

Spring 2014



The Merry Leaflet

Merry Lea Environmental Learning Center of Goshen College

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Farming as Restoration: Merry Lea Sustainable Farm Adds Barn, Woody Polyculture

Merry Lea is well known for its restoration of wetlands and prairies. Now, one could argue that the addition of a barn and a four-acre woody perennial polyculture plot to the Merry Lea Sustainable Farm are also acts of restoring the landscape.

Those who mourn the decayed barns dotting the Midwestern landscape would be heartened by the construction taking place at the Merry Lea Sustainable Farm at Rieth Village this summer. At this writing, the new 2,750-square foot barn has walls and a roof in place and is expected to be complete by this fall.

“We only build barns occasionally and usually they are pole barns,”

observed Mark Eisfelder of Zehr Construction. “This barn is kind of unique to work on in that it combines modern construction techniques with a traditional look.”

“Rugged elegance” is what Executive Director Luke Gascho was aiming for when he drew up the plans. The barn looks like barns of yesteryear—those sturdy, dependable cultural icons that suggested community, stability and long-term commitment to a particular piece of land.

The new animal barn is built to last and designed for multiple uses. “Durability is a big part of sustainable building,” Gascho observes. The

concrete lower walls can house animals without rotting and the lack of fixed stalls allows for a variety of different species over time. Wide doors on both the north and south sides of the structure allow for equipment to drive straight through without backing up. Like the rest of Rieth Village, the barn has a white metal roof and tulip poplar siding that was locally harvested.

The addition of animals will benefit the Merry Lea Farm in a number of ways. Currently, some guineas and a handful of chickens in a rolling coop are the only animals that students in the Agroecology Summer Intensive encounter. “Now we’ll be able to offer students a broader spectrum of experiences, including livestock production,” comments Farm Manager Jon Zirkle. He is also eager to use the manure that animals will produce. Manure that is brought in from elsewhere may contain unknown contaminants like conventional chemicals or weed seeds.

The first inhabitants of the barn will likely be additional chickens, turkeys and ducks, followed by pigs and goats. Goats, with their tendency to chew on coarse, woody matter, can help manage the landscape.

The barn also has a hayloft. Growing hay and alfalfa would not only provide feed and bedding for animals but also helps build up the soil. Zirkle sees a number of marginal areas that could be used for hay, including the rows between the nut orchard.



Construction workers install white metal roofing on the new barn at Rieth Village. This view is taken from Oshtemo Cottage, looking southwest.



Director's Desk Planting in Anticipation

by Luke Gascho

Joy wells up in me each time I'm involved in planting. It is such a hope-filled activity. Planting is a critical act to reach a goal. Achieving a sought-after outcome will require much time, but always needs a starting point. The joyful emotions ran high for me on the beautiful day in May when the planting started for the woody perennial polyculture plot. By the end of the day 3,600 trees, bushes, and vines were in the ground.

The agrarian poet, Wendell Berry, captures both planting and hope exquisitely in the following poem from his 2013 volume, *This Day: Collected & New Sabbath Poems*:

The seed is in the ground.
Now may we rest in hope
While darkness does its work.

We know waiting is part of our growth processes at Merry Lea. Sometimes it feels like working in darkness, but the hope factor is strong. The four acres didn't look much different at the end of the planting day than they had at the beginning, yet the roots of the plants were there, settling in to the earth ready to grow into the food forest that we can see in our imaginations. Only the foundation for the new barn was in the ground when our 'long winter' arrived in November. We knew a structure would be there, but we had to wait for the spring thaw to actually arrive. Now the structure has emerged.

Planting, waiting and hoping are also part of the other articles that are in this newsletter. Building generative relationships with the Menominee, Potawatomi, and Miami tribes takes time and care. The new curriculum for churches required serious labor to develop and write. It will take time for church groups to engage with the material, but we imagine a day when churches will be different because they have made caring for God's creation a stronger part of their mission.

Later in the same collection, Berry paints a splendid picture of planting and anticipation:

In spring we planted seed,
And by degrees the plants
Grew, flowered and transformed
The light to food, which we
Brought in, and ate, and lived.

Each of our Merry Lea programs—Pre-K-12, undergraduate, graduate and public—repeats this cycle through our annual work and long-term planning. In our long view, we see people and the earth being healthier because of the 'planting' we are doing. We are joyously committed to life-giving outcomes. ☺

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Woody Perennial Polyculture Plot Takes Root

Meanwhile, in an old field south of the new barn, rows of chestnuts, swamp white oaks, hazelnuts, fruit trees and brambles are taking root following their May 19 planting. This is the Merry Lea farm's new woody perennial polyculture plot. The four-acre plot is a test site for the Savanna Institute of Urbana, Ill., an organization that explores the economic and ecological viability of restoration agriculture.

"The goal of restoration agriculture is to reconstruct the kind of vegetation that used to be in this area," explains ASI director, Dale Hess. When the planting is mature, it will resemble an oak savanna, once the dominant ecosystem between the forests of the east and the prairies of the west.

Oak savannas consist of scattered canopy trees interspersed with smaller trees and shrubs and surrounded by grasses and forbs. Either fire or grazing animals prevent a savanna from becoming a forest. Hess' and Zirkle's work to establish an agricultural oak savanna on the east side of the property complements the efforts of Bill Minter, Merry Lea's land manager, who is creating a wild oak savanna on the west side of the property.

Chestnut and swamp white oak trees will provide the canopy in Merry Lea's woody polyculture plot. Both produce nuts that can serve as feed for pigs and other animals.

Apple, pear, peach, pawpaw and hazelnut trees compose the middle layer of the savanna, along with grape vines twining up the trees just as wild grape does in an Indiana forest. Red,

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

Janie Beck Kreider, Associate Coordinator of Public Pr.
Luke A. Gascho, Executive Director
Kerry Goodrich, Property Supervisor
Carol Good-Elliott, Environmental Science Educator
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Dale Hess, Director of Collegiate Programs
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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.

black and yellow raspberries and currants fill in the bramble layer.

Woody perennial polycultures address a number of the negative consequences of conventional agriculture. The vast blanket of corn and soybeans that covers much of the Midwest leaves little room for biodiversity in the landscape. It also requires a lot of annual soil disturbance. Fields need to be tilled with heavy equipment and sprayed with fertilizers and herbicides. These procedures compact the soil and increase erosion. Restoration agriculture requires herbicides to establish the plantings, but not an ongoing barrage of them. Like an oak savanna, the perennial plot will also sequester carbon and purify water better than a field of annuals can.

As one of the first test sites for the Savanna Institute, Merry Lea's woody perennial polyculture plot will be scrutinized in many ways: Is it economically viable? What inputs are required? Could this be done on a larger scale? What practices work best?

The plot will provide educational and research opportunities for Merry Lea's students as well. Jack Schomberg, a Goshen College Maple Scholar from Landsdale, Pa., is already at work comparing management practices for establishing the young trees and shrubs. This year's ASI students have just arrived, but it won't be long before they too are introduced to the woody polyculture plot.

Photos at right show the installation of the woody perennial polyculture plot. Kerry Goodrich, Merry Lea property manager, is driving the tractor while staff from the Savanna Institute plant trees using technology they have adapted for this purpose. First, the rolling tree planter scars a row in the field; then human hands insert the young plants. In the bottom photo, Farm Manager Jon Zirkle points out a newly placed seedling. Ω

For more information on restoration agriculture, see the Savanna Institute website.



Merry Lea Welcomes Menominee Youth

Boundary-Crossers and Boundary-Abiders

by Jonathon Schramm



Jonathon Schramm and Menominee youth explore a woods at Merry Lea.

*In recent years, Merry Lea has been graced with opportunities to connect with and learn from Native Americans. Some of this has taken place through faculty engaged in research projects for Merry Lea's **Institute for Ecological Regeneration**.*

Dr. Jonathon Schramm teaches in Merry Lea's Sustainability and Environmental Education Department. Before Schramm joined the Merry Lea faculty in 2012, he served as a curriculum and educational design consultant on a research project involving the Menominee tribe of northern Wisconsin. He continues this connection.

In the days leading up to Easter, a group of 13 Menominee high school youth and their leaders came to Merry Lea to explore the concept of sustainability through several interrelated lenses.

The theme for this group was centered on the idea of boundaries, and throughout the week we paid special attention to those things, like water, that readily cross human boundaries while still respecting their natural boundaries (watersheds) and those things, like amphibians and spring ephemeral plants, which are very tied to a small part of the landscape.

With these themes in mind, we talked about the many ways that our decisions as human beings relate to these boundaries, and the commitment required to live in a way that is respectful of them.

With Reith Village as a home base, the group explored Northern Indiana. At Merry Lea, we hiked through forests to see evidence of the very slow rate of spread among spring ephemeral plants and spread chicken bedding out over the farm's market garden. We also walked past the manure lagoons of a nearby dairy to consider nutrient cycling on farms and climbed glacial-era dunes at Fox Island County Park near Fort Wayne as a way to imagine the scale and drama of past change on this landscape. The week included the chance to visit with youth from the Pokagon band of the Potawatomi, sharing language lessons and black ash basket weaving. We ended with a canoe trip on High Lake and the Elkhart River.

The week-long trip begins a six-month journey of study, research and community activism that will introduce these high schoolers to sustainability, both cultural and ecological; to career opportunities, and to action research that sheds light on possibilities in their home

community northwest of Green Bay, Wis. The "Odyssey Trip," as it is known, and the entire project, termed the Sustainability Leadership Cohort, are part of a larger USDA grant that is funding science and cultural curriculum and career development at the College of Menominee Nation Keshena, Wis.

The Menominee, whose name roughly translates to "people of the wild rice," are world-famous for the high quality stewardship of the forest resources on their reservation. But like many parts of rural America, the area struggles with a lack of robust jobs for youth after high school.

The multi-institutional research team working on this grant is aiming to increase the interest in and preparation for science careers among youth in this region. The environmental sustainability of the Menominee in their place is a goal of intense interest to cultural leaders, educators and ecologists, and thus has been a fertile area for collaboration.

In some respects this project has developed slowly, due in large part to the patience needed to develop effective cooperation and cognizance of the ways in which Native American tribes have sometimes been treated as research subjects rather than research partners by outside academics. Nevertheless, the work is bringing forth rich, culturally-relevant curricular units on subjects like biodiversity, food systems and climate change and student-led research into ways to better their home community.

I can't help but see parallels to our community here in rural northern Indiana. As our current social and economic systems show strain, we too are in need of new ways to envision our healthy persistence in this place. From cultural health to the food we eat to economic opportunities for young people, there is plenty of vital, creative work to do right here! Ω

Un-rooted, Re-rooting: Encouraging Western Science to Collaborate with Native Americans

by Dave Ostergren

Dr. David Ostergren is director of Merry Lea's Masters in Environmental Education program. A portion of his job also includes research for Merry Lea's Institute for Ecological Restoration. Below, Ostergren describes his work encouraging restoration ecologists to combine Western scientific knowledge and the knowledge that indigenous people possess through long experience.

My research area is unusual. I work between two groups of people with different worldviews but the same goal. Restoration ecologists trained in Western science want to see ecosystems and habitat restored and managed to maximize the number of endemic species that would have been in that habitat centuries ago. Native Americans and First Nations seek balanced, whole ecosystems that include people—people who understand they are part of the natural system. This is a world that is spiritually balanced as well as ecologically balanced. Both groups seek healthy systems, healing and beauty.

“I learned that the greatest injustice of all is the mass disruption of ecosystems and the separation of people from the earth.”

The knowledge held by indigenous people such as the First Nations of Canada and Native Americans in the USA may be called traditional ecological knowledge (TEK). TEK connects culture and geography, so it is very specific to the land and people living on that land. It has been handed down, usually orally, for generations or even thousands of years.

Unfortunately, Western science and traditional knowledge often do not mesh. Western-trained ecologists



Paul Steury and visiting Menominee youth consider the role of stories in traditional ecological knowledge—and elsewhere—at Merry Lea's council house.

may be uncomfortable recognizing TEK as a useful, equally valuable source of knowledge. My goal is to shed light on what Western restoration ecologists need to understand in order to recognize that TEK and Western ecology are two equal parts of a whole. Great strides have been made in 20 years, but I hope that even more TEK will be integrated into restoration projects.

I just read *Buffalo Shout, Salmon Cry*, a book of stories and essays edited by Steven Heinrichs. The book is about injustices suffered by the First Nations and Native Americans as settlers moved into North America, and is partly written by indigenous people. Some stories made me weep. Other parts are filled with hope and possibility. I learned that I am a settler. Four generations after some Swedish and Irish immigrants got off the boat at Ellis Island, I am still a settler. I learned that the greatest injustice of all is the mass disruption of ecosystems and the separation of people from the earth. To this day, all over the earth, indigenous peoples are forcibly uprooted and moved far from their lands and their ways of life.

We too are uprooted when we forget what lives in nearby forests, prairies and wetlands, or when we forget where our food comes from.

Something is lost in the human spirit when it is unmoored from the land. Our challenge is to ask, “How do we re-root?” How do we reattach ourselves to the earth and renew our connection to the land? How do we connect to land we have been plowing for nearly 200 years? Do we change some of our farming methods? Do we restore some forests or wetlands? What percentage of the land should be restored? And how do “settlers” begin to recognize or reconcile the injustices caused by laws and treaties that allow so many of us to live and prosper here in Indiana?

I have no clear answers. My research on how to encourage more TEK in restoration projects is one way I work at addressing these questions. I do not collect and share TEK, although I have seen examples of it. Some kinds of knowledge may be easy to recover, such as the use of prickly ash bark to numb a painful tooth, or other plants to settle an upset stomach. Other examples are much more complicated and emotionally charged, like whaling in Alaska, spearfishing for walleye in northern Wisconsin or managing salmon in the Pacific Northwest.

From 1999 to 2008, I worked at Northern Arizona University on several projects related to Native American

Nations in the area. In collaborative watershed planning, national park management and re-introduction of fire into forest ecosystems, tribal experts consistently referred to the cultural context of management decisions—and by default traditional knowledge with spiritual roots.

To continue my research, this summer I will be working with Ben Shelly, a Maple Scholar from Goshen College, to conduct a survey of restoration ecologists on the potential challenges or benefits of using TEK in restoration. We think one obstacle is the spiritual aspect of TEK. I know that indigenous people will not or cannot share some important aspects of their culture. A scientist may hear that a plant was important to an ecosystem and should be included in restoration, and we may even hear about a method to encourage that plant's growth. But we may not hear why it is important to people, or how the First Nation knows it is important.

Here is one example. Salmon is part of many Northwest cultures, and everything about salmon is, in a sense, sacred. Cultural traditions cover harvesting, cooking, preserving, eating and spiritual meanings that outsiders many never fully grasp. For generations, salmon has knit communities together in the Pacific Northwest, and therefore they know a lot about the salmon breeding patterns, habitat needs and safe harvest levels.

Western trained scientists prefer knowledge that is tested with familiar methods and reported in familiar journals or books. The scientific method is a rigorous strategy to seek and develop useful information about the ecological world that is then recorded. TEK is a time-tested multi-generational strategy to seek and develop useful information about ecology that is often not written down. How does a western scientist trust it?

Fortunately, state biologists in Oregon and Washington have recognized the value of TEK in this case, and salmon management is, for the most part, a joint effort. These biologists do not need to know the spiritual components that native people connect with salmon to access knowledge that creates

Recent Visitors

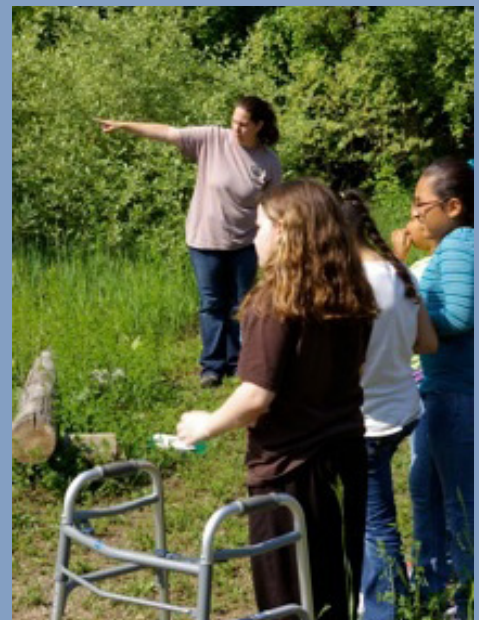


Friends of Merry Lea

Friends of Merry Lea were invited for dinner and a tour of the Merry Lea Sustainable Farm on May 17. Above, Dale Hess, director of the Agroecology Summer Intensive discusses the nearby permaculture garden with about 30 guests.

Rock Cycle

At right, master's student Caitlin Lorenc leads a rock cycle program in Merry Lea's gravel pit during the season's last on-site school program May 29. The children are third graders from Leesburg Elementary.



strong management plans. And yet, somehow we need to be able to use this information as part of the whole.

I have seen more and more national parks combine TEK and Western science to create good natural resource management plans. Still, I wonder why more restoration ecologists do not incorporate TEK into their restoration projects. How many success stories or strategies that help us understand our neighbors do we need in order to trust information that comes in a different format? It seems to me that if managers want to restore

and rehabilitate an area, they would use all the information they could find about the ecosystem.

Western science can join with TEK to build a picture of a restored, whole ecosystem, but to do that, we need to build relationships that foster trust. People who hold TEK need to trust that a restoration ecologist will not ask too many questions or abuse the information given, and Western scientists need to trust their sources of information. We will let you know what we find out. Ω

Mennonite Creation Care Network Offers Curriculum for Churches

by Jennifer Schrock

*Jennifer Schrock is Merry Lea's public program coordinator and an assistant professor in the Sustainability and Environmental Education Department (SEED). She also works with the Mennonite Creation Care Network where she oversees network communications and recently finished writing the new **Every Creature Singing** curriculum.*

Most people don't take maps to church. Most people don't discuss watersheds or plan river clean-ups in their Christian education classes. That could change, however, as more congregations check out the Mennonite Creation Care Network's *Every Creature Singing* adult curriculum, which was created by Merry Lea staff members.

Christian faith has always been an important part of Merry Lea's vision. When Lee and Mary Jane Rieth first founded Merry Lea, they envisioned the land serving as a retreat center for their Methodist congregation in South Bend, and Merry Lea's name included the phrase, "Nature and Religious Center."

One way this legacy is carried on today is through Merry Lea's sponsorship of the Mennonite Creation Care Network (MCCN), an organization that encourages congregations to make the health of the planet part of their ministries. MCCN maintains a website and sends regular communications to its members, helping them to find resources and inspiration. While MCCN is affiliated with Goshen College's parent denomination, the Mennonite Church USA, Christians from other groups are welcome to join as well, either as individuals or 100 Shades of Green congregations.

Three staff members devote some of their time to MCCN: Executive Director Luke Gascho helped to found the organization and provides leadership for the Creation Care Council. I oversee network communications and wrote the *Every Creature Singing* curriculum. Janie Beck Kreider is MCCN's webmaster.

The bi-national organization also receives support from Everence, Goshen, Ind., and Mennonite Church Canada.

Every Creature Singing: Embracing the Good News for Planet Earth is a thirteen-session adult curriculum that covers the biblical basis for caring for creation, probes the peace and justice issues related to current environmental issues and calls people to make appropriate lifestyle changes. The curriculum is available online at:

www.mennocreationcare.org

"One thing we tried hard to do was to root the curriculum within each congregations' context," says Beck Kreider. "We realize not everyone is on the same page with regard to environmental issues, and every setting is different." Rather, groups are encouraged to work through a series of "circle questions" based on a map radius circle they create at the beginning of the class.

Questions include:

- What watershed are you in?
- What forms of environmental damage are you aware of within your map circle?
- How is climate change expected to affect your region?

"We do not wish to be prescriptive as to exactly how churches are called to respond to the environmental crisis," Gascho observed. Our hope is that as groups become more aware of their surroundings, the scripture texts and Spirit within the group will provide clarity on how to respond.

The emphasis on local ecosystems and taking care of one's own place fits well with Merry Lea's other work in environmental education. I could not have written this curriculum if I had not worked at Merry Lea. I drew heavily on the work we did planning the Sustainability Leadership Semester, with its emphasis on the local watershed and interdisciplinary thinking. Ω



Bike blessings, such as the one above, happen each spring at Assembly Mennonite Church, Goshen, Ind., one of the congregations in MCCN's 100 Shades of Green network. Bike racks mounted on the outside walls also encourage attenders to bike to church.

Other MCCN member congregations plant and tend community gardens, preserve land, plant trees or debate how to respond to climate change. At a meeting of northern Indiana MCCN congregations June 5, attenders were enthusiastic about recent Interfaith Power and Light workshops they had attended on energy conservation.



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“Where Earth and People Meet”

Upcoming Public Programs at Merry Lea

Orienteering

Thursday, July 24, 6:30 to 8:30 p.m. Meet at the Learning Center Building

Join Jonathon Schramm for a bushwhacking adventure off the trails of Merry Lea. You'll learn some basic orienteering skills to navigate through the landscape and to find a few treasures along the way. This is an intergenerational event appropriate for ages 10 and up. Girl and Boy Scouts can use this experience to complete their Orienteering merit badges. Please arrive promptly as we will be commuting to the Luckey Prairie and adjacent woodlots. Advance registration preferred. Email mlevents@goshen.edu or call 260-799-5869.

Wilderness First Aid

Thursday and Friday, August 28 and 29, 8:30 a.m. to 5:30 p.m. at Merry Lea's Farmstead

Instructors from the SOLO School of Emergency Medicine and Rescue, Conway, N.H., will teach this 16-hour course. Participants earn a two-year certification recognized by the American Camping Association, U.S. Coast Guard and various guide licensing boards. The curriculum covers patient assessment, rescue techniques, fractures, splint improvisation, spinal cord injury, management of environmental emergencies, shock and preparedness. Hands-on practice with emergency scenarios is an important part of the course. The cost of \$175 includes lunches. Dorm lodging is available at an additional cost of \$20/night. To learn more about SOLO courses, see <http://www.soloschools.com/>. Advance registration required. A registration form is posted online on Merry Lea's events page.

Community Potluck

Saturday, September 6, 5 p.m. to 8 p.m. at Merry Lea's Farmstead

Join us for a potluck gathering in honor of our new animal barn at Rieth Village. We'll share a meal and tour the barn. Other festivities are still in progress. Everyone is welcome, but we'll make a special effort to invite our neighbors. Ω