Nahant Marsh
4220 Wapello Avenue
Davenport, IA 52802
563.336.3370
nahantmarsh@eicc.edu
www.nahantmarsh.org

STAFF DIRECTORY

BRIAN RITTER
Executive Director
britter@eicc.edu • 563.336.3372

AMY LOVING
Education Coordinator
aloving@eicc.edu • 563.336.3373

LINDSEY KENNEDY
Marketing & Events Coordinator
lmkennedy@eicc.edu • 563.336.3374

KINSEY NIELSEN
Part-time AmeriCorps Educator
Part-time Natural Resources Manager
ksnielsen@eicc.edu • 563.336.3370

SIGNYE HILBY
Full-time AmeriCorps Educator
shilby@eicc.edu • 563.336.3370

JIMMY WIEBLER
Full-time AmeriCorps Educator
jwiebler@eicc.edu • 563.336.3370

SAMMI BOYD
Natural Resources and Education Intern

KORY DARNALL
Natural Resources Technician II

ZACH STRONG
Natural Resources Technician II

MADELINE KULL
Natural Resources Technician I

Nahant Marsh preserve is one of the largest urban wetlands on the Upper Mississippi River. It is comprised of marshy areas, mesic, wet and sand prairie, and bottomland forest. A spring-fed quarry, known as Carp Lake, and the surrounding grounds are part of the Nahant Marsh preserve as well. The 305-acre preserve is owned by the City of Davenport and the Nahant Marsh Board, a 501(c)(3) nonprofit organization. Conservation and restoration efforts on the preserve are directed by the Nahant Board. The educational programming is overseen by Eastern Iowa Community Colleges (EICC). EICC’s Advanced Technology Environmental Education Center (ATEEC) is also a critical part of Nahant Marsh.
NAHANT WELCOMES NEW STAFF

Nahant Marsh is excited to welcome new staff members Sammi Boyd, Signey Hilby, and Jimmy Wiebler to Nahant Marsh. Sammi is a graduate assistant from Western Illinois University’s Recreation Parks and Tourism Administration Program and is from Minnesota. Signey will serve as an AmeriCorps naturalist. She comes to us from the Winneshiek County Conservation Board and is originally from Dubuque. Jimmy just completed his Master’s degree at the University of Miami-Ohio and is a Davenport native. He will also be serving as an AmeriCorps naturalist. We are also excited to introduce our new Natural Resources Manager, Kinsey Nielsen. Kinsey has been with the marsh since September 2016, serving as an AmeriCorps naturalist. We are also an Iowa State University graduate. She has her Bachelor’s degree in Animal Ecology with a minor in Entomology.

RECORD ATTENDANCE

Since the beginning of this year, Nahant Marsh has already served nearly 16,000 people. This is over 1,000 more people than this time last year and over 2,000 more than 2016. We have seen an increase in school field trips and public programs, including over 350 people who attended the monarch butterfly release on September 15.

DOUBLE YOUR GIFT THROUGH OUR CHALLENGE GRANT!

Nahant Marsh is one of the Community Foundation of the Great River Bend’s 2018 Challenge Grant awardees. We have until December 31 of this year to raise $15,000. If we are able to reach that goal, the Community Foundation will match $15,000. This is a great opportunity to double your gift. The majority of the dollars from this challenge grant will be used for the Nahant Fund for Recreation and Environmental Education (FREE). The FREE program, started in 2017, allows Nahant to provide K-12 schools with free or discounted field trips, outreach programming, and busing scholarships. To donate to the challenge grant, simply go to www.nahantmarsh.org.

*There are only two more sessions left this year: October 10 and October 20 from 6:30-9 a.m. Don’t miss out! See our website for more information and to register: www.nahantmarsh.org. You may also call 563.336.3370. Tours are sponsored by the Quad City Audubon Society.
In partnership with LSAMP IINSPIRE program, Nahant Marsh hires summer interns to complete research projects around the preserve. In addition to providing hands-on experience in STEM fields for the students, knowledge gained helps to inform our natural resource practices. Students presented their findings at a poster session on August 8, 2018.

**RESEARCHERS AND PROJECTS**

**Pedro Barros:** *A Superficial Look into Nahant Marsh’s Waters*

**Jose Carranza:** *Snake Survey at Nahant Marsh*

**Oliviya Caruthers:** *Concrete Runoff in a Natural Water Filtration System*

**Anthony DeSalvo:** *Heavy Metals and Petroleum at Nahant Marsh*

**Melette DeVore:** *Quality Assessment of the Effects of Clethodim on Reed Canary Grass and Non-target Species*

**Andre Dinh:** *Amount of Turtle Captures Compared to Corresponding Weather Conditions*

**Jemimah Harrouff:** *Effects of Wildflower Diversity on the Number of Bird Species on a Prairie*

**Hillery Hartwig:** *The Impact of Goat Grazeing on the Biodiversity of Invasive Plant Species*

**Samantha Hernandez:** *Soil Quality in Different Environments at Nahant Marsh*

**Nick Martinez:** *Turtle Utilization of Floating Wetlands at Nahant Marsh*

**Ali Schnerre:** *Sex Ratio of Turtles Compared to Average Temperature and Precipitation*

**OUR STUDENT RESEARCHERS ATTEND**

*Augustana College*  
*Eastern Iowa Community Colleges*  
*Iowa State University*  
*St. Ambrose University*  
*The University of Iowa*  
*Wartburg College*

The Iowa Illinois Nebraska STEM Partnership for Innovation in Research and Education (IINSPIRE) is a National Science Foundation (NSF) Louis Stokes Alliance for Minority Participation (LSAMP) among 16 two-year and four-year colleges and universities working together to broaden the participation of underrepresented minorities in science, technology, engineering, and mathematics (STEM) education in the Midwest. In particular, the program addresses the need to remove the barriers impeding student progress and success in STEM fields before education and workforce disparities widen.
“GETTIN’ BUGGY WITH IT” CAMP GETS SIX THUMBS UP  
by Kinsey Nielsen, AmeriCorps Naturalist

The premier of our camp for insect-loving kids was a huge success! We ended up with 20 campers who got to decorate their own bug jars, catch insects for hours, and make a mason bee house. They also learned how to make insect traps, record data from an insect survey, and got to pin their very own Japanese Beetle! Since the kids had so much fun we plan to offer a similar camp experience next summer.

A special thanks to the Friends of Nahant Marsh for sponsoring some of our campers.

“Gettin’ Buggy With It Camp.” Photos by K. Nielsen.

2018-2019 HOMESCHOOL PROGRAM

We have a fun-filled year of homeschool environmental education programs planned! The first of our monthly homeschool series begins on September 28th and will allow students to explore the nature preserve and learn about different types of insects. Each session includes a lesson, hands-on activity, and outdoor exploration.

Time: 2:30-4:00 p.m.
Cost: $8 per session or $64 for the year for non-members or $6 per session or $48 for the year for guests.

SCHEDULE
September 28th: Insectigations
October 6th: Migrating Waterfowl
November 30th: Native Americans
December 14th: Animal Signs
January 25th: Backyard Birds
February 22nd: Planets, Moon, and Stars
March 29th: Weather
April 26th: Snake Studies
May 31st: Turtle Studies

Due to high demand, pre-registration is required, either online at www.nahantmarsh.org or by calling 563.336.3370. Each classroom is limited to 15 students (30 total).
NCCC CREW TACKLES INVASIVE SPECIES REMOVAL
by Kinsey Nielsen, Natural Resources Manager

We had extra hands helping us on September 4-6th with the arrival of an AmeriCorps National Civilian Community Corps (NCCC) team. Despite all the rain, they were still able to accomplish a lot of work! The seven AmeriCorps members were able to create a trail and burn break through a forested area, seal the wooden boardwalk and benches, pull weeds, and harvest seed from prairie plants. Friends of Nahant Marsh members prepared lunch for the team each day, and it was much appreciated.

Sealing the boardwalk. Photo by K. Nielsen.

UNITED WAY DAY OF CARING

A motivated group of 24 people came to volunteer at Nahant Marsh on September 20 as part of the United Way Day of Caring. Volunteers were from John Deere and the Mississippi Valley Regional Blood Center. We also had several Friends of Nahant Marsh members participate as well. They helped us perform a trash cleanup along Wapello Avenue and South Concord Street, cut down hundreds of small trees invading a prairie, and continued clearing a trail through the forest that the NCCC team began. The trash cleanup crew was able to gather 22 bags of garbage, three tires, a broken cabinet, and a car seat. We are so thankful for their time and energy!

Pulling burdock by the marsh. Photo by K. Nielsen.

CHEERS FOR VOLUNTEERS

Does “Wine and Willows” sound intriguing? Do you like getting your hands dirty and a sense of accomplishment? Contact Natural Resources Manager, Kinsey Nielsen, for upcoming natural resource volunteer opportunities: ksnielsen@eicc.edu / 563.336.3370.
RAISING MONARCHS AND MOTH

by Amy Loving, Education Coordinator

Summer is one of my favorite seasons because there are so many exciting things happening at the marsh. The prairie is in full bloom and the butterflies are abundant. But, as soon as the goldenrods start to flower, I know it’s time to tag monarchs! We have been raising monarch caterpillars for most of the summer to ensure there are healthy populations. It’s not until mid to late August when they can be tagged. To date, we have raised over 50 monarchs and tagged a dozen. There is more tagging to come!

Not only have we been raising monarchs, but we now are rearing Polyphemus Moths. These moths are currently feeding on oak and maple leaves. They will overwinter in their cocoons and emerge next year, so be sure to keep an eye out for updates. We are also raising Black Swallowtails and what we believe to be a couple of Virginia Creeper Sphinx Moth caterpillars. Although the latter is considered a pest by grape growers, our curious naturalists want to observe this creature close up. Both the sphinx and swallowtails will pupate overwinter.

A CLOSER LOOK: POLYPHEMUS MOTH

by Sammi Boyd, Natural Resources and Education Graduate Assistant

One of the most notable moth visitors to Nahant Marsh is the Polyphemus Moth (Antheraea polyphemus). These large moths are known for their striking eyespots on their hind wings. The adult females lay their eggs on tree leaves, using a sticky brown substance to cement the eggs to the leaf. The caterpillars hatch and grow before they diapause (overwintering) as a cocoon. The next year, the moths will emerge from their cocoons to start the cycle over. Did you know, Polyphemus Moth adults have no mouthparts? That means that only the caterpillars eat food! Stop in to the Education Center to see the Polyphemus Moth caterpillars that we are raising!

MEET SAMMI

I am an Education and Natural Resources Intern at Nahant Marsh. I received my Bachelor of Science in Wildlife Ecology from the University of Wisconsin-Madison and am currently a graduate student at Western Illinois University. My interests include natural resources management and outdoor accessibility. In my free time, I enjoy kayaking, gardening, growing strawberries, baking, and exploring with my dog, Poppy.

MUSSELING INTO YOUR CLASSROOM

by Amy Loving, Education Coordinator

Due to a recent partnership with the Iowa Department of Transportation and U.S. Fish & Wildlife Service (USFWS), Nahant Marsh is able to offer river ecology and fresh water mussel programs at no fee. Topics include mussel life cycles, symbiosis with fish, key characteristics used in identification, and the I-74 mussel relocation project. If you are interested in a mussel-related program, contact Amy at aloving@eicc.edu.
The Pleistocene Snail (*Discus macclintocki*) is a small land snail which has an average adult shell width of approximately 6-8mm (about 1/4 inch in diameter). The shell of Pleistocene Snails can range from a brown to a greenish-white color and is made up of tight coils that form an approximate dome shape. Pleistocene Snails have an important role in the ecosystem as decomposers of organic matter and leaf litter. Through decomposition, the Pleistocene Snails put carbon and other nutrients back into the soil. From April to August each year, the Pleistocene Snails can be found living under logs, tree bark, and leaf litter near cold air vents of special cold-producing, moist hillsides called algific talus slopes.

Algific talus slopes develop on north-facing entrances to small rock fissures or caves where air circulates over underground ice. In the winter, cold air is drawn into the vents freezing the ground water. In the summer, air flows over the ice, where incomplete melting produces a stream of cold, moist air that flows out of cracks (vents) in the rock. The constant cool temperatures and moist conditions provide a cold, buffered microclimate for the Pleistocene Snails.

In algific slope habitats, the underground ice is critical for maintaining cool temperatures through its annual freeze and thaw cycle. Today, due to climate change, the ice freezing cycle is shorter and the thaw cycle is longer causing underground algific slope ice to melt before summers end. As a result the Pleistocene Snails population has been rapidly decreasing as they are unable to adapt to the warmer temperatures.

Today there are about 300 known algific talus slope habitats located in the Driftless Area of the United States. Approximately 160 of those algific talus slopes are located in Iowa, most of which do not have suitable conditions for Pleistocene Snail survival. There are only 18 algific talus slope habitats in Iowa that have a recorded Pleistocene Snail population. The Iowa Pleistocene Snail was listed as an endangered species in 1977.

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**MEET SIGNEY**

I serve as a full-time AmeriCorps Naturalist at Nahant Marsh. I graduated in 2018 from Upper Iowa University with a Bachelor’s degree, double majoring in Environmental Science and Conservation Management. I spent the past few summers doing field research with the Iowa State University Monarch Butterfly Team and was an Education Intern with the Winneshiek County Conservation Board. Back home in Dubuque, I was/am involved in Venture Crew (a co-ed branch of Boy Scouts), which has allowed me to participate in many outdoor activities while also receiving the Triple Crown Award of National High Adventure. I enjoy backpack camping, hiking, horseback riding, geocaching, and learning about other cultures.
In the words of Ned Stark, “winter is coming.” For many plants and animals, that means it is time to prepare for the cold. Although birds and mammals can migrate or burrow to warmer climates, some have no choice but to withstand the harsh conditions brought on by winter. The wood frog (Rana sylvatica), whose range extends from Georgia to Alaska, is one example.

Wood frogs hibernate on the forest floor under leaf litter, where they are exposed to subzero temperatures throughout their dormancy, which can last several months. During this time, something spectacular happens. The wood frog freezes solid. Up to 70% of its body water becomes ice. Its heart stops beating, its tissues harden, and it remains in this state of suspended animation for several weeks, perhaps months for frogs at northern latitudes. To endure the physiological challenges of freezing, these frogs use cryoprotectants, which are small molecules that work like an antifreeze by limiting excessive ice formation, among other protective functions.

Although a handful of other frog species can survive freezing, the wood frog does it best. Upon freezing, they accumulate massive amounts of glucose, a cryoprotectant derived from carbohydrate stored in the liver. Urea—another cryoprotectant—is accumulated in the fall as the frog prepares for winter. Recent research shows that high levels of urea are also important for supporting certain bacteria in the frog’s gut during hibernation. In spring, when the frog thaws out and begins to resume activity, these gut bacteria could be important players in returning nitrogen from accumulated urea back to the frog, which may help restore body condition before hibernation concludes and breeding ensues. Retaining nitrogen is likely critical to their survival, especially during times of low nutrient acquisition such as hibernation.

Although this particular species of amphibian is not common in Iowa, there are several reports of them along Iowa’s eastern edge. Listen for their duck-like quacking in the spring, and if you are lucky, you might just find the enigmatic wood frog.

MEET JIMMY

I am an Iowa native, born and raised in Davenport. I received my Bachelor’s degree in biology from Augustana College, Rock Island, IL (2014) and my Master’s degree in Biology from Miami University, Oxford, OH (2018). During my time as an undergraduate and graduate student, I studied hibernation physiology of painted turtles (Chrysemys picta) and wood frogs (Rana sylvatica), and my research on these species was recently published in peer-reviewed scientific journals. Most recently, I completed a summer (2018) internship with the Virginia Department of Game and Inland Fisheries, where I assisted in the management of breeding populations of shorebirds throughout Virginia’s coastal plain. I enjoy hunting and cooking wild game, dog training, and spending time with my (growing) family.
Every year our Monarch Release Party attracts more and more attendees. This year we celebrated the southern migration with 351 people! Solomon Powell also did a reading of his children’s book, “The Butterfly Catcher.”

Photos by C. Lundy.

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MONARCH SPONSORS

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UPCOMING PROGRAMS

BREAKFAST NATURE CLUB
Learn the secrets of Iowa’s wildlife during this monthly class at Nahant Marsh. A continental breakfast with coffee, juice, and tea is included in the fee. Feel free to bring your own coffee mug or travel container. Programs are held on the first Friday of the month from 8-9 a.m.
Cost: $5 Members / $10 Guests

October 5: Trees and Leaves
The morning will begin with a brief overview of Iowa’s woodlands. Then we will head out and learn how to identify trees by examining bark, leaves, and seeds.

November 2: Bird Migration
Waterfowl are migrating south to their wintering grounds. In this session, we will explore the common ducks and other waterfowl who visit the marsh on their journey.

December 7: Winter Wildlife
Snuggle in for this morning talk on how animals survive winter.

BEGINNING BIRDING
Learn how to identify birds and their habitats with expert ornithologist Kelly McKay. Kelly will lead birding tours to various areas of Nahant Marsh. Participants will learn how to identify birds by sight and call and will learn how to properly use the equipment. The tour series is sponsored by Quad City Audubon Society.
October 10 and October 20 from 6:30-9 a.m.
Cost: $6 Members, / $12 Guests

FALL SUNSET HIKE
Explore the marsh at dusk when the wildlife is abundant. Sunsets at Nahant are truly a masterpiece painted by Mother Earth. The hike will include the history of Nahant Marsh and information on the flora and fauna found at the preserve. Participants are encouraged to bring a camera. The trails are on flat terrain, making this guided hike perfect for everyone.
October 2* from 5:30-6:30 p.m.
Cost: $5 Suggested Donation
* Rescheduled from September 18

GUIDED NATURE HIKES
Join a naturalist for a guided hike along the trails at the marsh. Hikes are offered on the first Saturday of the month and give visitors an opportunity to experience the environmental changes as the plants and wildlife adapt to the seasons. Whether you are a regular visitor or first-timer, there is always something to learn and experience at the marsh.

October 6, November 3, December 2 from 9-10 a.m.
Cost: $5 Suggested Donation

There will not be a hike in January. Come see us at Bald Eagle Days instead!

MINDFULNESS MARSH TOUR
Join us for the second annual Mindfulness Marsh Tour coordinated by the Coalition for Social Justice and Transitions Mental Health. The program will begin with an introduction to environmental ethics and the benefits of both mindfulness and connectedness to nature, followed by a brief history of Nahant Marsh. You will then be lead on a mindfulness tour through the marsh, an experience you can’t get anywhere else in the Quad Cities. The event will conclude with refreshments, during which there will be a brief discussion about ways to become environmentally engaged and increase your connectedness to nature. Space is limited. RSVP required. Contact Chelsea at haleychelsea@haleychelsea.sau.edu.
September 29 from 10 a.m.-noon
Cost: $40 Suggested Donation

TODDLER TALES
A great way to introduce young children, ages 3-5 years old, to the wonders of the outdoors! The second Tuesday of each month from April–October, Nahant Marsh educators will lead a nature-themed story, craft, and outdoor adventure.
October 9: Bats from 10-11 a.m. or 2-3 p.m.
Cost: $3 Member / $5 Guest. No fee for adults accompanying children.

PUMPKIN INVESTIGATIONS FAMILY PROGRAM
In this family-friendly program, we will learn all about pumpkins through various activities and experiments.
October 13 from 10-11 a.m.
Cost: $3 Member / $6 Guest. No fee for adults accompanying children.

Pre-registration for programs is strongly recommended, either online at www.nahantmarsh.org/events or by phone at 563.336.3370.
WITH APPRECIATION

PARTNERS

CORPORATE SPONSORS

ANIMAL ADOPTIONS
Ben Doerscher
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Cathy Meehan
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Elizabeth Russsell
Kaileigh and Merle Scott
Tim Tisinger
GUIDED HIKES

October 6, 2018 at 9 a.m.
November 3, 2018 at 9 a.m.
December 2, 2018 at 9 a.m.

There will not be a hike in January. Come see us at Bald Eagle Days instead!
EDUCATION CENTER HOURS

Monday–Friday from 8:30 a.m. to 4:30 p.m. and Saturdays from 9 a.m. to noon (extended to 3 p.m. April–October)

There is no fee to visit the Education Center, but donations are always appreciated.

PRESERVE HOURS

Open Daily from Sunrise to Sunset

If the main gate is locked, trails are accessible from the front parking lot. Look for the opening in the fence near the kiosk.

GETTING TO NAHANT MARSH

Nahant Marsh
4220 Wapello Ave.
Davenport, IA 52802

From Davenport, Iowa—Take Highway 22 south (Rockingham Road), turning left on Wapello Avenue (the last turn before the I-280 overpass).

From Rock Island, Illinois—Take I-280 into Iowa to the Highway 22/Rockingham Road exit. Turn right onto Highway 22, and then right onto Wapello Avenue.

Follow Wapello Avenue toward the river. Nahant Marsh will be on the left just before the railroad crossing.