



Making Waves



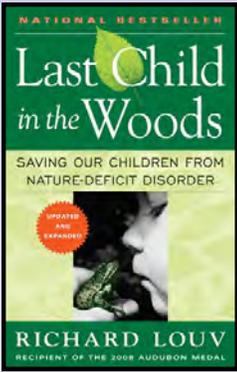
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Children & Nature: An Investment in Our Future



By Heidi Keuler

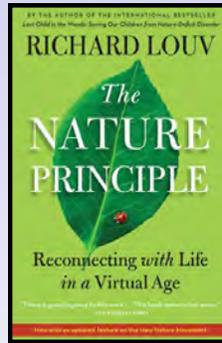


It has been ten years since the first publication of Richard Louv's book, *Last Child in the Woods*. In this award winning book, Louv talked about "Nature-

Deficit Disorder" and how children are not playing in nature like they once were. He pointed to evidence that the rise in child obesity, attention disorders, and depression were closely related to the shortage of nature in family life. In families that have spent time in nature, Louv and his colleagues have observed physical and emotional benefits of unstructured play.

After many people read Louv's book, they thought that there were just as many adults with the "disorder." So in 2012, he wrote, *The Nature Principle: Reconnection with Life in a*

Virtual Age. In this book, Louv explains that we can be immersed in both nature and technology and the effects of nature can be both a driving force for creativity and a healing therapy.



Although Louv explains that many people have been working to connect kids to nature long before his first book was published, he has set off a major nature movement termed the "New Nature Movement." He has also initiated an organization called the Children & Nature Network (CNN; childrenandnature.org).

were among a crowd of more than 400 who attended the 2015 CNN Conference held April 7-9 in Austin (TX). Key topics discussed here included:

- Creating vibrant cities - green space with areas to walk and bike;
- Growing healthy children - medical benefits of time spent in nature;
- Nurturing the next generation - diverse, nature-smart leaders;
- Transforming education - more opportunities in nature;
- Sharing stories of success.

As a representative for the Service's Midwest Region, I learned a lot at the conference that will not only be a professional asset, but a personal one as well with benefits to my: school district; Parent-Teacher Organization; community; family life; and personal well-being. Best of all, I returned home from the conference rejuvenated and ready to put my ideas into action.



"Time in nature is not leisure time; it's an essential investment in our children's health and also, by the way, in our own."

Richard Louv

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Children & Nature Conference



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Highlights from the conference included talks given by:

- Richard Louv - Best selling author and co-founder of the Children & Nature Network;
- Juan Martinez – Director of Leadership Development in the Children & Nature Network and National Geographic Emerging Explorer;
- Dr. Guillermo Penalosa – Executive Director of 8-80 Cities;
- Dr. Scott Sampson – Chief Curator of the Denver Museum of Nature & Science and paleontologist on the PBS television show *Dinosaur Train*.



Biologist Heidi Keuler meets "Dr. Scott" during a break at the conference.

Service employees met after the conference to discuss what they learned and share some of the great outreach projects they work on.

Participation at this event provided me with a great opportunity to network and learn how to connect kids with nature.

RESOURCES TO CONNECT KIDS AND NATURE

Smart Phone Apps

- Nature Passport (<http://www.naturenet.com/naturepassport.html>)
- iNaturalist (<http://www.inaturalist.org>)
- Merlin Bird ID (<http://merlin.allaboutbirds.org>)

Programs

- Every Kid in a Park (<http://nationalparks.gov/look/every-kid-in-a-park>)
- Science-Technology-Engineering-Math (<http://www.ed.gov/stem>)
- YMCA Bold & Gold Program (<http://ymcaleadership.com>)
- *Transforming Youth Outdoors* (<http://mytyo.org>)
- *Plum Landing* (<http://pbskids.org/plumlanding>)

Books

- *Last Child in the Woods* by Richard Louv
- *How to Raise a Wild Child* by Scott Sampson
- *The Nature Principle* by Richard Louv
- *Asphalt to Ecosystems* by Sharon Danks
- *Ecopsychology* by Patricia Hasbach



A solitary butterfly may connect kids to nature.

Taking a Team Dive

By Kyle Mosel

Ten SCUBA-certified employees from throughout the Midwest Region met in La Crosse (WI) March 3-4 to complete annual Service dive-authorization training requirements.

I was one of two new recruits looking to join the regional dive team this year and had much to learn during the two-day event. Andy Roberts, the Midwest Regional Dive Safety Officer, got things underway by covering dive reauthorization requirements and leading a discussion of responsibilities as a diver for the Service.



Annual training ensures the safety of dive team members.

Janet Dalton, a regional safety and occupational health specialist, also participated by phone during the morning portion of the meeting. Once these discussions concluded, we proceeded to an indoor pool for the afternoon to complete annual swim tests. This battery of exams included: a 400-yard swim; an 800-yard snorkel swim; a 15-minute tread; and a 100-yard inert diver tow. After these tests were completed, individual diving skills were evaluated including the proper means to: enter/exit the water; clear a mask; breathe from an alternate air supply; remove/replace equipment underwater; and communicate with hand signals.

In the near future, several of us will also complete a required oxygen administration course. Once fully trained, I look forward to participating in a variety of SCUBA diving projects, particularly those that contribute to the recovery/restoration of threatened/ endangered species of native mussels in the Midwest Region.



e-DNA Sampling Kick-Off

By Nick Bloomfield

Staff from the La Crosse (WI) FWCO, Carterville (IL) FWCO, and Wilmington (IL) Field Office teamed up the week of April 20 to collect water samples from four waterways in northeastern Illinois and resume the annual search for molecular traces of environmental DNA (e-DNA) fragments from Asian carps here.

A cumulative total of more than three hundred samples (50 mL each) were collected from the upper Illinois River, the lower Des Plaines River, the lower Kankakee River, and lower portions of the Chicago Sanitary and Ship Canal. Sampling began just below the electric dispersal barrier in Romeoville (IL), ran downstream continuously



Trevor Cyphers takes a sample in the tailwater of the Dresden Dam.

through three lock and dams, and ended in the middle of the Marseilles Pool. Sampling also extended up the Kankakee River, a tributary of the Dresden Pool known to harbor Asian carp near its mouth.

These sites nearly ran the full gamut of Asian carp densities, from commercially harvestable numbers in the Marseilles Pool to likely very low densities in the Brandon Road and Lockport Pools. This sampling will be repeated during the spawning season to track changes that may occur from spring to summer and potentially identify spawning areas.



Fishers & Farmers Presents

By Heidi Keuler



Chris Jones (Iowa Soybean Association) and Aleshia Kenney (USFWS Rock Island Field Office) presented a talk entitled "Oxbow Restoration for Habitat and Water Quality Improvement" at the annual Partnership for River Restoration and Science in the Upper Midwest Symposium held February 8-11 in Dubuque (IA).

Chris Jones is a member of both the Science Team and the Steering Committee of the Fishers & Farmers Partnership for the Upper Mississippi River Basin. Both



Aleshia Kenney cradles an endangered Topeka shiner seined from an oxbow pond.

Chris and Aleshia work on oxbow restoration projects in the Boone River watershed in Iowa that have been funded by the Fishers & Farmers Partnership. Aleshia also helps design and monitor oxbow restoration projects in Iowa's North Raccoon watershed.

Meanwhile, as the Fishers & Farmers Partnership Coordinator, I gave a talk entitled, "Using Social and Scientific Tools to Enhance Conservation Across the Upper Mississippi River Basin".

This presentation covered the history of the Fishers & Farmers Partnership, stream protection/restoration projects they work on, and the scientific/social tools they use to put more conservation actions into practice. Scientific tools include geographic information system-based fish habitat assessments and a decision support tool that several other Midwest Fish Habitat Partnership Programs are working on with Downstream Strategies, **Downstream Strategies** an environmental consulting services company. Models are also being used to identify target watersheds. Fishers & Farmers are likewise using social tools such as: social monitoring plans and evaluation, field days or pasture walks, farmer workshops, websites, landowner engagement training and a newly purchased stream table.

Welcome Back!



by Mark Steingraeber

Katie Lieder re-joined the La Crosse FWCO staff in April as a contracted biological science technician. She resumes work in the same position she held for 5 months at the La Crosse FWCO in 2014.

Katie hales from nearby Winona (MN) where she earned her bachelor's degree in Environmental Biology from Saint Mary's University. As a student, she worked for the Minnesota



Katie Lieder re-joins the La Crosse FWCO.

Pollution Control Agency in St. Paul conducting fish surveys and for GeoSpatial Services in Winona geo-referencing aerial photos for the Natural Resources Conservation Service.

Katie is picking up at the FWCO where she left off last year, largely in support of Asian carp surveillance activities around the upper Midwest. Having worked here before, she is a great asset to our office in many other ways as well and we are very pleased she has returned to work with us. WELCOME BACK KATIE!

Welcome Aboard!



by Mark Steingraeber



Erin Johnson joined the La Crosse FWCO staff in April as a contracted biological science technician. A native of La Crosse, she brings with her a world of experience gathered from around the globe.

After graduation from La Crosse Central High School, Erin earned a Bachelor of Science degree (Biology) at the University of Wisconsin-Superior. She made the most of opportunities available to her here by interning as a zookeeper at the Lake Superior Zoo and participating in a mid-winter, coral reef ecology, study-abroad program in Belize that later led to her open water SCUBA dive-certification. When not busy "up north" at school, she also worked as an animal care giver for the Coulee Region Humane Society,



Erin Johnson joins the La Crosse FWCO.

Erin was subsequently bit hard by a travel bug and moved to Australia for several years where she earned a Masters of Environment degree at Melbourne University. Her diverse experiences here included: conducting risk assessments and evaluating remediation techniques used to restore mined lands; assessing the toxicity of arsenic contaminated sediments to benthic macro-invertebrates; using macro-invertebrates to monitor the health of the River Murray; and developing management plans to limit the spread of invasive algae.

A volunteer for the La Crosse FWCO and the Genoa NFH in 2014, Erin's primary focus this summer will be on Asian carp surveillance. WELCOME ABOARD ERINI!



Upcoming Events



Mark Your Calendar Now!

SEE PAGE 5

Children's Fishing Clinic
May 9, 9 am - 1 pm
Genoa National Fish Hatchery

SEE PAGE 6

Mississippi River Pools 7 & 8 - Clean Up
May 9, 8 am -12 pm

Youth Outdoor Fest
July 11, 10 am - 2 pm
Veterans Freedom Park
La Crosse

Hope to See You!

Restore and Return

By Mark Steingraeber



Besides biology, a discipline I've made a career of, history was another of my favorite subjects in school ... particularly U.S. History. Therefore, I was pleased to be able to blend the two topics when I spoke to Environmental Science students at Aquinas High School in La Crosse on



April 15. Juniors and seniors in the class had recently turned their attention to water resources and I was invited to speak on biodiversity.

Looking only 12 blocks west of campus for a focal point, I gave a 40-minute address that highlighted water and land management practices which have altered the biodiversity of the Upper Mississippi River System (UMRS), for better and for worse, since the mid-19th century.

From packet boats and wing dams to tow boats and closing dams ... from St. Anthony Falls to the St. Louis Arch ... from the Rivers and Harbors Act to the Works Progress Administration ... from the Clean Water Act to the Environmental Management Program ... be it layers of rock and willow or concrete and steel ... for more than 150 years, the United States have worked to harness the power of the Upper Mississippi River to make it a more dependable navigation corridor.

Chief among these actions was the construction of 28 locks and dams that



fundamentally altered the river's hydraulic nature from a wild, free-flowing waterway to a series of managed, lake-like impoundments. This drastically altered many physical habitat characteristics which a diverse variety of native aquatic species require to thrive here. With other environmental stresses like water pollution and invasive species, some sensitive native species were adversely impacted, causing localized (if not widespread) losses in aquatic biodiversity.

One documented loss has been the extirpation of ebonyshell mussels upstream of Lock and Dam 19 at Keokuk, Iowa. Skipjack herring, the host-fish required by this mussel species to complete its life cycle, cannot migrate upstream of this enormous man-made barrier to fish passage. Thus over a period of decades, populations of both these species were gradually lost at sites upstream of here.



The absence of ebonyshell mussels and the skipjack herring in much of the UMR is due to Lock and Dam 19.

In recent years however, some declining trends in native biodiversity have been reversed. A turning point came in 1986 when the U.S. Congress recognized the UMRS as both "a nationally significant ecosystem and a nationally significant commercial navigation system" that should be managed for both purposes. Since then, state and federal agencies have received funding to rehabilitate and

enhance river habitats that benefit a wide variety of native fish and wildlife species.



While some of this work is very time consuming and expensive, like island restoration (pictured above), other actions, like mid-summer water-level drawdowns to encourage rooted aquatic plant growth (pictured below), are much quicker and less expensive.



Actions like these provide stable physical habitats that improve water quality and encourage greater productivity among a diverse variety of native species. This ultimately improves the functional stability of the river ecosystem and the many services it provides to society. In closing my take on the current state of native aquatic biodiversity in the Upper Mississippi River for the students that day, I left them with a take-home message adapted from the classic film *Field of Dreams*: "Restore it and they will return".



Volunteers Take an Artistic Sojourn

By Mark Steingraeber



The La Crosse Fish and Wildlife Conservation Office (FWCO), the Genoa National Fish Hatchery (NFH), and the La Crosse Fish Health Center co-hosted an annual recognition dinner to publicly acknowledge many of their key volunteers and friends at St. Andrew Square in La Crosse on March 20.

A total of 37 invited guests attended the event including keynote speaker Sara Lubniski, an American landscape painter and botanist. Sara first shared the personal perspective and insight she brings to the canvas when she creates a work of art. Then through her art, Sara took everyone on virtual tour she titled *River Sojourn: a Painter's Portfolio of the Mississippi*



High Ground by Sara Lubniski

River Blufflands, sharing many of her works of art that illustrate the beauty and diversity of natural places in the Upper Mississippi River valley and celebrate landscapes preserved by individuals, state and federal organizations.

The evening was capped off with individual recognition for each volunteer or friend in attendance. Some volunteers were also given special recognition for exceptional service. These individuals included: Susan Houlihan (Meritorious Service Award, Genoa NFH); Erica Rasmussen (Conservation Steward Award, Genoa NFH); and Ron Walley (Volunteer of the Year, La Crosse FWCO). We appreciate the efforts of all our volunteers and look forward to working with you in 2015!

ANNUAL KIDS FISHING CLINIC & DERBY - FREE

GENOA NATIONAL FISH HATCHERY

5 5631 State Hwy 35, Genoa WI 54632

Saturday, May 9, 2015 8:45 AM TO 1:00 PM

For Children Ages 5 years to 12 years old

Fishing poles available as needed ... Lunch will be provided



The following is the itinerary for the Annual Fishing Clinic & Derby for children **5 to 12 years old** at the Genoa National Fish Hatchery, **Saturday, May 9, 2015**

Clinic Stations

	Station 1	Station 2	Station 3	Station 4
8:45 to 9:00 am Registration	Boat Safety	Fish Health	Fish Behavior and ID	Wetland Tour
9:00am to 9:15am	" "	" " "	" "	"
9:15am to 9:30am	" "	" " "	" "	"
9:30 am to 9:45 am	" "	" " "	" "	"
9:45 am to 10:00 am	" "	" " "	" "	"

This event is limited to the **first 250 children** that register on the day of the event.

Children will rotate every 15 minutes (9:00 to 10:00 am) through the clinic stations.

Recreational fishing will follow (10:00 am to 12:00 pm) at Hatchery Pond 5.

Fishing pole "loaners" will be available, as needed.

Lunch will be provided at noon for the children, volunteers and employees.

Everyone will be dismissed at approximately 1:00 pm

Participants will be provided bait, **NO outside bait will be allowed.**

Due to safety concerns and space limitations, no artificial lures, fly fishing and/or treble hooks will be allowed at this event.

Children must attend the Fishing Clinic to attend the Fishing Derby



For more information call: 608-689-2605



MISSISSIPPI RIVER



CLEANUP - POOLS 7 & 8



Saturday May 9, 2015 8 am - 12 pm

The Mississippi River has been the center of our community since La Crosse was founded. It is important for recreation, as well as industry, and attracts visitors from around the world.

The Mississippi River Cleanup event brings volunteers together to recover discarded refuse along the riverbanks and care for this resource to preserve it for future generations.

Each volunteer must check in at one of the following locations: 7th Street Landing, Goose Island South Landing, Clinton Street Landing or Fred Funk Landing located on Brice Prairie.

Volunteers are welcome to join us afterwards at the Copeland Park shelter for food and prizes! Please join us as we work to preserve the splendor of this great river for everybody to enjoy!

We ask everyone to register in advance so we can order shirts and track our volunteers.

PLEASE...ALL VOLUNTEERS MUST PRE-REGISTER online.

Register today @ <http://mississippirivercleanup.com/>