



CHINA LOOKS TO WOLF RIDGE AS AN ENVIRONMENTAL EDUCATION MODEL

by Pete Smerud, Wolf Ridge Executive Director

From Hungary to Argentina, Wolf Ridge has served as a model for environmental education centers. In January I was sent to Shenzhen, China with a few additional days in Taiwan, to use Wolf Ridge's experience to help increase the infrastructure of environmental education in those locales. I was honored to be able to share the wisdom and lessons learned from Wolf Ridge's almost 50 years of connecting more than 700,000 students to nature through hands-on field study.

This trip arose from a visit to Wolf Ridge, nearly a year ago, by Chen Yang, the Director of Public Education for the Mangrove Conservation Foundation in Shenzhen. Yang had traveled widely, visiting 30 different environmental education centers around the world. She spent four weeks at Wolf Ridge as a participant in a program administered by the National Committee on U.S.-China Relations. At the conclusion of Yang's stay, she chose Wolf Ridge as the model for her work in growing environmental education in China. My trip was another step in the growing collaboration between Wolf Ridge and Chinese environmental educators to expand the environmental education experience for students in China.

The National Committee on U.S.-China Relations (NCUSCR) coordinated and arranged my trip with funding from the

U.S. Department of State Bureau of Educational and Cultural Affairs through its Professional Fellows Program. The Mangrove Conservation Foundation hosted the trip on the China side. NCU-SCR's Margot Landman notes, "We support building relations between the two countries through exchanges of citizens and community leaders to build bridges as we confront bilateral and global issues. Particularly on the subject of the environment and climate change, the US and China need to work together. Environmental education is critically important to address these issues."

First, a brief glimpse at China and environmental education. You'll likely know that China has the largest population on the planet, 1.4 billion people. It has massive cities, beautiful countryside, ancient history, and is a world economic force.

For China and many countries, *The United Nations Conference on the Human Environment*, Stockholm, Sweden, 1972, was a milestone in the develop of environmental education efforts. Following the conference, Beijing made several decisions recognizing the importance of the environment and began focusing more education efforts on the environment. After China's attendance at the *United Nations Conference on Environment and Development* in Rio de Janeiro, Brazil, in



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CHINA

continued from page 1

1992, the phrase “sustainable development” was introduced to the Chinese community via mass media, and the general public became more aware of environmental challenges. Thus began the launching of environmental education into mainstream culture there. Since 2003, environmental education has been integrated into the national curriculum.

Despite China’s growth in environmental education over the past decades, there has been more emphasis on improving the living standards of its citizens. This has manifested itself in the move of millions from rural areas to cities. I visited the city of Shenzhen. Thirty-five years ago Shenzhen was a fishing village of 30,000. Now 20 million people call the 4th largest metro area their home. About 60 miles from Shenzhen is Guangzhou, a metro area of about 22 million. The Shenzhen and Guangzhou area would be equivalent of Minnesota’s Arrowhead region, holding 42 million people!

Through these periods of massive growth in cities and raising the education levels of the population, the focus has been on teaching science and technology for solving environmental problems. Nearly a year ago leaders in China set new goals and policies to establish environmental education services at all the nature reserves of the country, beginning with 96 along the coastline. The nature centers in Shenzhen are fore-runners for future efforts to be developed in other locales. The Mangrove Conservation Foundation, my host in China, is leading the education efforts in the Shenzhen area centers.

If someone from a foreign country visited only the Twin Cities, I would caution them not to see these places as representative of the entire US. So, please remember my interactions were relatively brief and limited to

the Shenzhen area. My meetings in China were with environmental education staff, leaders, and foundation representatives from southeast China and one government staff person from Shanghai. I visited multiple nature centers, interpretive trails, eco parks, and wetland reserves. In each location we discussed their goals and methods and compared Wolf Ridge approaches. We brainstormed classroom and outdoor learning space design opportunities that would focus on student centered learning experiences. We discussed how Wolf Ridge creates our curricula to match outcomes for Minnesota academic and Next Generation science standards. The concept of the Wolf Ridge ELC as a

private non-profit entity AND an accredited school, was astonishing to many people I met.

My experiences at their centers and in their classes were joyous. I rubbed elbows with many families in the eco-parks, nature centers, and interpretive buildings. I was asked to attend a class on birding at Shenzhen Bay Nature Park on a Saturday morning. I, of course, inquired, “How many people will be there tomorrow?” “Oh, about 30,000,” was the answer. I responded with a rather loud, “uff da,” that resulted in a perplexed look from my interpreter. The class consisted of individuals looking through spotting scopes at birds, which naturalists identified for them and critical habitat education.

Based on my understanding of the history, pressures, and structures of their education system; I saw things I expected. There is great effort and success with students learning science, identifying species, and identifying components of ecosystems. The learning I witnessed is outstanding at establishing science knowledge, but now they are looking to add what I describe as the difference between science education and environ-



The View will reappear in its usual format in the *May Almanac*.

mental education - the introduction of heart into the system.

Cue my entry representing Wolf Ridge. We believe that no other organization is doing the same type of environmental education advising in southern China as us. The curriculum and outdoor teaching techniques we are sharing will influence how Chinese environmental educators design field trips for local students. New hands-on experiences will help them build meaningful personal connections to nature while learning how these beautiful natural ecosystems work.

While families in China bring children and grandchildren for learning experiences at nature centers and outdoors spaces on a regular basis, the Wolf Ridge residential model of learning is rare. We're fortunate, particularly in Minnesota, that it's common for students to go on field trips for outdoor-based



learning, sometimes even for an entire week. Leaders in China see this field-based learning value and are working toward it. This was the primary focus of my time with them and framed our discussions their goal-setting efforts. We also talked of "professionalizing" the outdoor-learning experience through preparation of skilled field educators working with proven curriculum. I feel

strongly that curriculum, after experienced, well-trained staff, is one of our foundational educational assets. Our models of curricula became a great subject of interest. My hosts viewed Wolf Ridge's curriculum as the tool used to maintain our "product" - the student's learning experience. No matter who facilitates the experience, in, for example, our Wetlands Ecology lesson, the same learning outcomes are achieved. Those outcomes are then tied to academic standards when it's a school-based experience at Wolf Ridge. This is the professionalism and standards-based approach Wolf Ridge can offer China.

Given thousands of years of Chinese history, I was surprised that my hosts had an incessant interest in the longevity of Wolf Ridge (48 years). I was repeatedly asked, "How has Wolf Ridge survived this long? What enables your staff to make a career at such a facility?" and "How have you maintained

EMPLOYEE MATCH PROGRAMS

Did you know that many companies will match their employees' gifts to Wolf Ridge ELC? This means doubling (or in some cases even tripling) the impact of your gift. For some companies, retirees and spouses can participate as well.

Last year alone, Wolf Ridge received more than \$13,640 in donations and their matching gifts.

For Lynnae and Tim Taylor, the matching gift benefit from Tim's employer made their gift to Wolf Ridge so much more impactful. "One of the best benefits of working for a company that has a matching program is that they significantly increase our gift to the charities we care most about. This meant more support for Wolf Ridge and the incredible programs they run. Thanks for all you do, Wolf Ridge!"



Many Minnesota companies have robust match policies. Find out if your company will match your contribution to Wolf Ridge by contacting your company's benefits department or doing a web search. Once you know your company will match your donation, requesting a matching gift is normally a five-minute process which must be initiated by the donor. You can do this by filling out and submitting a paper match form provided by your employer or through an electronic submission process. If you need proof of Wolf Ridge ELC's designation as a 501c3 charity, you can find it on our website: https://wolf-ridge.org/wp-content/uploads/2013/11/about_501c3_irs_letter_wrelc.pdf. ♦





years, 50% of the school children in the Shenzhen metro area will experience outdoor-based learning as part of their formal schooling experience!

Some call this time period the Anthropocene - an era dominated by humans and environmental impact. We need educated citizens who can work collaboratively to quickly brainstorm and execute plans to adapt to the world's new conditions.

It was clearly reinforced to me that collaborative work is equally important as knowledge gain or understanding. We're doing this for a greater purpose. Ultimately, we hope young people leave our programs with a new view of the world and a commitment to act. Whether in our backyard or across the Pacific, we are preparing for a life of constant response to environmental conditions.

I offered Wolf Ridge's support and encouraged those I met to visit our campus in northern Minnesota. Discussions have started regarding a possible exchange between Chinese educators to come to Wolf Ridge to train and our alumni traveling to teach in China. Several families proposed plans to attend Wolf Ridge's family or youth camp.

I'm confident the Chinese will build the network of nature centers they're planning and they will achieve their goals. For example, the Shanghai metro area (23 million) reduced its solid waste

by 50% in a year! The centralized government is the focal agent of change. When China commits, it achieves its outcomes.

We're all in this together, especially when it comes to the education of our children and the development of better environmental behaviors. I am truly optimistic for our future when I see Wolf Ridge, the United States, and China banding together for something we agree is in everyone's best interest. ♦

A special thanks to several who made this trip possible

- Margot Landman and the National Committee on U.S. China Relations - for your support and vision for stable and productive relations that benefit both countries and the environment is what made this happen. Thank you.
- Chen Yang, Huang Fang, Hu Huizhe, and Dr. Yan Baohua of the Mangrove Conservation Foundation - for your goals and passion for enacting change in environmental education for the future generations of Shenzhen is inspiring. You were wonderful hosts. Thank you.
- Dr. Joanna YanZhu, Wolf Ridge Graduate Student Naturalist Alum 2010 and current Education Specialist at Baoshan Center for Environmental and Science Education, Shanghai - for your good care and support of a large white man of Scandinavian heritage in a very foreign culture that I came to love.

stable finances as a non-governmental organization?" The answers kept coming back to community and the importance of establishing it within your team, creating meaningful and personal relationships with school and community leaders, and assuring that we are driven first and foremost by the needs expressed by those community members.

After many site visits and meetings, the last evening of my trip concluded with dinner and conversations with the leaders at the Mangrove Conservation Foundation. I witnessed their fast growing commitment. I learned, first hand, that my trip coincided with their current strategic planning and associated goal setting. I'm thrilled to report that at that meeting the Mangrove Conservation Foundation set a goal that in 8



PHOTO © Bryan Hansel

BRYAN HANSEL

2021

The 2021 Wolf Ridge calendar features the work of Bryan Hansel. Bryan is an award-winning professional landscape photographer and outdoor educator. He has over 25 years of photography experience with over 100 publication credits from publications such as *National Geographic*, *Outdoor Photographer*, *Lake Superior Magazine*, *National Park Traveler*, *Ocean Paddler*, *Canoe and Kayak Magazine*, *Backpacker Magazine* and many more. In 2018, he received *Lake Times Magazine's* Best Photographer in Minnesota award. An outdoor educator and guide at heart, Bryan decided to share his passion for outdoor photography and started a photography workshop program in 2006. His programs take students to the best and often unknown locations in the northland and across the nation to many National Parks. He lives in Grand Marais, Minnesota. Calendars are available for \$18.95 including shipping. They are also available at special prices, in lots of 25, for school fundraising and retail resale. Proceeds of all calendar sales directly support children attending Wolf Ridge school programs. Email mail@wolf-ridge.org or call Wolf Ridge at (218) 353-7414 for more information and to order. ♦

SECRETS OF THE SUBNIVEAN ZONE

by Katie McCreary, Wolf Ridge Naturalist



Katie McCreary

A set of mouse tracks disappears under the snow. Entrances to subnivean tunnels are often found at the base of a tree where there's a natural opening of snow.

Have you ever stepped outside during the winter and seen tiny tracks criss crossing your doorstep? If you follow these tracks, likely made by a mouse or vole, you will find they eventually disappear into a hole in the snowpack. Where do these portals into the snow lead? How do such tiny animals survive the harsh Minnesota winter? The answers lie underneath the surface in a habitat full of secrets: the subnivean zone.

The subnivean zone is the area between the bottom of the snowpack and the ground. A few factors contribute to the creation of the subnivean zone each winter. First, large branches, rigid vegetation, and other debris prevent snow from falling all the way to the ground thus allowing small animals to travel underneath. Then, heat from the ground causes the bottom layer of snow to sublimate (a phase transfer from the solid to the gaseous state, skipping the liquid state in between). Some of the water vapor created from this sublimation will rise through the air pockets in the snowpack and get released into the air

above the snow. More importantly for the residents of the subnivean zone however, some water vapor will remain underneath the snowpack as humidity or re-freeze into a thin layer of ice on the bottom of the snowpack creating a stronger ceiling.

Perhaps the most remarkable feature of the subnivean zone is the warm and stable microclimate. The world above the snow is harsh and dynamic during the winter, with temperatures ranging from -40 to 40°F. Below the snow, the subnivean zone is a relative tropical paradise where the humidity is high and the temperature stays near 32°F all winter long. This habitat is critical for the survival of small mammals during the winter as they lose heat quickly due to their high surface area to body mass ratio. Snow provides insulation in the same manner that a down coat does - tiny air pockets trap and retain heat. In the case of the subnivean zone, the heat is provided by the ground which retains warmth even in the winter. Fresh, uncompacted snow is about 90% air and while these air pockets shrink as snow piles up on itself, the snowpack retains plenty of space for heat to be trapped.

Small mammals like mice and voles are not only residents, but also architects of the subnivean zone. They will create tunnel systems including separate areas for food caches, sleeping quarters, and sometimes even communal toilets. While they spend much of the winter under the snow, they sometimes need to head above the snowpack to search for food so tunnels need some access to the surface. These entrance/exit holes are often located in natural openings in the snow cover (like near the base of a tree). Openings additionally provide ventilation which is necessary to prevent the toxic build-up of CO₂ gas from respiration and decomposition.

Venturing out of the subnivean zone makes these critters more vulnerable to predators, but under the snow isn't necessarily safe either. Some predators with acute senses can detect activity beneath 12 or more inches of snow. Once they hear and locate their prey, owls can punch through the snowpack with their large talons to catch their meal. Canines like foxes and wolves can also hear or smell creatures under the snow and will plunge through to catch their prey; when they pounce the tunnels collapse, cutting off escape routes of their prey. Danger comes not just from above but also from within the subnivean zone as the short-tailed weasel, or ermine, will even enter the tunnel systems of small mammals to hunt.

The nature of the subnivean zone makes it difficult to observe during the winter, but as the snow melts in the spring, some evidence is left behind. As the weather warms this spring, look in your yard or local park for the winding paths of beaten-down grass where the snow melts first. You might even find a pile of chewed grass clippings - the remnants of a vole's food cache - or who knows what else!

The next time you see a set of tiny tracks disappear under the snow you can imagine the extraordinary, elaborate subnivean world. ♦



Jonathan Schechter - Oakland County Michigan Blog

Tunnels of the subnivean zone are exposed as the snow melts in the spring.

PROFILE: LUCIANA RANELLI

Wolf Ridge welcomes Luciana to the program team as the youth and family program director.

What is your connection to Wolf Ridge ELC? My connection began in 2014 with the Graduate Naturalist Training program, and continued through summer 2017 as a Mentor Naturalist, followed by a third year Curriculum Specialist role. (Actually, it really started back in seventh grade when I came here with my Girl Scout Troop for a weekend.) Since then, I finished my Masters degree at Antioch University New England, and directed the summer day camps and some community outreach programming at Teton Science Schools as Field Education Faculty.

Tell our readers about something that you have learned as the result of your time at Wolf Ridge.

We learn as individuals and as a group. At Wolf Ridge I practiced asking reflection questions like “what did you notice?” and “what did we notice?” I try to remember this trait and apply it at many settings and scales, like work teams, organizations and institutions, family, and even social movements.

Please share a Wolf Ridge ELC memory. I hold frozen lakes dear to my heart. During my graduate naturalist year I got below zero in November and didn’t snow for awhile. We had weeks of magical ice skating at Wolf Lake...my first time skating on a lake. I wait in anticipation each winter now for the window of opportunity to skate on a frozen lake.

What are your hobbies? One of my hobbies is having lots of hobbies! I enjoy cooking, cross-country skiing, hiking slowly to look at plants, watching tv shows, playing clarinet when I can find a community band, and roller derby.

Tell us an item of interest about yourself. This past year in Wyoming I joined a roller derby team for the first time. At first the learning curve of skating skills, new teammates, choosing a derby name, and gathering the courage to play a contact sport seemed overwhelming. I had the time and interest to stick with it, and am glad I did! Now I’m figuring out how to play up in Northern Minnesota. I find meaning in this story for whenever I am learning or doing something new.

What book and/or movie would you recommend others read. *Real American: A Memoir* by Julie Lythcott-Haims.

Please share a travel tip? Bring some of your own snacks. I do enjoy purchasing food when I’m out and about, but I get my hungriest when snacks are hard to come by. I try to prevent that situation by having something on hand.



Luciana’s roller derby persona “Snack Attack” celebrates with fans.



What is your favorite place at Wolf Ridge and why? My favorite places change since they become my favorites via connection with a certain memory, moment, or find. I often head towards Raven Lake to see what’s happening with birds, sunlight, and wetland plants.

If you could visit with any conservationist/naturalist/environmentalist, living or dead, who would it be and what would you say. I would like to meet and botanize with Robin Wall Kimmerer. I’d probably start by being tongue-tied in awe! Then I’d let our way of moving through the woods together start the next conversation. ♦

WOLF RIDGE NEWS BRIEFS

• Various program staff have been traveling to several **conferences** around the nation. Between the Minnesota Naturalist Association (MNA), Minnesota Association of Environmental Education (MAEE) that hosted the Midwest Environmental Education Conference (MEE) and the North American Association of Environmental Education (NAAEE) current Wolf Ridge staff gave 8 **presentations**.

• Sarah Mayer, WR farmer, attended the 7th **Farm-Based Education Conference** in Baltimore, MD. She came away from the experience energized. Farm education is a growing field with numerous interesting formats being explored.

• At the NAAEE, a **two-week educational opportunity** at Wolf Ridge was auctioned to Kristen Alexander (past WR student naturalist), executive director at Potomac Valley Audubon Society. Kristen, sent her lead teacher and naturalist, Amy Moore to learn about and participant in the daily workings of Wolf Ridge. Amy came in October.

• Joining the **Wolf Ridge team** are Joe Sullivan and Christopher Dunham. Joe can be found in maintenance quickly learning the in's and out's of our sustainable heating and electrical systems. along with snow removal tactics. A hobby of Joe's is agate picking. Christopher Dunham is located in the Twin Cities. He is in charge of the SEAK program and school group



recruitment. When telling others that he works for Wolf Ridge, Christopher commonly hears, "my child has been to Wolf Ridge" or "I went to Wolf Ridge with my school." "It's amazing to see how a trip to Wolf Ridge is almost a rite of passage for many Minnesotans." Christopher likes building/repairing boats and being on the water. He's built six skin-on-frame canoes, a Greenland kayak, and 2 cedar strip voyageur canoes. Christopher shares, "a paddle from Bohemian Flats to White Sands Beach on the Mississippi River is the Twin Cities best kept secret for wild beauty, seclusion, and wildlife viewing!"

• **Snow** has been falling in steady increments. We got 10" of "concrete" which took about 2 weeks to shovel out, soon followed by 17" of "downy feathers." Both are equally challenging to shovel especially as the snow banks grow taller.

• A big thanks to Warner Nature Center for our **screech owl**. Warner has quickly adjusted to his new home and educates in our raptor program. Our **salamander** Amby also gained a buddy, Dexter, from WNC.

• Juniper, an **Eastern Chipmunk** orphan, assists in teaching students about wildlife when he visits Animal Signs class. He rates a "10" in cuteness and amazes students with his ability to navigate his ball. ♦

John Kohlstedt (76) received the 2019 lifetime achievement award from Minnesota Association for Environmental Educators (MAEE). "This award is presented for long-term, outstanding service and contribution to the field of environmental education in Minnesota. It is intended to recognize the efforts of those people who have had a large-scale, long-term impact in the EE field." Many alumni gathered at McColl Pond ELC in Savage, MN to celebrate his achievement. While visiting China to consult about environmental education, **Pete Smeurd (88)** was joined by **Dr. (Jojo) YanZhu (10)**. They video chatted with **Xia Ji (00)**, who inspired Jojo to come to WR. **Elise Kylo (92)** is in the midst of a 2 yr stint as an resident artisan at North House Folk School. Her specialty is "magically transforming wool into an endless list of things with just water, soap, and patient agitation." Check out some of her creations at woolyworks.org. **Xia Ji (00)** is faculty at the U. of Regina, Saskatchewan. She prepares pre-service teaches in environmental education and indigenizing science education. She is also director of professional development and field experiences. **Josh Hordorff (08)** visited Wolf Ridge after 2 years adventuring in South America. His goal was to learn Spanish. Most of his time was spent in Bolivia, Peru, and Panama. He climbed, worked odd jobs and taught. **Dr. (Jojo) YanZhu (10)** currently works as an education specialist at Shanghai Baoshan Center for Environmental and Science Education. **Francis Van Sloun (13)** recently returned from traveling with Working to Advance STEM Education for African Women (WAAW) Foundation to South Africa and Rwanda where she introduced coding to secondary school teachers. **Emily Richey (16)** started the Great Lakes Gear Exchange in Duluth this year. It started as a pop-up and now they opened in a store front location. They handle outdoor gear and apparel on a consignment basis. Also Pete randomly ran into **Kyler Abercrombie (19)** who is in China teaching English. Neither knew the other was there. What are the odds in a city of 12 million? ♦



SUSTAINABILITY JOURNEYS

by Lori Walewski, Wolf Ridge Naturalist

Imagine a game of Plinko. Players drop chips at the top of the vertical game board into any space. Pulled by gravity, the chip randomly bounces off pegs, eventually settling into a slot at the bottom. If the chips left a colored trail marking their route, we would see zigs, zags and possibly a few intersections, but the overall journey of all the chips down the plinko board would "parallel". Now imagine the chips as organizations. One represents Wolf Ridge. Another, the company Coldspring. The journey of these two organizations towards sustainability and how they intersect is interesting.

Let's review the Wolf Ridge story. Jack Pichotta, a Cloquet social studies teacher and his students created a weeklong symposium called S.C.A.R.E. (Students Concerned about a Ravaged Environment). S.C.A.R.E. took place the same year as the first Earth Day and essentially grew into Wolf Ridge but not without a few zigs and zags.

The first teachers wrote their own curriculum. Soon, Jack created site-specific lessons with some focusing on broader nature topics. Classes like Acid Rain, Living Lightly, and Wildlife Management explored wider sustainability and environmental issues. Recycling, solar panels, low flow shower heads, LED lighting, and biomass district heating systems are some examples of learning tools that eventually enhanced the classes. As years passed, lessons evolved - Changing Climates, Energy in My Home, Renewable Energy, Seeds of Change, and Organic Farming joined the ranks.

Eventually the time came to add new housing for our graduate students while remodeling the West Dorm for the emerging needs of school groups and families. Wolf Ridge chose to align the construction to Living Building Challenge (LBC) standards. Our new construction is built to the highest level of green building and sustainable design. It requires buildings to function as designed for twelve consecutive months before successful certification. What

better way to have students learn about sustainability than actually live in a lodge built using sustainable practices, showcasing energy efficiency, and providing real time feedback on water and electrical usage in each room?



Coldspring, a quarrier, fabricator, and bronze manufacturing company headquartered in Cold Spring, Minnesota was established in 1898. A Scottish immigrant, Henry Alexander, started the business, which is still family owned and run by his descendants. Their goal is to "foster business culture that supports industry leading sustainability practices." In 2006, Coldspring, along with other quarry companies, started working on 3rd-party verified sustainability standards. By 2016 their work came to fruition. Several quarries received certification for their stone produced in an economic, environmental, and socially responsible manner. In 2008 Coldspring's new office headquarters were LEED gold certified. Most recently, Coldspring received the Recognition of Excellence award from Excel Energy for exhibiting an "exemplary commitment to energy efficiency."

Both Wolf Ridge and Coldspring are long-standing organizations with tremendous commitment to sustainability. Wolf Ridge is a non-profit residential environmental learning center. Coldspring is a fabrication, quarrier, and manufacturing business. Where do the paths of these two environmentally-aware orga-

nizations intersect? Visit any bathroom in Wolf Ridge's LBC-renovated MAC Lodge and admire the Mesabi Black granite countertops donated by Coldspring and you'll see one intersection.

Granite is a product that is local (Wolf Ridge's counters were only 56 road miles away), long lasting, durable, doesn't contain VOC's, and has natural beauty.

Another intersection happened in December. Cari May, marketing manager, and Jason Kron, director of sales, of Coldspring visited and shared their story with Wolf Ridge staff. Our graduate students attended as a part of their sustainability class as well as maintenance, custodial, administration, and program staff. Coldspring shared their sustainability journey with us. They asked for our feedback and we had conversations about sustainability. We learned that a family owned company has control over its decisions and can drive changes without conceding to shareholder profits, that they strive to be genuinely curious and actively listen to customer demands, they recycle water used in their quarrying processes, have committed to reducing their energy footprint by 2% each year, are use rock waste piles, and educate about sustainability through presentations like the one they gave at Wolf Ridge. We also learned that Coldspring is working with the International Living Future Institute (LBC creators) to bring business practices into its fold.

After Wolf Ridge's challenge of building MAC Lodge to LBC standards it was exciting to have a company choose to make their products 3rd-party certified without us consumers having to advocate for this.

We cheer as we watch our chip zig and zag to the bottom of the plinko board. Only with our analogy of Wolf Ridge and Coldspring as plinko chips, the journey doesn't end. The interest lies in watching like-minded organizations cross paths and influence each other in the sustainability journeys. ♦

CARVING OUT MY SUSTAINABILITY ETHIC

by Isabel Gerber Brydolf, Wolf Ridge Naturalist

Before coming to Wolf Ridge, my concept of a sustainable relationship with the environment around me was limited to “leave no trace” and “take one in every ten living things.” Living at Wolf Ridge, immersed in an intentional social community and a rich ecological community, I’ve been able to practice sustainability through my actions, not just think about it as an abstract concept. I do not pretend to have it all figured out - not even close - but I’m taking the first steps by applying my ethic to my love of woodcrafts.

My practice of sustainability has been guided by the wisdom of Robin Wall Kimmerer and the tenets of sustainability she shares in *Braiding Sweetgrass*. The indigenous land ethic Kimmerer calls the Honorable Harvest has helped shape my sustainability ethic and put it into practice. Kimmerer writes, “The harvest is made honorable by what you give in return for what you take.” Through this reciprocity we are able to participate ethically in our ecological communities rather than attempting to preserve them by keeping our distance.

In the spirit of actually doing things and not just talking about them, I decided to perform my own honorable harvest. I settled on a small birch tree that was knocked over last winter. The first rule of the harvest: ask permission. I

struggle with knowing how to ask for permission from a non-human being, but when I saw this tree laying in a snow drift, it felt intuitively right. I’m sure it won’t always be that easy in the future! The next rule, “take only what you need” is deceptively simple. In the western paradigm we have become so entrenched in consumption-based lives that we struggle to see the difference between need and want, especially when it comes to the natural world. In working to be more conscious of my casual consumption of nature I’ve found that I often take things - rocks along the shore of Lake Superior, a nice piece of birch bark - with little thought to my purpose. Therefore, I tried to have a clear plan for my harvest; I’m a woodcarver, and I wanted to carve spoons to give to my community members. Handcraft is the best form of “buying local” that I can think of and it empowers me to reduce my consumption of products that have not been produced sustainably.

My first harvest was going smoothly. Then, I remembered the next rule: never waste what you take. Carving spoons is great, but it certainly doesn’t

use the whole tree. Figuring out what to do with all the “scraps” made me realize how little thought I usually give to my use of my materials. I’ve swept all the shavings and small branches from my carving into



the trash more times than I can count. It felt a little dramatic to pick up every last scrap of wood to save for kindling, but more so it felt like an exercise in intentionality and respect.

I whispered my thanks to my little birch tree as I carried it home, but for me, the best way I can give thanks for what I have taken lies in the next rule of harvesting: “give a gift in reciprocity for what you have taken.” Giving people my handcrafts is a way of thanking them for the kindness and generosity they have shown me. I do this in the hope that they feel valued by me in the way that they have made me feel valued in our community. Gift giving also fits within what Kimmerer calls the “culture of gratitude,” a culture based on reciprocity. Sustainable harvests and gifts of gratitude are a good start, but I still have a lot of work to do. It isn’t enough to give gifts just to other humans. I have to figure out how to give gifts to the earth as well.

Sometimes the best gift we can give is the respect and care we show by limiting our consumption. Starting now, I challenge myself, and I encourage you to challenge yourself, to be thoughtful of your consumption of our earth’s resources. Ask, do I need this? What purpose does it serve? How can I give back in gratitude?♦



PROGRAMS 2020

ALL AGES



Open House: June 20, 10-4:00: Free

Bird Banding Drop-in Days:

June 3, 17, 24, July 8, 15, 29, August 5: Free

Family Wknds: Aug 14-17

Family Camp: June 28-July 3, July 26-Aug 1,
Aug 2-8

Grandparent/Grandchild Summer Adventure:
(ages 6-11 & adults) July 19-23

Fees based on number of days, people, and ages. See website:

wolf-ridge.org

YOUTH

Discoverers: (4th-5thgr) June 21-27, July 5-11, July 12-18, July 19-25, July 26-Aug 1, Aug 2-8, Aug 9-15: \$650

Summer Sampler: (2nd-5th gr) June 24-27, Aug 12-15: \$405

Eco-Artists: (4th-5thgr) July 19-25: \$650

Green Energy Camp: (4st-5thgr) Aug 9-15: \$650

Day Camp: (K-5thgr) June 29-July 3: \$200

Voyageurs: (6th-7thgr) June 21-27, July 5-11, July 12-18, July 19-25, July 26-Aug 1, Aug 2-8, Aug 9-15: \$650

Voyageurs Farm Camp: (6th-7th gr) June 21-27: \$650

Angling to Archery: (6th-7thgr) July 5-11, Aug 9-15: \$707

Wildlife Camp: (6th-7thgr) Aug 2-8: \$650

Voyageurs 2-wk Ultimate Survival: (6th-7thgr) July 12-25: \$1,350

Girls Rock the Ridge Leadership: (6th-7th) June 21-27, Aug 9-15: \$665

Boys Rock the Ridge Leadership: (6th-7th) July 26-Aug 1: \$665

BWCAW Canoe 5-day: (7th-8thgr) July 26-Aug 1, Aug 9-15: \$676

Superior Hiking Trail 5-day Backpack: (7th-8th) July 5-11: \$676

Adventurers: (8th-9thgr) July 12-18, July 19-25, July 26-Aug 1, Aug 2-8: \$665

Adventurers Farm Camp: (8th-9th gr) Jul 26-Aug 1: \$650

Camp Rock Climbing: (8th-9thgr) Aug 2-8: \$725

Adventurers Northwoods Kayak: (8th-9thgr) June 21-27: \$780

Adventurers 2-wk BWCAW Canoe: (8th-9thgr) July 5-18: \$1,500

Adventurers 2-wk Isle Royale Backpack: (8th-9thgr) July 12-25: \$1,500

Credit Camp - Freshwater Ecology: (10th-12thgr) July 5-25: \$2,100

Credit Camp - Wilderness Ethics: (10th-12thgr) July 26-Aug 8: \$1,765

Beginning Youth Bird Banding: (10th-12thgr) July 12-18: \$890

Advanced Youth Bird Banding: (10th-12thgr) July 5-11: \$910

Counselor-in-Training: (10th-12thgr) Aug 2-15: \$1,000

Superior Service Learning: (10th-12thgr) Aug 2-8: \$650

Jr Naturalists 2-wk Quetico Canoe: (10th-12thgr) July 19-Aug 1: \$1,586

Jr Naturalists 2-wk Apostle Island: (10th-12thgr) July 26-Aug 8: \$1,562

BWCAW Traverse Canoe Expedition: (10th-12th) June 28-July 18: \$2,100

Apostle Islands Kayak Expedition: (10th-12th) June 28-July 11: \$1,750



NEW

Leave No Trace: (adults) May 16-20: \$465, register at nols.edu/lnt

Bird Banding IBP Beginning: (adults) June 21-28: \$2,295

Bird Banding IBP Advanced: (adults) June 30-July 4: \$1,250

Adult Wknds: (adults) Aug 14-17, Sept 25-27: \$325 and up

**Leave No Trace
Master Educator Course**

This is the highest level of education training in NOLS/LNT training. One of the only courses offered in the mid-west, coursework focuses on how to teach others about ethical camping and outdoor recreation practices. Graduates are certified to offer and teach LNT Awareness Workshops and Trainer Courses. A great opportunity for outdoor professionals, scout leaders and anyone interested in teaching outdoor ethics.



Beg. & Adv. Bird Banding Courses

Wolf Ridge hosts the Institute for Bird Population's beginning and advanced workshops for seasoned and new banders. The seven-day introductory class provides both amateur birders and professional biologists with the skills necessary to participate in monitoring and research programs. The four-day advanced class is designed for experienced banders who wish to improve their sexing and ageing skills.

**Summer Adult
Sampler Weekend**



Experience for yourself why Wolf Ridge Environmental Learning Center is so fun and memorable! Hike, paddle, and climb. Meet other adults interested in the outdoors and outdoor recreation. Share stories at a campfire with S'Mores and an evening wine social.

**Fabulous Fall Nature
Geek-Out Weekend**

Give your inner nerd a little love! Choose North Shore Geology Exploration, Saw-whet Owl Banding, North Shore Coastal Kayaking, Lake Superior Agates, or the Wolf Ridge Sampler.

Stay in touch with Wolf Ridge

Register for programs on-line or by calling Wolf Ridge.

Order calendars for your school fundraiser or friends by calling Wolf Ridge.

Calendars are available for \$18.95 including shipping. They are also available at special prices, in lots of 25, for school fundraising and retail resale. Proceeds of all calendar sales directly support children attending Wolf Ridge school programs.

Your gift supports Wolf Ridge:

- Consider monthly donations with automatic payments.
- Contribute an annual donation.
- Become a planned giver.
- Make an in-kind donation.

Call to set-up your gift.



**Facebook
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at
wolf-ridge.org
or call
800-523-2733
(MN, WI, ND)
218-353-7414**

Complimentary Issue

IN THIS ISSUE



*China
Connections.....1- 4*

Employee Match Programs.....3

*2021
Wolf Ridge
Calendar.....4*



*Secrets of the
Subnivean Zone.....5*

*Profile:
Luciana Ranelli.....6*



Wolf Ridge News Briefs.....7

*Wolf Ridge
Staff Update.....7*



Sustainability Journeys.....8

*Carving Out
My Sustainability
Ethic.....9*



*Upcoming
Programs.....10*



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Wolf Ridge is an accredited residential environmental school for persons of all ages. We offer immersion programs which involve direct observation and participation in outdoor experiences. Wolf Ridge programs focus on environmental sciences, human culture and history, personal growth, team building, and outdoor recreation.

Our mission is to develop a citizenry that has the knowledge, skills, motivation, and commitment to act together for a quality environment.

We meet our mission by:

- Fostering awareness, curiosity, and sensitivity to the natural world.
- Providing lifelong learning experiences in nature.
- Developing social understanding, respect, and cooperation.
- Modeling values, behaviors, and technologies which lead to a sustainable lifestyle.
- Promoting the concepts of conservation and stewardship.