

Summer 2012



The Merry Leaflet

Merry Lea Environmental Learning Center of Goshen College
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Summer at Merry Lea

“What do you do in the summertime?” Staff members often field this question from friends who assume Merry Lea operates on a school schedule. Summer at Merry Lea has its own rhythm, but it is a time of comings and goings, not a “down time.”

The quietest month at the Learning Center Building is June, after K-12 programs are over and the graduate students in environmental education complete their eleven-month program. Faculty scramble to take vacations before the incoming graduate students arrive in early July. This compact master’s degree is designed to give students a taste of all four seasons at Merry Lea, so there are no summers off.

Meanwhile, on the other side of the property at Rieth Village, students in the Agroecology Summer Intensive arrive the first week of June and stay until early August.

Add in the activities of student researchers, birdbanders, volunteers, ongoing land restoration work and the blooming of the prairie flowers, and Merry Lea continues to be a lively place, even during the sweltering dog days.

Plants Persevere, Students Thrive in Drought of 2012

For Dale Hess and the eight students in the Agroecology Summer Intensive he directs, 2012 has been the year of the drought. While the kitchen garden still sports cheerful rows of beans, sweet potatoes, cauliflower and other vegetables, they have grown at a price: Everyone involved has become very familiar with the business end of a hose. Hess says they have all spent more time watering than they would prefer.

One particular challenge is keeping the new nut orchard alive. In early April, Hess planted walnut, chestnut, hazelnut and pecan trees in a field near the Kesling Wetland. He now

refers to these 88 saplings as “our patients.” Plumbing is not available at this site, so 50-gallon drums of water are trucked in and distributed. While Hess would not have chosen to start the nut orchard this year if he had foreseen the dry weather, he expects most trees will survive to bear nuts.

Heat is another inescapable part of gardening, and the outdoor learning continued during the week in early July when temperatures hit 103 degrees.

“These students are good sports,” Hess remarked. He has also observed that heat tolerance varies depending on where his students



David Stoesz offers a chestnut tree its five-gallon ration of water. The tree is part of Merry Lea’s new nut orchard near the Kesling Farmstead. Stoesz, a 2012 Goshen College graduate from Indianapolis, Ind., is serving as an agroecology intern for the 2012-2013 year.



Director's Desk: Across the Generations

by Luke Gascho

This morning I spent a delightful hour with our new cohort of graduate students as part of their orientation to Merry Lea and the graduate program. Our conversation focused on the mission and history of Merry Lea. They asked insightful questions, and

I enjoyed sharing tidbits and stories from our past. It felt like giving them an important light to carry as they journey.

Three weeks ago, I also shared details of the Merry Lea mission, history and vision with Jonathon Schramm, who is beginning his work with us as a professor of sustainability and environmental education. What a pleasure to have him engage in this important mission, which directly matches many of his life goals! Passing on the depth and breadth of Merry Lea is invigorating and reminds me of our intergenerational identity and purpose.

I recall learning about Merry Lea when I arrived 15 years ago. I absorbed the mission of Merry Lea from Mary Jane Rieth and Larry Yoder through many conversations. Bill Minter and Dave Miller helped me understand the ways the mission statement for Merry Lea shapes the choice of programs and the facilities needed to host these programs. Marian Miller embodied a gracious hospitality that brought additional meaning to the mission, and Kerry Goodrich shared his experiences caring for the property, which demonstrated the mission in action. I recall feeling that I was being offered a very important gift.

I often find riches as I probe our archives. Many notes and stories recount the ways that Merry Lea's vision emerged as Lee and Mary Jane Rieth worked with board members to articulate purpose and direction. The master plan for Merry Lea that was assembled in 1973-1974 is a particularly inspiring artifact. The overarching purpose is found in the opening sentence of the booklet:

A unique opportunity exists to conserve, develop, and beautify nearly one thousand acres of land in Noble County, Indiana as a resource and retreat for today and future generations.

Concern for future generations was rooted in the group's thinking from the beginning, and we are privileged to carry this same vision forward in the 21st century. I marvel at how closely statements about education, nature preservation, recreation and research intersect with efforts we are undertaking now, even though these paragraphs are from 38 years ago.

What may appear as an eclectic set of activities as you read through the *Merry Leaflet* is actually a wonderful web of interactions that emerges from our age-old mission. It is humbling to think and plan for the land and the programs in ways that will be helpful in coming generations. Ω

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come from. Those from toasty climates can be counted on to lead the way on blistering days when tomatoes still need to be tied up.

Katie Janzen of Plymouth, Neb., spent last summer in her home state, working outdoor jobs while the heat index routinely hit 110.

"This has been a welcome change. We've only had a few days over 100 degrees," was Janzen's wry remark.

For Cassilda Dhanaraj of Chennai, India, the first few days were the hardest, and then her body adapted to the outdoor work. "It helps to have a goal. Knowing you need to finish weeding a row is different from just working out," Dhanaraj explained. She alternates between tasks to distract herself. Coming from a region where 104 degrees is routine may also help.

After the workday is over, the ASI students have a broad range of coping strategies available to them. They make smoothies, play in the sprinklers and often take a dip in High Lake out at Luckey's Landing. Ω



ASI member Josh Yoder hails from Tucson, Ariz., where 99 degrees is an average summer high. Photo by Carina Zehr.

Merry Lea was created with the assistance of The Nature Conservancy and through the generosity of Lee A. and Mary Jane Rieth. It is operated by Goshen College. The center provides a comprehensive program of environmental education and recreation.

ADMINISTRATION AND STAFF

Luke A. Gascho, Executive Director
Kerry Goodrich, Property Supervisor
Carol Good-Elliott, Environmental Science Educator
Dale Hess, Director of Collegiate Programs
Jane Litwiller, Environmental Educator/Maintenance
Bill F. Minter, Director of Land Management
Dave Ostergren, Director of Graduate Program

Jennifer Halteman Schrock, Public Programs
Jonathon Schramm, Assistant Professor, SEED
Ryan Sensenig, Director of Environmental Science Program at
GC & Lindsey Researcher
Paul Steury, K-12 Education Coordinator
Maria Tice, Admin. Assistant/Volunteer Coordinator
Laura Yoder, Director of the Sustainability Semester
Lisa Zinn, Assistant Professor, SEED

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The *Merry Leaflet*, published in spring, summer, fall and winter, provides news about programs and developments at Merry Lea. Jennifer Halteman Schrock is its editor and the author of articles without bylines. Look online at www.goshen.edu/merrylea/latest for more news.

Volunteers Play Vital Role in Monitoring Restorations

by Bill Minter

An important aspect of restoring native ecosystems is monitoring their response to management activities over the long term. For oak savannas, this includes monitoring changes in the composition of the plant community.

Are plants that are typically representative of this partially shaded ecosystem increasing in numbers? Are there a greater number of representative species? Is competition from non-native or invasive plant species less intense than it was before restoration? These are the kinds of questions that need attention.

In 2002, Bill Minter, director of land management, began restoration of a second degraded black oak savanna at Merry Lea—the North Sand Hill Savanna. This site is located on what was an ancient sand dune system running along the northeast edge of High Lake. More recently, it was pasture. After removing the woody understory which consisted mostly of invasive shrubs, the overstory trees were selectively thinned to create an open, park-like stand of black oak trees. This provided the right balance of sun and shade required for herbaceous (non-woody) plants native to savannas to reestablish themselves. Periodic controlled burns have been performed on the site to mimic the historic role that fire played in maintaining the partially



Volunteer researchers Doug Vendreley and Bud Wulliman conduct their study of sand dune vegetation amidst an explosion of orange butterflyweed. Photo by John Smith, Goshen, Ind., who heads up the project.

sunlit understory characteristic of oak savannas.

In 2007, a series of permanent transects were established for monitoring vegetation. This enables the field crew to sample the same area on a long-term, periodic basis. The data collected provides a better understanding of how the vegetative community is changing in response to the initial removal of woody vegetation and the ongoing periodic burning.

For the past six years, the vegetation has been monitored annually by a group of volunteers headed by Dr. John Smith. Smith was an education professor at Goshen College before he retired, but he also has a master's degree in plant science and a passion for wildflowers. Joining Smith during this summer's annual monitoring were retired public school teachers Doug Vendreley and Bud Wulliman. Along with Stan King, each of them has periodically assisted Smith

during past surveys. During the following winters, Smith summarized the previous year's data in a format that can be more easily analyzed.

An initial analysis of the first five years of monitoring data indicates that there has been about a 36% increase in the "floristic quality" of the site. This floristic quality reflects the degree to which the plant community is comprised of plant species that represent a natural area unaffected by human activities. Among the plants that contributed to increased floristic quality are hoary puccoon, large twayblade orchid and arrow-leaved violet. All were discovered by Smith during his survey work.

Restoration and management activities are labor-intensive and have long time horizons. On-going monitoring of ecosystem response to these activities is equally demanding. Merry Lea relies on volunteers like Smith, Vendreley, Wulliman and King to gather this important information. Ω



Hoary puccoon, *Lithospermum canescens*, now blooms in the spring on the Luckey's Landing sand dunes. To learn more about native wildflowers, see Smith's blog, <http://wildflowersnearyou.blogspot.com>.

Comings and Goings Keep Summer Lively

New Faces Join Merry Lea

Dr. Jonathon Schramm

Jonathon Schramm, a native of Michigan, joined Merry Lea's faculty in mid-June. He will teach pedagogy in the Master of Arts in Environmental Education program and advise graduate students as they develop curriculum. He is also overseeing the environmental problem-solving course for the Sustainability Semester in Residence. Research rounds out his job description.

How do students learn biology? What gaps in knowledge and misperceptions are common? How can these be remedied? These are questions Dr. Jonathon Schramm has been thinking about the last few years during a post-doctoral position at Michigan State University, East Lansing, Mich.

Among the projects Schramm worked on was a study aimed at helping youth of the Menominee Nation in northern Wisconsin develop a richer understanding of the forest ecosystem where they live. This project pushed Schramm to ponder how one might teach traditional indigenous knowledge in relation to Western science. Should these

subjects be taught in two tracks, toward a kind of bilingualism, or should there be a synthesis between the perspectives?

Previously, while pursuing a Ph.D. in Ecology and Evolution at Rutgers University in New Jersey, Schramm studied the invasion patterns of a non-native grass in a region of low hills in central New Jersey. He uncovered a strong link between land use history and distribution of the species.

"I'm vitally interested in seeing people develop a relationship of love and knowledge with the land that they live in, on and with," Schramm said. "I love learning more about my home landscape and enjoy sharing its surprising complexity with other people."

Schramm lives in Goshen with his wife, Katie, and their two children, Erich and Tilly.

Maria Tice

Maria Tice is the new volunteer coordinator and administrative assistant at Merry Lea. Though she began her current job in April, Tice previously did a year-long internship at Merry Lea from August 2005 to 2006.



Dr. Jonathon Schramm

As an environmental education intern, her primary responsibilities were to help teach school programs, work on curriculum development and organize Merry Lea's archives.

"What I took away from that internship was the understanding that education can be much broader than the classroom," said Tice. "It gave me the opportunity to see informal education and to realize that wonderful learning can happen when students are out of the classroom."

Tice says that the biggest change for her in returning to Merry Lea is the program development that took place in the last six years. When she left in 2006, the first phase of Reith Village had just been completed and the graduate program was not yet accredited.

"It's an exciting time to be back," Tice said, referring to the upcoming launch of the Sustainability Semester in Residence.

Since Tice left Merry Lea, she has continued to work in the field of environmental education, in settings that include a state park, an educational non-profit and a bi-county agency. Her most recent position was as a park naturalist with the Maryland-National Capital Park and Planning Commission in Mount Rainier, Maryland. Training volunteers, developing interpretive programs and managing an office are all familiar tasks for her.



Maria Tice at her work station at the hub of activity in the Learning Center Building.

Tom Hartzell

Tom Hartzell, pictured below far left, as a master's graduate, has returned to Merry Lea as an assistant to the Sustainability Semester in Residence program (SSR).

Hartzell's role includes coordinating logistics for the SSR and serving as a resident director for students. Most recently, he has canoed the Elkhart River in preparation for the canoe trip that takes place the second week of the semester.

Hartzell is originally from State College, Pa., and spent his undergrad years studying environmental science at Juniata College.

David Stoesz

Janie Beck Kreider

Each year, Merry Lea offers two yearlong internships for recent graduates. David Stoesz (see picture on page 1) graduated from Goshen College in 2012 and is now serving an internship in the agroecology program. His responsibilities range from weeding to marketing produce to overseeing student workers.

Janie Beck Kreider, a 2012 graduate of Associated Mennonite Biblical Seminary, will arrive in mid-August. Beck Kreider will divide her time between Merry Lea's public programs and Mennonite Creation Care Network. Ω

Master's Program Graduates Ten

The ten students in Merry Lea's 2011 – 2012 Master of Arts in Environmental Education program (MAEE) completed their degrees May 25. The tidbits below give a flavor of this group's contributions to Merry Lea—and the broader community. Students are listed in the order they are pictured, left to right.

Tom Hartzell's master's project unearthed some good news on the Elkhart River. Hartzell sampled river sediments both upstream and downstream from major industries. Even though the Elkhart River carries a fish advisory, he did not find mercury in the sediments.

Matt McQueen will return to teaching 8th grade science at West Side Middle School in Elkhart, Ind., but not before he participates in a two-week summer experience at the Smithsonian Institute that he was awarded by Ethos, a science education non-profit. According to Graduate Director Dave Ostergren, it's quite an honor to be chosen.

Carol Good-Elliott's ephemeral pond study will benefit visitors to Merry Lea for years to come. She prepared a detailed guide of all the species school groups are likely to encounter while dipping in the wooded wetland near the Learning Center. Good-Elliott continues as an environmental educator at Merry Lea.

Ken Merhege, Albuquerque, N. Mex., will teach in a Montessori middle school beginning this fall.

Jason Derryberry's creative writing background inspired him to study the ways children encounter animals through stories. Derryberry is transitioning to a Ph.D. program in communications in Denver, Colo.

Carli Thompson's interest in local food developed into a job designing the educational program for Cloudview Ecofarms near Ephrata, Wash.

Laurina Graber, Goshen, Ind., surveyed members of Mennonite Creation Care Network to learn about the challenges congregations face as they attempt to green their faith communities.

Aaron Goldstein, South Bend, Ind., appeared in traditional Senegalese dress during the MAEE's leadership course. Students were required to create and direct their own nature centers, thinking through everything from the mission of the organization to fundraising. Goldstein, who had been to Senegal through Goshen College's Study Service Term, chose an African setting.

Amy Berry researched Merry Lea's salamander population and designed a curriculum featuring these elusive creatures. Berry is currently working with the Louisville County Parks in Louisville, Ky.

Sara Yob's degree in engineering and experience in manufacturing brought a new set of questions to Merry Lea's classroom. Yob will return to workforce training at Grand Rapids Community College, Grand Rapids, Mich. Ω





More Summer Activity: Yoder Visits Country Known for Happiness

When Dr. Laura Yoder returns to Merry Lea this month, she will bring with her a wealth of anecdotes from Bhutan. This small Buddhist kingdom is located between China and India in the eastern Himalayas.

Bhutan is well known for its development of the Gross National Happiness Index, an indicator that measures holistic quality of life. The largely agrarian nation, identified as one of the world's top ten biodiversity hot spots, is also noted for its progressive environmental policies on renewable energy,

maintaining forest cover and promoting development that fosters local culture.

Yoder co-taught the course, Himalayan Forests, Watersheds, and Rural Livelihoods with a team of Bhutanese environmental professionals. She was hosted by the Ugyen Wangchuck Institute for Conservation and Environment, an international research and training facility. The six-week course is a summer program of the School for Field Studies.

At left, Yoder pauses by the door to the king's palace where her office was located. Ω



Bird Banders Marvel at What they Catch

Five white bags hang from a nail on the shelter, wiggling like Mexican jumping beans. Inside each one is an anxious bird, waiting its turn to be held in a human hand, weighed, examined and banded.

The birds were caught in a series of mist nets that are erected at the same spots on Merry Lea's property each year as part of the Monitoring Avian Productivity and Survivorship program (MAPS). This long-running study gathers critical data about the ecology of North American bird populations.

During the summer months, Lisa Zinn, who heads up Merry Lea's MAPS program, bands birds twice a week from 6 a.m. to about noon. Volunteers and other staff assist.

Today is a good day to listen in because Zinn is orienting Merry Lea's new graduate students in environmental education.

"You feel for the head and grasp it before you open the bag. That way, they won't escape, or bite you," she instructs as she deftly extracts a warbling vireo from one of the bags. While a vireo's bite is nothing to fear, the sharp bill of a seed-eater like a cardinal can deliver a wicked pinch.

"This bird is molting," Zinn explains, demonstrating how the vireo's feathers are growing in

tube-like shafts. She is also noting its age, gender and the condition of its feathers. Bird banders discuss these observations in an argot all their own.

"This is an SY male; J-L-J-J, F-F," Zinn says to Chelsea Frederick, who writes the appropriate codes on a data sheet that will be submitted to the Institute for Bird Populations.

Frederick is spending the summer as a student researcher at Merry Lea before heading into her senior year as an environmental science major at Goshen College.

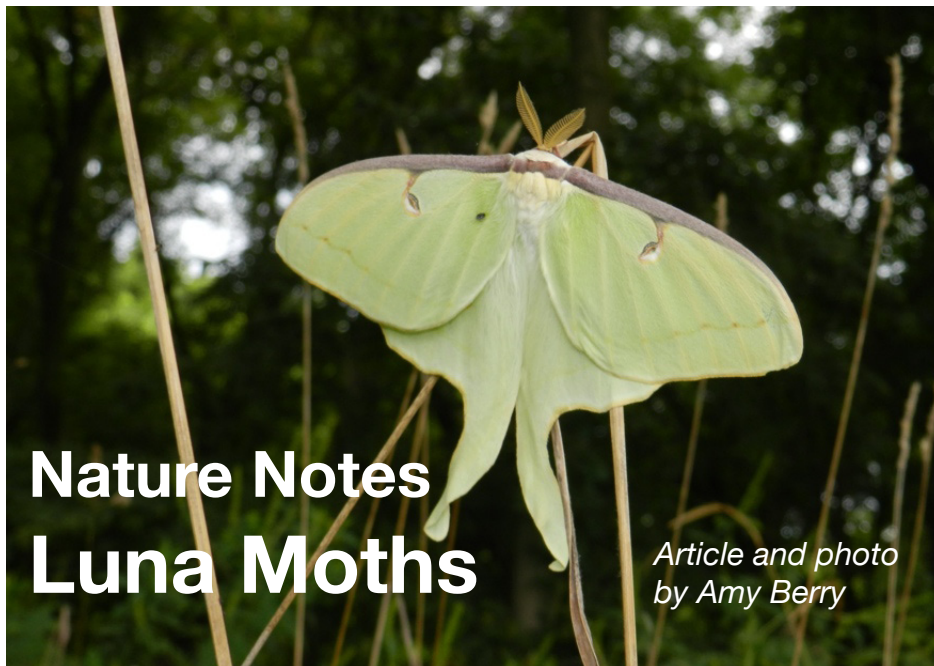
"Which bird is your favorite?" Kathryn Johnson, a graduate student from Ennis, Texas, asks Frederick.

"I like the blue-gray gnat-catchers," Frederick replies. "They are soooo tiny!"

"Five grams!" Zinn agrees. A pencil, by contrast, weighs about 20 grams, and there are about 28 grams in an ounce.

The conversation ebbs as several banders head out to check nets, but it will flow again when they return. For more than a decade, students and volunteers alike have cherished the hands-on learning and bird-talk that takes place at the banding shelters. Holding a live bluejay in your hand is pretty neat, too. Ω





Nature Notes Luna Moths

Article and photo
by Amy Berry

Ask just about anyone what a moth looks like and they will describe a drab, brown creature that hangs around porch or streetlights. Rarely would someone use the words, *velvety*, *vibrant* or *luminous*, but those are exactly the words that fit the *Actias luna* or luna moth.

This striking, pale green insect with long curving tails and a wingspan of up to four-and-a-half inches could be considered the supermodel of the moth world. Accenting her wings are a maroon wing margin and four lentil-sized eyespots. When magnified, they closely resemble the human eye, complete with eyelid and liner. Her body is roundish with a velvety white torso that stores fat from days as a caterpillar. The luna moth's legs are pink and her antennae remind me of the plumage that adorned the hats of women at the turn of the century. Her mate resembles her closely, but like d'Artagnan of *The Three Musketeers*, the male's feathery antennae are even larger and more impressive than hers.

After emerging from her papery thin cocoon protected by leaves on the forest floor, she climbs to safety in a tree. Her only task is to stay put and wait for a male to track the pheromone she releases from the tip of her abdomen. Using their antennae as a guide to track scent, males have been known to travel up to six miles to a mate. When a male reaches a female luna moth, they may stay

together for up to twenty hours to fertilize the eggs.

Like all members of the Saturniidae or silk moth family, luna moths have no mouths for feeding. Their sole purpose is to reproduce. As caterpillars, they feed on the leaves of a variety of trees including several commonly found at Merry Lea. White oak, hickory and black cherry are among them.

I was privileged to find and photograph a luna moth near the edge of the woods on the west end of Merry Lea's property near a stand of black walnut trees, also a favorite food. Very early one summer morning, I was returning from my walk when I spotted this impressive beauty grasping a reed of prairie grass with stickpin precision. Like a boutonniere on a prom tuxedo, it stood out against the background of the woods. I couldn't believe my luck, knowing that luna moths are usually out only at night.

Not wanting to lose the moment, I sprinted inside and grabbed my camera. I was in luck, I thought, finding the moth still grasping the plant moments later. I snapped several shots, then left the luna moth and went inside. As the day wore on and the sun rose higher in the sky, I noticed that the moth was still there. That's when I realized that the moth was not merely posing patiently for me, but was no longer alive.

A luna moth lives for only seven days. The males die soon after mating, and the females expire after laying approximately two hundred pinhead-sized eggs on the undersides of leaves. The emerging caterpillars are lime green with tiny orange spots. They will feast on these leaves, molting five times before becoming a pupa. After eating and growing to about two-and-a-half inches long, the caterpillar builds a brown, tent-like cocoon and eventually emerges as a fully-grown adult.

In Canada, this cycle will only be completed once a year, but in warmer climates such as Mexico, it may occur up to three times. In Northern Indiana, the cycle may take place twice over the course of the summer. Any cocoon that reaches fall weather will remain on the forest floor among the leaf litter and will emerge in the late spring.

Coveting this creature for its beauty, I placed it on a wide windowsill where it continues to sit, faded now from its Tinkerbell green to a pale white, a ghost of its former glory. Ω

Donations Welcomed

Merry Lea's Sustainability Semester in Residence (SSR) will launch this fall with ten undergrads. These students will live at Rieth Village for fifteen weeks—the longest continuous period anyone has occupied this setting.

Our request: Help us keep the students entertained by donating your unused recreational equipment and games in good condition. Our wish list includes but is not limited to:

- Puzzles
- Board and card games
- Chimineas
- Basketballs and hoop
- Volleyballs, soccer balls
- Frisbees
- Portable goals and discs for disc golf
- Kayaks
- Bocce
- Croquet
- Ladderball

To donate, contact Tom Hartzell at 260-799-5869 ext. 126 or tchartzell@goshen.edu. Ω

2012 Upcoming Public Programs

See our web site, <http://merrylea.goshen.edu/> for more complete information on these events. Please register in advance for all programs. Call 260-799-5869 or email jenniferhs@goshen.edu.

A Day With Wetland Invertebrates

Saturday, July 21, 9 a.m. to 3:30 p.m., Learning Ctr Bld.

Join wetland ecologist Dr. Mary Linton and other wetland fans for a day focused on our wetland insects. \$75 includes lunch; \$30 students or volunteers. Four spots left.

Celebrating the Landscapes of the Midwest:

An Unorganized Praise with Mary Linton

Saturday, July 21, 7 p.m., Farmstead Barn

Dr. Mary Linton will read from her poetry. The evening also includes a prairie ramble and a chance to read a nature poem of your own. \$5

Wilderness First Aid Course

Thursday and Friday, August 30 and 31

8:30 a.m. to 5:30 p.m., Farmstead Barn

This 16-hour course is taught by SOLO Wilderness and includes certification recognized by a wide variety of outdoor organizations. Hands-on practice with emergencies ranging from hypothermia to broken bones make this valuable training for any outdoorsperson. \$175.

INPAWS Hike With John Smith

Saturday, September 8, 10:30 a.m. to noon, Learning Ctr.

Members of the Indiana Native Plant and Wildflower Society will meet for a hike across Merry Lea's Bear Lake Prairie. Others are invited to join the hike as well. No fee.

Autumn Hope Conference: Learning From Long Traditions

Friday, September 28, 6 p.m. to noon on Sunday, the 30th

Learning From Long Traditions will explore the relationship between people and land as expressed in three cultures: Miami, Hebraic and East Asian. The fee of \$115 includes five meals and all events. Saturday only: \$75, two meals. Tent camping is available on site for \$5 per night.

Nature Photography Workshop

Thursday, October 11, 6 p.m. to Saturday, October 13

Paul McAfee and Dave Dornberg will team up to offer instruction for this year's photography workshop. Two instructors and limited group sizes make it possible for photographers of all ability levels to benefit. Note that meals are included in the \$250 fee, but we are unable to offer lodging this year.



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