold spell with lows in the single digits and daytime highs remaining down in



Frost flowers on dittany - shaded, protected areas produced the largest formations.



the teens and 20s. The saturated, yet unfrozen ground provided a good source of moisture for plant stems to draw upon, and continuous subfreezing air temperatures allowed frost flowers to persist throughout the days and attain remarkable size. The photo above was taken in late afternoon as a sinking sun shone brightly on the west-facing slope where this formation was seen, persisting in all its fragile glory.



Partial thawing during ribbon formation causes exquisite twists and turns.

In Missouri, frost flowers are primarily associated with dittany (*Cunila origanoides*), species of *Verbesina* (*V. virginica*, white crownbeard; and *V. alternifolia*, yellow ironweed), and camphor weed (*Pluchea camphorata*). Frost flowers are rarely seen on any other plant in Missouri, and I don't know what it is about these plants and not others that make them suitable for frost flower formation. Dittany is a daintily little member of the Lamiaceae, and as such has square stems – perhaps the angles on the stem are prone to splitting. However, there are many other lamiaceous plants and non-lamiaceous square-stemmed plant species in Missouri that do not form frost flowers. Likewise, *Verbesina* and *Pluchea* belong to the Asteraceae and do not have square stems. *Verbesina*, however, is a large, more robust plants with thick, pithy stems that may be capable of holding a large amount of water and mature late in the season after most other plants have already dried up, perhaps allowing them to retain sufficient moisture in the stem late enough in the season to allow frost flower formation when conditions are right. The majority of the frost flowers we saw were on dittany – dainty, delicate, fragile formations 2-3 inches across. However, at



Dittany (*Cunila origanoides*) dried stem, leaves, and fruits.

the end of the hike, as we were exploring the area around the parking lot, we found a stand of *Verbesina* (I suspect *V. alternifolia*), with which some of the most enormous and robust frost flowers that I have ever seen were associated. Following are additional views of some of the more impressive formations we saw and the plants they were associated with.



Like snowflakes, each frost flower is one-of-a-kind.





*Verbesina* sp. frost flowers were enormous - this one was approx. 5 inches wide.



Dried fruits of *Verbesina* sp. (poss. *alternifolia*), on which the largest frost flowers were seen.



## Chestnut-collard Longspur 2010

By Bill Rudden

Around lunch time, Mark Lund pulled-over along the smooth road to talk. I was parked cleaning the van windows. The sun was warming, and a feel of "this is where the parade came through" was in the air. We were at Columbia Bottom Conservation Area (CBCA), St. Louis County, Missouri. The local attorney's morning birding, as Charlene would say, "dipped on any zooties". It was early January, and CBCA had been the center of activity for area birders the past weekend. Bill Rowe, who frequents this river delta, estimated the CA held 2,000 Lapland Longspurs. A single Snow

Bunting found by Craig Paradise, triggered the house-bound birders to get out.

If you experienced the natural wonder of waves of longspurs and blackbirds, kept moving by the numerous and varied raptors, you had a winner. Josh Uffman in an email said, "It might be ten years for this to happen again." He may be right – there was a perfect combination of a long freeze, snow cover and food crops. I last witnessed this in January 1979 at Busch Conservation Area. Seasoned birders may remember that Carmen Patterson found a McCown's Longspur in that group of 2,000 birds from the far North.

On January 10, 2010, I photographed a small, sparrow-sized bird with buff underside and lacking side streaks; different than the Lapland Longspurs it fed with atop milo seed heads. Connie Alwood and Chris Kirmeier were scoping and drew my attention to the milo field. When they drove off toward the gravel road to look for the Snow Bunting, I stayed and "worked" the flock. Now, looking out the window at the same milo field, wishing that the parade would return, two Joe's drove up. Joe Pinnell, always aglow – I'm afraid he could sell me a lemon of a used car and Joe Eades – the local birding icon, stopped to exchange info. The bird activity had slowed.

After taking the three original photos, 300 more of the flock were taken, hoping to catch the bird by chance. Later, at the computer, searching through these photos, five more of the bird were found. One, a decent flight shot, shows the extensive white-sided tail with a tapering dark bar at base and short rounded wings with triple wing bars (white edged lesser, median and greater coverts). Photos of the bird feeding reveal a light brown, small-billed bird that looks like a lean House Sparrow with a buff eye-line and light-centered dark ear mark as in Smith's Longspur. BUT, the grey/tan breast with dark smudging (and tail) eliminate both Smith's and McCown's Longspurs.

Chestnut-collard Longspurs are few and hard to find and, thus, very rare birds. According to Josh Uffman's site [Showme-birds](http://Showme-birds.com), there are less than 20 records for Missouri, only four of which come from the eastern side of the state. The 2010 St. Louis area CCLO, if accepted, is the first

<sup>1</sup><http://Showme-birds.com>

photographic record and second winter record for the state. The last sighting of this bird in eastern Missouri was by Jack VanBenthuisen in November 1991 at St. Charles Airport.



<http://i29.photobucket.com/albums/c281/bilrudn/42009/1-10-10e2-1.jpg>. Photo by the author.

Record Committee new dilemma: here is a bird that was not fully identified in the field, but only later based on photographs. It makes one wonder if any of the five specimens collected were not identified until later once in the hand.



## The “overlooked, needle-tailed, thick-headed fly”

By Ted C. MacRae<sup>1</sup>

While photographing the rare [Typocerus deceptus](#) on flowers of wild hydrangea (*Hydrangea arborescens*) at [Trail of Tears State Park](#) in southeast Missouri last June, I encountered this strange fly also visiting the hydrangea blossoms. At first I thought it was some weird type of syrphid fly, but it turns out to be a member of an even more unusual group of flies in the appropriately-named genus *Stylogaster*<sup>2</sup>. Although classified in the family Conopidae (thick-

<sup>1</sup> Reprinted from an article posted August 14, 2009 by the author at <http://beetlesinthebush.wordpress.com>.

<sup>2</sup> Derived from the Latin *stilus* (needle) and the Greek γαστήρ (belly, stomach), a reference to the highly elongated female abdomen, or “tail.”

headed flies), members of this genus are placed in their own subfamily (Stylogastrinae) due to their unusual morphology and biology (obligate parasites of crickets, cockroaches and calyptrate flies). [Ninty-two described species](#) are currently placed in the genus, only two of which occur in North America (the remainder are found chiefly in the Neotropics and in sub-Saharan Africa and southeast Asia). This individual appears to be a female *S. neglecta* because of its short 2nd antennomere (antennal segment) and highly elongate 3rd antennomere (in *S. biannulata*, the 2nd antennomere is almost as long as the 3rd). Thus, the “overlooked, needle-tailed, thick-headed fly” – and who said common names are easier?



*Stylogaster neglecta* at flower of *Hydrangea arborescens*. Photo by the author.

Morphologically, stylogastrines are distinguished from other conopids by their eggs, which feature a rigid barbed tip. This, along with some behavioral observations, seems to imply a shooting oviposition technique; however, morphological evidence suggests that the eggs are forcibly jabbed into their hosts (Kotrba 1997). The larvae hatch and develop inside their host as internal parasites, but other than the egg very little is known about the life histories of species in this genus (Couri and Pont 2006). Adults are further distinguished by their long proboscis, which exceeds the length of the body when fully extended and is used to access nectar within a variety of flowers. Adult females aggressively intercept hosts in-flight for oviposition, and speculation has been made that they are obligate associates of army ants (New World subfamily Ecitoninae and Old World subfamily Dorylinae), relying upon the ants’



raiding columns to flush out their prey. However, since the genus also occurs in Madagascar and parts of Africa where army ants are completely absent, it is clear that at least some species of *Stylogaster* have no obligatory association with these ants (Stuckenberg 1963, Couri and Pont 2006).

## REFERENCES:

**Couri, M. S. and A. C. Pont. 2006.** Eggs of *Stylogaster* Macquart (Diptera: Conopidae) on Madagascan Muscids (Diptera: Muscidae). *Proceedings of the California Academy of Science* 57(16):473-478.

**Kotrba, M. 1997.** Shoot or stab? Morphological evidence on the unresolved oviposition technique in *Stylogaster* Macquart (Diptera: Conopidae), including discussion of behavioral observations. *Proceedings of the Entomological Society of Washington* 99:613-621.

**Stuckenberg, B. R. 1963.** A study on the biology of the genus *Stylogaster*, with the description of a new species from Madagascar. *Revue de Zoologie et Botanique Africaines* 68:251-275.



## Publications by Members

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**Carl Darigo. 2009.** A County Checklist of the Mosses of Maryland. *Evansia* 26(4):193-218.



## Maryland Heights Residents for Responsible Growth: 3<sup>rd</sup> Annual Trivia Night

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*By Deborah Moulton<sup>1</sup>*



Maryland Heights Residents for Responsible Growth, in conjunction with the Open Space Council, is sponsoring their 3<sup>rd</sup> annual trivia night to raise funds for

purchasing land in the Howard Bend area and to support their educational efforts. Maryland Heights Residents for Responsible Growth formed

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<sup>1</sup> Board member, Maryland Heights Residents for Responsible Growth.

in 2008 in response to development threats in the City of Maryland Heights' Comprehensive Plan for Howard Bend and Creve Coeur Park.

The event will be held on **Saturday, February 27** at the Maryland Heights Centre, 2344 McKelvey Rd., Maryland Heights, MO 63043. Doors open at 6:15 p.m., and trivia begins at 7 p.m. The cost is \$25 for individuals or \$160 for a table of 8. Soda and snacks will be provided – or bring your own (alcohol allowed). There will be raffles, games and prizes, and all funds raised from the event will be held in trust for Maryland Heights Residents for Responsible Growth for the future protection of open space in Howard Bend. Your donation helps protect green space for future generations.

Registration deadline is by mail is February 13 – send cash, check or money order payable to ‘Open Space Council’ to:

Maryland Heights Residents for Responsible Growth  
P.O. Box 28521  
St. Louis, MO 63146

Or call (314) 732-5808 to make arrangements for drop off by February 20.



## St. Louis Zoo Lecture Series

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*By Jim Jordan<sup>2</sup>*

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

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### CONSERVATION CONVERSATIONS

There is no March program.

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### SCIENCE SEMINAR SERIES

St. Louis scientists present timely topics and/or recent "discoveries."

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<sup>2</sup> Curator of Education, Saint Louis Zoo.



Wednesday, March 10, 7:30–9 p.m.

Subversive Science:

Sustainability and Architecture

Dr. Bruce Lindsey, Washington University.



## Society Constitution and By-Laws: Proposed Revisions

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*By Ann Earley*

The WGNSS Board is proposing revisions to the Society Constitution and By-Laws to be voted on by the general membership at the annual meeting in April. The existing documents have not been revised since 1999 and in some areas are no longer consistent with current practices. After reviewing various changes for several months, the Board has agreed on this updated version of these governing documents and recommends that they be approved by Society members. The goal of the changes is to make the documents more usable by Society and Board members, and to better reflect current practices and recent developments such as the use of electronic communications. An overview of the changes is included below for your reference. If you have questions or comments about the revisions, please contact me or another Board member.

### **Proposed changes to the Constitution:**

#### *Article III. Membership*

The classes of membership are changed from four to three, as the Society no longer accepts Life memberships and has not done so for some time. All current Life members will maintain that status for the duration of their lifetimes, but no new Life memberships will be accepted.

#### *Article IV. Officers*

The officers will be elected at a meeting of the Society held no later than May 31; the previous wording specified that the meeting was to be held in April. While this is the general practice, the proposed revision allows future flexibility in scheduling. Language has also been added to state that the term of office shall be two years beginning June 1.

#### *Article V. Duties of Officers*

The Secretary's duties have been stated as "keep

the minutes of Board meetings and distribute them to the Board in a timely fashion."

#### *Article VI. The Executive Board*

The position of Hospitality Chairman has been added to describe the position responsible for planning the spring banquet and the winter party and for working with the Board in the months prior to these events. The members-at-large positions have been increased from three, to up to five, to expand opportunities for serving on the Board and provide a larger pool of candidates for officer positions; the member-at-large positions would no longer be limited to two consecutive two-year terms, but would be unlimited. A provision has also been added to enable the Executive Board to transact business by email or other means of electronic communication.

#### *Article VIII. Meetings*

The annual meeting of the Society will be held no later than May 31; this replaces existing language setting the annual meeting on the second Friday in April, which is no longer a viable date for this meeting.

#### *Article IX. Quorum*

References to "active" members at a "regularly" announced meeting have been removed.

### **Proposed Changes to the By-Laws:**

#### *2. Dues*

The annual dues for each year shall be set by a majority vote of the Board. Dues shall be paid to the Treasurer by September 30 of each year. Members whose dues are more than three (changed from two) months in arrears shall be dropped from the roll. Honorary members are exempt from paying dues. References to dues amounts for other categories of membership are deleted to provide greater flexibility in considering future dues changes.

The final sentence of the By-Laws is changed to state that at the beginning of each year, the Secretary (changed from President) shall provide all Board members with a copy of the Constitution and By-Laws.

A complete copy of the proposed Constitution and By-Laws can be found below (see page 18).



## Group Activity/Walk Schedules

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### ORNITHOLOGY GROUP

David Becher, Chair—(314) 576-1146

#### Saturday Bird Walks

David Becher, Leader—(314) 576-1146

Saturday Trips meet at **8:00 A.M.**

March 6—Des Peres Park

March 20—Teal Pond at Riverlands

March 27—Des Peres Park

#### Thursday Bird Walks

Jackie Chain, Leader—(314) 644-5998

Thursday trips meet at at the Des Peres Park parking lot (east side of Ballas Rd. just north of Manchester Rd) at **8:30 A.M.** (to avoid school and rush hour traffic). Depending on what birds are around, we may continue to other areas. Bring lunch as we usually have lunch in the field unless you plan to leave early. We will normally return by 3 or 3:30 p.m. If you have questions, please contact Jackie Chain at (314) 644-5998 or

[chainjac@sbcglobal.net](mailto:chainjac@sbcglobal.net)

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### BOTANY GROUP

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

#### Botany Walks

Fr. James Sullivan, Leader

(now in his 44<sup>th</sup> 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](mailto:jahar@mac.com) or (314) 368-0655 and receive an email no later than Sunday about the next Monday's trip.

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### ENTOMOLOGY GROUP

Rich Thoma, Chair—(314) 965-6744

#### Upcoming Meetings

**Sunday, February 21, 7:00 p.m.** Jennifer Hopwood, will present “Bugs, bees and butterflies...all about the Xerces Society”. The Xerces Society is a nonprofit organization that protects wildlife through the conservation of invertebrates and their habitat. Established in 1971, the Society is at the forefront of invertebrate protection worldwide, harnessing the knowledge of scientists and the enthusiasm of citizens to implement conservation programs. Mike Arduser, will host the meeting at August A. Busch Wildlife Conservation Center. From I-270 take I-64/US40 west approximately 15 miles. Exit onto Mo 94 and drive west (left) 1.5 miles. Turn right on D and drive another 1.5 miles. Busch Wildlife Conservation Center is on the right. Go in the main entrance and follow the road signs to the main building. The meeting will take place in one of the classrooms within the main building. Please contact Richard Thoma at (314) 541-4199 should additional directions be necessary.

**Sunday, March 21, 7:00 p.m.** Jane Walker, former board member and long time member of WGNSS, will be making a presentation on those delicate insects, the damselflies. Here is a chance to learn about and identify those odonates that can fold their wings. The location for this meeting will be at the Shaw Nature Reserve in Gray Summit. Directions for this event are as follows: Take I44 west (about 22 miles from the 270 interchange) to Gray Summit. The Gray Summit I-44 exit is # 253, just two exits west of Six Flags (Allenton/Eureka). After exiting I-44, turn left, crossing over I-44. Turn right at the intersection (at the Phillips 66) and go 50 yards to the large iron gates on the left side of the road. We will be gathering at the visitor's center prior to conveying a short distance to reserves conference center. For additional assistance with directions contact Richard Thoma at 314-541-4199.

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



## Editor's Corner

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By *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 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](mailto:whittex@aol.com) to receive *Nature Notes* by email.

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### 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](mailto: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!





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## Constitution of the Webster Groves Nature Study Society (Proposed)

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### **Article I. Name**

This Association shall be known as the Webster Groves Nature Study Society (WGNSS, hereinafter referred to as the Society).

### **Article II. Purposes**

The purposes for which the Society is organized are:

1. The stimulation of public interest in nature study
2. Adult education in nature study
3. Nature education for children
4. Encouragement of amateur research in natural sciences
5. Conservation of wildlife

### **Article III. Membership**

There shall be three classes of membership: Regular, Student, and Honorary. Honorary Membership may be conferred upon any individual by the Society in recognition of special service to the Society or outstanding accomplishment in some line of nature study. The name shall be proposed by three members of the Society and approved by the Executive Board. All current Life members maintain that status for the duration of their lifetimes, but no new Life memberships will be accepted.

### **Article IV. Officers**

The officers of the Society shall consist of: President, First Vice President, Second Vice President, Secretary and Treasurer. The election shall occur at a meeting of the Society no later than May 31 each year. The term of office shall be two years beginning June 1 and no officer shall be eligible for the same office for more than two consecutive terms, with the exception of Treasurer, which shall have no limit on the number of two-year terms. In one given year, the President, First Vice President, and Second Vice President shall be elected; the following year, the Secretary and Treasurer shall be elected. Nominations shall be made by a Nominating Committee appointed by the Executive Board. This committee shall consist of at least three members. Other nominations may be made from the floor.

### **Article V. Duties of Officers**

The President shall perform the usual duties of presiding officer, shall be chairman of the Executive Board, and shall appoint all special committees of which he/she may be an ex-officio member. The First Vice President shall assume the duties of the President in the absence of the President and shall act as Program Chairman. The Second Vice President shall assume the duties of the President in the absence of the President and the First Vice President, and shall act as Publicity Chairman. The Secretary shall keep the minutes of Board meetings and distribute them to the Board in a timely fashion. The Treasurer shall receive membership dues and keep the roll of the Society, keep all accounts, pay all bills and make financial reports at the request of the Executive Board.

### **Article VI. The Executive Board**

The Executive Board shall consist of all the officers of the Society, the Editor, the Membership Chairman, the Hospitality Chairman, and up to five members-at-large. The Editor and Membership Chairman shall be appointed by the Executive Board, and the five members-at-large shall be appointed by the Executive Board. The Executive Board shall authorize the expenditure of funds, and promote and conserve the welfare of the Society. One-third of the members of the Executive Board shall constitute a quorum. The Executive Board may transact business by email or other means of electronic communication.

### **Article VII. Groups**

Special interest groups in nature study may be organized at any time by members sharing similar interests. The Chairmen of such groups are expected to participate as Executive Board members as voting members.

### **Article VIII. Meetings**

There shall be an annual meeting of the Society no later than May 31. Field trips and other meetings of whatever nature may be arranged at the discretion of the Executive Board and/or group chairmen.

### **Article IX. Quorum**

Twenty-five members at an announced meeting shall constitute a quorum for the transaction of business.

### **Article X. Amendments**

Amendments to this Constitution and By-Laws, recommended to the Executive Board and announced to the membership 30 days in advance, may be adopted at any regular or specially called meeting of the Society by a majority vote providing that a quorum is present.

## By-Laws of the Webster Groves Nature Study Society (Proposed)

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### **1. Officers**

Officers elected for a two-year term in April shall be installed at the annual banquet meeting in May.

### **2. Dues**

Regular and Student Members: The annual dues for each year shall be set by a majority vote of the Board. Dues shall be paid to the Treasurer by September 30 of each year. Members whose dues are more than three months in arrears shall be dropped from the roll. Honorary Members are exempt from paying dues.

### **3. New Members**

The name of any prospective new member shall be submitted to the Membership Chairman who will then send him/her one copy of Nature Notes together with an application for membership.

At the beginning of each year the Secretary shall provide all Board members with a copy of the Constitution and By-Laws.