



Minnesota Valley National Wildlife Refuge

Spring Calendar of Events



March, April, May
2015

Monarch and Milkweed
Photo K Raveiling



Monarchs in Trouble

World Wildlife Fund recently released the results of their December 2014 monarch hibernation colony study. An estimated 56.5 million monarchs are hibernating on 2.79 acres of temperate fir and pine forest in central Mexico (World Wildlife Fund). This is an increase of 68.7% from December 2013, but is still an 82% decline from the 20 year average of hibernating monarchs (Xerces Society).

Why an 82% Decline?

Monarchs (*Danaus plexippus*) in North America are threatened from the decline of common milkweed (*Asclepias syriaca*), deforestation and illegal logging in overwintering sites, and extreme weather conditions in its entire range.

Milkweeds are the monarch caterpillar's only food source. Herbicides used for corn and soy crops are the biggest contributing factor to milkweed decline in the United States (World Wildlife Fund). From 1999 to 2010 herbicides used on these crops reduced milkweed plants by 58%, which in turn dropped monarch reproduction rates by 81%. Because of this, it is estimated that the monarch has lost as much habitat as 165 million acres and at least one third of their summer breeding grounds.

What can you do?

Learn more from experts! We will be hosting world-renowned monarch expert Karen Oberhauser on Sunday, March 8. She, along with other monarch experts, will discuss ways to move forward and save this iconic animal.

Planting milkweed is easy! Buy local, pesticide free milkweed seed. Use the Xerxes Societie's milkweed finder to find a source near you. As a bonus, common milkweed smells like lilacs. When milkweed blooms in June and July the aroma of lilacs once again scents the air!

Do you have information about monarch biology or migration? The U.S. Fish and Wildlife Service is conducting a 12 month status review and is requesting scientific and commercial data about the monarch. Comment period ends March 2, 2015. <http://go.usa.gov/3qaDd>

Continued on page 2

March



7 Bird Watching Trek

Old Cedar Avenue
8:00 am-10:30 am

7 Nature's Notebook Workshop

Bloomington Education and Visitor Center ****Page 11 for details****
9:00 am-4:00 pm

7 Environmental Education Cohort

Bloomington Education and Visitor Center
9:30 am-12:00 pm

7 Refuge Partner Teacher

Orientation

Rapids Lake Education and Visitor Center ****Page 9 for details****
11:00 am-12:00 pm

7 Refuge Partner Teacher Spring

Training

Rapids Lake Education and Visitor Center ****Page 9 for details****
11:00 am-12:00 pm

7 & 8 Aldo Leopold Weekend

Bloomington Education & Visitor Center
9:00 am-5:00 pm

14 Bird Watching Trek

Old Cedar Avenue
8:00 am-10:30 am

21 Bird Watching Trek

Old Cedar Avenue
8:00 am-10:30 am

23 Bird Watching Trek

Old Cedar Avenue
8:00 am-10:30 am

24 Tuesday Tour: Squish!

Wilkie Unit
4:30 pm-6:30 pm

30 Bird Watching Trek

Old Cedar Avenue
8:00 am-10:30 am

Monarchs continued from page 1

Literature cited:

Xerxes Society for Invertebrate Conservation. *Monarch Numbers Up Slightly, but Still at Risk for Extinction.* www.xerces.org

World Wildlife Fund. *Forest Surface Occupied by Monarch Butterfly Colonies in December 2014.* Rendon-Selinas et. Al.

http://assets.worldwildlife.org/publications/768/files/original/REPORT_Monarch_Butterfly_colonies_Winter_2014.pdf?1422378439

Milkweed Seed Finder:

<http://www.xerces.org/milkweed-seed-finder/>

April



4 Environmental Education Cohort

Bloomington Education and Visitor Center
9:30 am-12:00 pm

5 Bird Language

Bloomington Education & Visitor Center
9:00 am-1:00 pm

5 Call of the Wild Film Fest

Bloomington Education & Visitor Center
3:00 pm

6 Partner Teacher Orientation

Bloomington Education & Visitor Center ****Page 10 for details****
4:00 pm-5:00 pm

7 Partner Teacher Spring Training

Bloomington Education & Visitor Center ****Page 10 for details****
4:00 pm-7:00 pm

11 Bird Watching Trek

Rapids Lake Education & Visitor Center
8:00 am-10:30 am

11 Early Signs of Spring Photo Hike

Bass Ponds
6:30 am-8:30 am

12 Call of the Wild Film Fest

Bloomington Education & Visitor Center
3:00 pm

19 Bird Watching Trek

Rapids Lake Education and Visitor Center
8:00 am-10:30 am

19 Call of the Wild Film Fest

Bloomington Education & Visitor Center
3 pm

21 Tuesday Tour: Bluff Trail

Old Cedar Avenue
4:30 pm-6:30 pm

26 Call of the Wild Film Fest

Bloomington Education & Visitor Center
3 pm



American Toad
Photo by Larry Syverud, Helios Photos

May



2 Bird Watching Trek

Bloomington Education and Visitor Center
8:00 am-10:30 am

2 Environmental Education Cohort

Bloomington Education and Visitor Center
9:30 am-12:00 pm

3 Bird Language

Bloomington Education & Visitor Center
9:00 am-1:00 pm

3 Call of the Wild Film Fest

Bloomington Education & Visitor Center
3 pm

4 Bird Watching Trek

Rapids Lake Education & Visitor Center
8:00 am-10:30 am

10 Bird Watching Trek

Rapids Lake Education & Visitor Center
8:00 am-10:30 am

10 Call of the Wild Film Fest

Bloomington Education and Visitor Center
3 pm

12 Tuesday Tour: Spring

Ephemerals

Rapids Lake Education and Visitor Center
4:30 pm-6:30 pm

17 Call of the Wild Film Fest

Bloomington Education & Visitor Center
3 pm

24 Call of the Wild Film Fest

Bloomington Education & Visitor Center
3 pm

30 Humans for Lunch! Insect Bites and Prevention

Bloomington Education & Visitor Center
10:00 am-11:00 am

30 Bird Hike



Louisville Swamp Unit
8:30 am-11:30 am

30 Introduction to Flower

Photography

Bloomington Education & Visitor Center
9:30 am-12:00 pm

31 Call of the Wild Film Fest

Bloomington Education & Visitor Center
3:00 pm

Program

Descriptions



Bird Language

Join us as we gather on the slopes of the Minnesota River Valley to explore what the birds are telling us about our surroundings. We will split the time between the classroom and outdoors. Bring a notebook, pencils, and something to sit on outdoors. To register: <http://www.mntracking.org/>
Donnie Phyllaier, Volunteer Refuge Naturalist

Bird Walk

Walk refuge trails to search for birds and other wildlife. We will look for warblers, vireos, and birds that nest on the refuge. Dress for the weather. Bring water, bug spray, binoculars, and your favorite field guide.

Ages 7 to adult.

Led by George Skinner and Anne Hanley, Volunteer Refuge Naturalists

Bird Watching Trek

Join us for a bird walk on one of the many refuge units and learn about the birds that visit during their spring migration. With a variety of habitats at the different units you will want to explore them all. During spring, observe a mix of waterfowl, raptors, warblers, and other songbirds resting and feeding before they continue their northerly migration. Birders of all skill levels are welcome on these walks. Bring along your binoculars, favorite field guide, and dress appropriately for the weather.

Led by Craig Mandel, Volunteer Refuge Naturalist

Call of the Wild Film Fest

Join in on 60-90 minutes of films featuring our favorite wildlife and their unique behaviors, habitat needs, and special adaptations. Experience the drama of survival in the wild and discover how community partners work together to protect habitat for wildlife. Recommended for all ages.

April 5-Animal Olympians

April 12-Living with White-tailed Deer

April 19-Global Warming, Climate Change, You Can Make a Difference

April 26-Conserving America: The Wetlands

May 5-Duckumentary

May 10-Wild America: Tender Times

May 17-Predators and Prey

May 24-Bees: Tales from the Hive

May 31-Crane Song

Early Signs of Spring Photo Hike

We will be heading out early to capture some early signs of spring out on the refuge. April is when the birds are returning, trees are starting to bud, and grasses are starting to grow. With some luck we will be able to capture some shots of our feathered friends as we look for Red-wing Blackbirds in the swampy areas, and migrating waterfowl in the ponds.

Don Tredinnick and Peter Berman, Volunteer Refuge Naturalists

Environmental Education Cohort

You are invited to join a dedicated group of educators focused on integrating and embedding Environmental Education and outdoor learning into every day instruction. See page 10 for details. Free! Registration is required;

https://www.surveymonkey.com/s/EE_Cohort2014-15

Suzanne Trapp, Visitor Services Specialist

Humans for Lunch! Insect Bites and Prevention

If you're wondering why mosquito bites itch, horsefly bites hurt, and blackfly bites bleed, here's a look at the specialized mouthparts of biting insects. Discover how, when, and where insects use their eating utensils and learn how to avoid becoming the next main course.

Judy Geck, Park Ranger

Bloodroot, Photo
Don Tredinnick



Introduction to Flower Photography

For the fourth year in a row, we will be presenting a program on flower photography. We will begin in the classroom with a presentation that will help you get some of those "wow" photos. Some of the topics to be covered are:

- 5 Types of Flower Photography
- Challenges
- Tips and Tricks
- Some Locations

After the class we will go out and photograph some of the spring flowers. Bring your camera, water, and dress for the weather (and for the ticks!).

Led by Don Tredinnick and Peter Berman, Volunteer Refuge Naturalists

Summer Hours

Bloomington Education and Visitor Center

Starting April 1st

Tuesday-Sunday, 9 am-5 pm

Rapids Lake Education and Visitor Center

Monday-Friday, 9 am-4 pm

Tuesday Tours

Improve your powers of observation and your health on a 4-mile hike with Ranger Judy through the river valley and uplands, exploring some of Minnesota Valley's best habitat. Come prepared for brisk walking with frequent stops and dress for the weather.

Judy Geck, Park Ranger

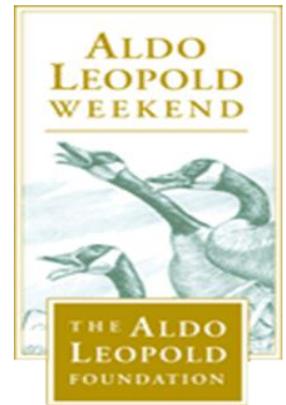


Water Angel, Photo by Harris Mallory

Minnesota Valley National Wildlife Refuge Invites you to join in on Aldo Leopold Weekend!

Designated the first weekend in March, Aldo Leopold Weekend is designed to bring people in the community together around Leopold's idea of a land ethic. Minnesota Valley National Wildlife Refuge will host weekend programs March 7 and 8 including a full day *Nature's Notebook Phenology Workshop*, screening of *Green Fire*, guided hikes, and conservation presentations.

Programs will take place at Minnesota Valley National Wildlife Refuge
Bloomington Education and Visitor Center.



Nature's Notebook Phenology Workshop

Saturday, March 7

9:00 am-4:00 pm

The National Phenology Network is recruiting volunteers, students, and educators to collect and submit plant and animal observations within the Twin Cities community using the national data base Nature's Notebook. No prior experience is required! Teachers, amateur naturalists and botanists, as well as seasoned professionals are welcome. Register to use your own site or conduct observations on Minnesota Valley National Wildlife Refuge.

To register, please visit:

<http://tinyurl.com/mohw7mq>

For more information:

Teacher Contact: Suzanne Trapp, Visitor Services Specialist, 952-361-4502

or Suzanne_Trapp@fws.gov

Volunteer Contact: Sarah Inouye-Leas, Volunteer Coordinator, 952-858-0724

or Sarah_Inouye@fws.gov

Bird Language

Sunday, March 8

9:00 am-1:00 pm

Join us as we gather on the slopes of the Minnesota River Valley to explore what the birds are telling us about our surroundings. We will split the time between the classroom and outdoors. Bring a notebook, pencils, and something to sit on outdoors. To register visit:

<http://www.mntracking.org/>

Donnie Phyllaier, Volunteer Refuge Naturalist

Planting for Pollinators

Sunday, March 8

10:00 am-11:00 am

Join a native plant expert to learn how you can provide ideal habitat for pollinators by selecting the right plants for the right location. Free resources about the refuge butterfly garden will be available.

Matt Stasica, Minnesota Waterfowl Association

Green Fire: Aldo Leopold and a Land Ethic for Our Time

Sunday, March 8

11:00 am-12:15 pm

This documentary explores the life and legacy of famed conservationist Aldo Leopold, and the many ways his land ethic philosophy lives on in the work of people and organizations all over the country today.

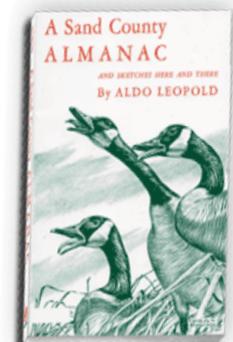
Brown Bag Book Lunch: Aldo Leopold Readings and Discussion

Sunday, March 8

12:15 pm-1:00 pm

Bring your lunch and join a read-aloud and facilitated discussion featuring favorite Aldo Leopold essays. Judy Geck is a Leopold Land Ethic Leader and will facilitate the discussion.

Judy Geck, Park Ranger



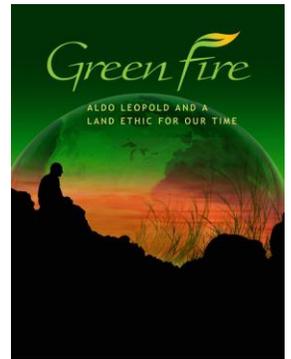
Feature Film

Green Fire: Aldo Leopold and a Land Ethic for Our Time

Sunday, March 8

11:00 am-12:15 pm

This documentary explores the life and legacy of famed conservationist Aldo Leopold, and the many ways his land ethic philosophy lives on in the work of people and organizations all over the country today. Learn how Leopold's vision of a conservation community offers inspiration and insight for the future.



Shell Lake Collective

Sunday, March 8

1:00 pm-2:00 pm

Learn how a group of concerned, committed citizens living near Shell Lake, Wisconsin have come together and work cooperatively to protect, restore, and enhance their private lands for conservation.

Guided Hike

Sunday, March 8

4:00 pm-5:00 pm

Join Ranger Judy and volunteer naturalists for a guided hike on the Long Meadow Lake Trail.

Judy Geck, Park Ranger

Dwindling Numbers for an Iconic Insect: A Conservation Biologist Ponders Moving beyond the Documentation of Declines

Presented by:

Karen Oberhauser, Director of the Minnesota Monarch Lab

Ward Johnson, Co-Director of the Save Our Monarchs Foundation

Sunday, March 8

2:00 pm-4:00 pm

Monarch butterfly populations have been declining over the last 20 years. Karen Oberhauser will describe the amazing biology of migratory monarch populations and the work of citizens and scientists in documenting numbers at all stages of their migratory cycle. She will discuss threats to monarchs, and potential responses to these threats. Because conservation biology must be, at its essence, a science of hope, her focus is on positive changes. Ward Johnson will describe how gardeners are helping gardeners by providing milkweed seeds and expertise to create habitat.



“The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land.” - Aldo Leopold

Published in 1949 as the finale to *A Sand County Almanac*, Leopold's 'Land Ethic' defined a new relationship between people and nature and set the stage for the modern conservation movement. Leopold understood that ethics direct individuals to cooperate with each other for the mutual benefit of all. One of his philosophical achievements was the idea that this 'community' should be enlarged to include non-human elements such as soils, waters, plants, and animals, *“or collectively: the land.”*

“That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics.”

Partner Teachers, Save the Date!!!

Are you interested in becoming a Partner Teacher or continuing in the program for a new season? Would you like to be able to take your class on a **free** field trip to Minnesota Valley National Wildlife Refuge (NWR)? Imagine having your classroom set up for you in advance of your field trip. Interested? Here's how!

What is the Partner Teacher program?

This program is an integrative partnership between teachers and the MN Valley NWR where your class will come to the refuge for a field trip to learn through nature-based curriculum that meets MN State Standards of Education. Classes may come for up to 3 field trips throughout the fall, winter, and spring season. There are no student fees and bus invoices are paid for through Refuge Friends, Inc.

Saturday, January 10th: Winter Training

****RSVP no later than January 5th****

Saturday, March 7th: Spring Training

****RSVP no later than March 2nd****

11:00 am-12:00 pm: Orientation to the Refuge

This portion of training is for new Partner Teachers only. Become a Partner Teacher, learn about the resources available to your class (microscopes, binoculars, etc.) and explore our indoor and outdoor classrooms. Please bring a bagged lunch!

12:30 pm-3:30 pm: Winter Training / Spring Training

This training is for everyone! In this portion of the training, the Partner Teacher Coordinator will model three highlighted curricula for your future field trip. Snacks will be provided.



To **RSVP**, contact Chelsi Burns, the Partner Teacher Coordinator by the above RSVP dates:

- 952-361-4511
- chelsi_burns@fws.gov

Rapids Lake Education and Visitor
Center

15865 Rapids Lake Road
Carver, MN 55315



MINNESOTA VALLEY NATIONAL WILDLIFE REFUGE



Your Outdoor Classroom!

Refuge Partner Teacher Program for the Bloomington Education & Visitor Center

- ▶ Integrative partnership between individual teachers and the Refuge
- ▶ Personalized field trip plans
- ▶ Up to 3 field trips per school year
- ▶ Training provided

Busing Scholarships

Outdoor Experiences

Standard Based Curriculum

All Seasons

Field Equipment

Multi-disciplinary



Requirements:

Attend at least one orientation session to participate in the **Program**. Next, attend a seasonal workshop to bring your class to the Refuge during that season. Offered 3 times each year, these workshops highlight curriculum, teaching materials and equipment for the season. After that, attend only one additional refuge training every 3 years to continue in the **Program**.

Register at <https://www.surveymonkey.com/s/2014-15PTBEVC> or Mara Koenig, mara_koenig@fws.gov 952/858-0710.

2014-2015 Workshops

- 9/16/14 4-5 pm Refuge Orientation
- 9/17/14 4-7 pm Fall Curriculum
- 1/13/15 4-5 pm Refuge Orientation
- 1/14/15 4-7 pm Winter Curriculum
- 4/6/15 4-5 pm Refuge Orientation
- 4/7/15 4-7 pm Spring Curriculum

Registration must be received 5 days prior to each workshop.





Join Us!

Nature's Notebook

We are recruiting volunteer, students, and educators to collect phenology data on the Refuge and share *Nature's Notebook* with the Twin Cities community. No prior experience is required! We welcome teachers, amateur naturalists and botanists, as well as seasoned professionals.

Learn more about phenology and help us record data for scientific research.

Teachers Contact: Suzanne Trapp, Visitor Services Specialist, 952-361-4502 or Suzanne_Trapp@fws.gov

Volunteers Contact: Sarah Inouye-Leas, Volunteer Coordinator, 952-858-0724 or Sarah_Inouye@fws.gov



What is The USA National Phenology Network (USA-NPN)?

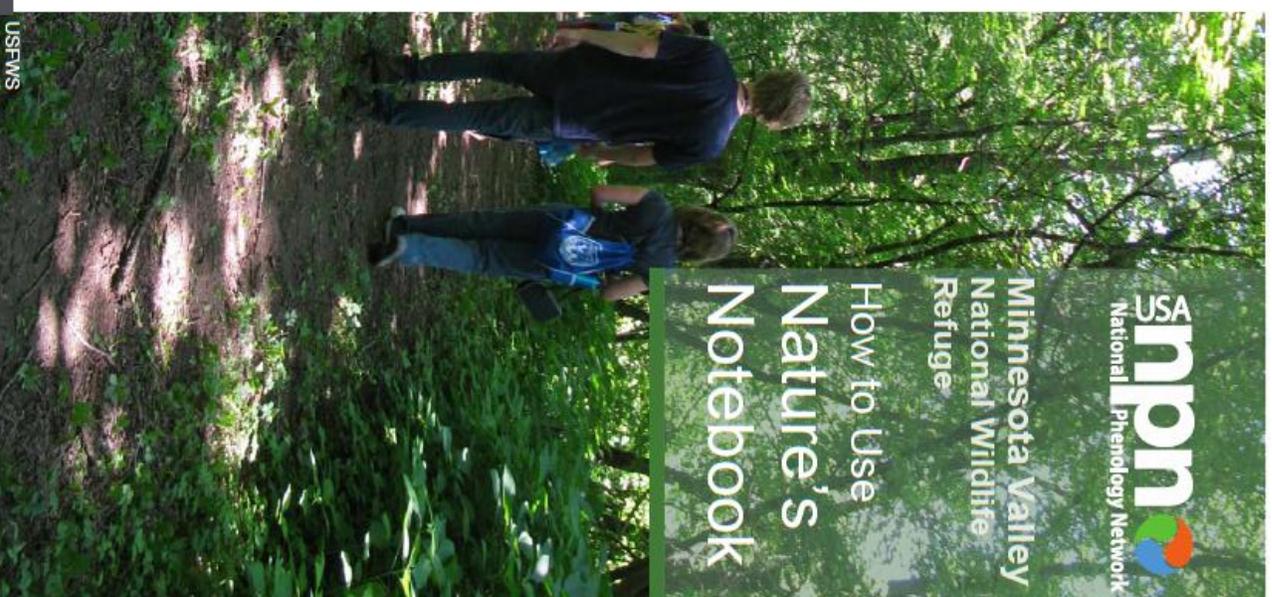
We monitor the influence of climate on the phenology of plants, animals, and landscapes. We engage the public in observing phenology and work with researchers to understand species response to a changing environment. Your data, along with data from scientists, will help to develop tools to support a wide range of decisions made routinely by citizens, managers, scientists, and others, including decisions related to allergies, wildfires, water, and conservation.

National Coordinating Office

1955 E. 6th Street | Tucson, AZ 85721
Phone: 520-622-0363 | www.usanpn.org



Minnesota Valley National Wildlife Refuge
3815 American Blvd. East | Bloomington, MN 55425
Phone: 952-858-5900 | www.fws.gov/refuge/minnesota_valley/



USA nppn National Phenology Network
Minnesota Valley National Wildlife Refuge
How to Use Nature's Notebook

USFWS



Phenology, also known as *nature's calendar*, is the study of life cycle changes in plants and animals. It includes the leafing and flowering of plants, emergence of insects, and migration of birds.



Plant and Animal Photos: S. Inouye-Leas/USFWS

Workshop

EVERYONE is INVITED to learn about the science of phenology and how it relates to changing environmental conditions. This workshop will:

- Provide an introduction to the science of phenology.
- Demonstrate how to use *Nature's Notebook* for making and recording phenology observations.
- Prepare you to set up an observation protocol for your site or participate in data collection on Minnesota Valley National Wildlife Refuge.

Taking the Pulse of our Planet

Scientists and educators at the USA-NPN are collecting observations and analyzing data on plant and animal species. Some questions we'd like to answer include how are bloom dates affected by temperature and rainfall? Do some species bloom twice in a year given moisture conditions? What types of pollinators are visiting our plants? We need your help! Collecting data on selected species will help us build a long-term dataset to answer these questions and many others. Sharing your knowledge will help us increase our capacity. You can help us answer the questions too!

REGISTRATION DEADLINE:

12:00 pm on February 27, 2015

Workshop Registration

Date Saturday, March 7, 2015
Time 9:00 am – 4:00 pm
Location Bloomington Education & Visitor Center
 3815 American Blvd. East
 Bloomington, MN 55425
Cost \$15.00 (lunch and snacks)

Name _____
Email _____
Phone _____

Space is limited, please register early!

Return the above form with registration fee to:
Refuge Friends, Inc.
 3815 American Blvd. East
 Bloomington, MN 55425

For Cross-Pollination: A Walking Theater Production

SOUTH LOOP STORY SWAP WORKSHOPS



Story Swaps held at
Minnesota Valley
National Wildlife Refuge
3815 American Boulevard East,
Bloomington, MN 55425

Story Swap Workshops are a place to share the history, stories & memories of Bloomington's South Loop & the Minnesota Valley National Wildlife Refuge to help create a community-based, musical theater production that will be performed during the Twin Cities Urban Bird Festival, **June 5-7th!** The production is a demonstration project for Creative Placemaking in the South Loop.

THREE OPPORTUNITIES TO SHARE YOUR STORIES!

**SATURDAY
FEBRUARY 7
2-4 PM**

**TUESDAY
FEBRUARY 24
10AM-12PM**

**THURSDAY
FEBRUARY 26
6-8 PM**

Workshops are free, open to all ages & include light food & beverages. No RSVP necessary

Questions? Contact Ashley Hanson at ashley@placebaseproductions.com or 952.486.0533



Now Showing in the Art Gallery

Rivers, Creeks and Everywhere in Between

by Judith Anderson opens March 2 and runs through April 30.

As a child Judith lived along a river in New Jersey and spent a great deal of time walking the river, playing in the forest and looking at nature. She found it so peaceful compared to the bustle of city life. At that time, she did not know that she would fall in love with the

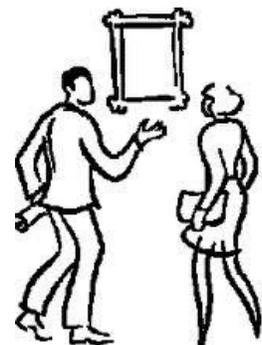


Blue Morning by Judith Anderson

beauty of the outdoors--the way the light plays on the water or rides up the side of a tree. When the weather was cold she would sit at the kitchen table for hours and draw the river and forest across from her family's home.

That's how it started for Judith--being curious about the flow of light on an object, the chroma, temperature and abstract shapes all coming together as a whole to form what we see as art. She started sketching and drawing, but after many years found her heart's desire was painting.

Judith is a Plein Aire painter who finds painting outdoors refreshing and tranquil. It also allows her to enjoy the beauty of the rivers, creeks, trails, fields and woods around her. These landmarks become new and exciting subjects during the changes between each season, and she appreciates her good fortune during each day spent among them. Judith's goal is to engage her viewer--holding their gaze for a moment so they can see the beauty that she has seen. She finds beauty in all things and hopes you enjoy looking at her work as much as she enjoyed creating it. You can view more of Judith's work and find out more information at <http://www.judithmandersonfinearts.com>



The Old Cedar Avenue Bridge project has started!

The habitat restoration project at Old Cedar is underway! Near the bridge invasive species like buckthorn, honeysuckles and Siberian Elm have been cut and treated. The cut areas will be closely monitored and all new invasive sprouts removed. Restoration will include planting native grasses and flowers and we hope that the area will function like an oak savanna when complete. It will take years for the restoration to be complete, but once it is tall wildflowers and grasses will once again grace the edges of Long Meadow Lake, providing quality habitat for wildlife.



Spring Construction Timeline

- Habitat Project: ongoing until end of March. There may be occasional trail closures for safety purposes.
- Utility Work: expected start date of March 1 through Mid-April. This will close about 25% of the parking lot but trails will remain open.
- Bridge Restoration: expected start date of May 1. This project is expected to run through September 2016. Parking areas will be affected during the restoration and may have portions of the parking lot closed during this time.

These dates are all subject to weather, construction timelines, and other pitfalls along the way. Please be patient as we work towards a healthier habitat for wildlife and a better experience for visitors.

For updates visit: http://www.fws.gov/refuge/minnesota_valley

Trailhead Addresses

Bloomington Education and Visitor Center

3815 American Blvd E, Bloomington
Phone: 952-854-5900

Rapids Lake Education and Visitor Center

15865 Rapids Lake Road, Carver
Phone: 952-361-4500

Old Cedar Avenue:

9500 Old Cedar Ave S, Bloomington

Bloomington Ferry Unit:

11255 Bloomington Ferry Road, Bloomington

Bass Ponds:

2501 East 86th St, Bloomington

Louisville Swamp:

3801 145th St W, Shakopee

Wilkie Unit:

7701 County Road 101 E, Shakopee

Cliff Fen Trailhead:

120 East Cliff Road, Burnsville

Connect with the Refuge....

http://www.fws.gov/refuge/minnesota_valley/

<http://www.facebook.com/MNValleyNWR>

<http://twitter.com/usfwsmnvalley#>

Minnesota Valley
National Wildlife Refuge
3815 American Blvd E
Bloomington, MN 55425