



# Kemp's Point

Volume 27, Number 1, Spring 2026

News from the University of Wisconsin-Madison's Kemp Natural Resources Station

## Sap, Syrup & Sugar

By Karla Ortman, Editor and  
Scott Bowe, Superintendent

Some years ago, Gary Kellner, Facilities Specialist at Kemp Station, took it upon himself to tap some sugar maple trees on the property, collect sap, and make maple syrup. It was a grassroots, low-cost effort, with repurposed buckets and basic supplies. The small amount of syrup produced was given as gifts to speakers and special visitors to the station.

Now Kemp Station's sugarbush serves as a demonstration site for maple sap collection and made its public debut on April 11. The Maple Sugaring Demonstration Day was a collaborative effort between multiple University of Wisconsin-Madison departments, including the Natural Resources Institute, the Rural Partnerships Institute, the Extension Forestry and Wildlife Program, and Kemp Station.

The day began with a workshop that provided insight into the world of maple syrup judging. Several attendees brought samples of their own syrup to

be included in the review. Tony Johnson, Working Lands Forestry Educator, explained that judging includes classifying the syrup by color, measuring its density, determining clarity, and finally, assessing flavor. Attendees used a scoresheet to work through the process of judging each syrup. Naturally, taste testing was the favorite part of the workshop! Tony encouraged everyone to give the syrup a sniff – is there a scent? And when tasting, how do you describe it? Maple? Toasted? Confectionary? Some negative flavor profiles would include sour or salty. It was interesting to consider an official maple syrup judging event may have over 100 syrups being judged!



*Learning about the traditional process of cooking maple syrup into sugar.*



*Session attendees look on as Tony Johnson demonstrates how to select syrup color classification.*

Next on the day's schedule was the making of traditional birch bark sugar cones. Lead by Biskakone Greg Johnson, from Lac du Flambeau, and DJ Micik, from Menominee, birch bark sugar cones are the traditional Ojibwe method for storing, transporting and gifting maple sugar. Birch bark is selected for its characteristics of being sturdy and water resistant and is shaped into a cone. A string of basswood bark is added, extending out

*(Continued on Page 2)*

## Syrup (Continued from Page 1)



Participants fill birch cones with warm maple sugar.

from the point of the cone and secured in place when the cooked maple sugar is poured into the cone and solidified. Greg explained that these cones are often strung together in bunches and stored until needed. A hunter may tuck a sugar cone in their pocket to have quick and sustainable nourishment on hand in the forest. Or a cone may be removed from the bunch and given to a visitor at a family's home. Participants of the workshop had the opportunity to make a birch bark sugar cone to take home.

In the afternoon, Kemp Facilities Technician, Matt Zeisloft, and Kemp Superintendent, Scott Bowe, showed the boiling, filtering, and bottling process. Kemp's boiling process does not use a wood fired evaporator, but a six-burner commercial stove that resides in the original cookhouse, the first building constructed at Kemp in 1920. The stove is the perfect size for a 2-foot by 3-foot stainless steel evaporator pan. About 150 gallons of sap can be processed in about 11 hours using this pan and a homemade reverse osmosis system which removes about half of the water. Without the RO system, the boil time would double to 22 hours.

During the boiling process, a good amount of sugar sand (also called nitre) forms in the pan. Sugar sand is a natural, sandy mineral sediment that forms when maple tree sap is boiled. It is not harmful but makes for cloudy syrup if not removed by filtering. Kemp's filtering system is very simple -- an orlon fabric cone filter with three paper prefilters. This cone filter system hangs from a homemade wooden

holder. When the boil is ready, the syrup is drained through a valve and pours into the filter system. From there, it flows into the bottling pan. Since we don't use a filter press or vacuum system, it can take several hours for the syrup to drain through the cone filters. The filter system is covered with a blanket to keep it warm, which helps the flow rate.

The next morning, the bottling pan is retrieved and we rewarm the syrup using an electric water heating system. This would be similar to a double boiler and prevents the syrup from being exposed to high temperatures. The goal is to bring the syrup temperature between 180 and 190 degrees. This is hot enough to sterilize the jars/bottles, but cool enough to prevent sugar sand from forming. Before bottling, we confirm that the syrup consistency is correct. If the syrup is too thin, it can ferment. If the syrup is too thick, sugar crystals will form in the bottle. Using a hydrometer to measure the density, water is added back to the syrup to bring the density down to 66.9 Brix. Brix is a scale used to measure the density of syrup. It can also be read as 66.9% sugar. Once we are happy with the density, jars are filled with syrup using the bottling spout, capped, and then inverted so that the 180+ degree syrup touches all parts of the jar. This will ensure that the jars are fully sterilized, the jars will seal, and the syrup will be shelf stable until it is opened.



Scott Bowe in Kemp Station's historic kitchen explains the process for cooking sap into syrup.

The final workshop of the day was "Bags, Buckets and Tubing," where Tony Johnson provided a

(Continued on Page 3)



## Syrup (Continued from Page 2)

tour of Kemp's sugarbush and reviewed the various tools involved in tapping trees and collecting sap. This past winter, Tony visited Kemp and worked with Matt and Scott to install a gravity tubing system. This system uses the topography of the land to carry sap from the tree to a central collection point. Kemp has the perfect setting because the maple trees grow in a large bowl in the landscape. A large stainless steel collection tank was placed in the bottom of the bowl, and maple sap tubing lines were run from the tank to maple trees further up the hill. A main line (1-½ inch) tubing was installed acting as the "main highway." Then seven lateral lines (5/16-inch



*In the sugarbush at Kemp Station, Scott Bowe explains how the pressure inside a tree changes with the freeze and thaw cycles. A pressure gauge was inserted in the tree to show the current pressure reading.*

tubing) ran from tree to tree, bringing the sap to the mainline. The main line then emptied into the tank. Eighty-eight taps were established on the tubing line, and an additional 29 taps were set up with the more traditional buckets and bags to collect sap.

Despite Wisconsin being ranked third in maple syrup production in the country (based on annual production volume), there is a great deal of potential in this forest product. It is surprising to note that less than 0.5% of available maple forests in Wisconsin are being used to produce syrup. However, this low number translates into high production because Wisconsin has the highest yield per tap in the United States, 0.463 gallons/tap in 2025. One might say that there is a great deal of untapped potential for this sweet forest product. 🍷

## Kemp Station Summer Intern



We are pleased to introduce Nico Gitterle, who will work as Kemp Station's summer communications intern beginning in June.

Nico is an undergraduate studying Wildlife Ecology and Life Science Communication at the University of Wisconsin–Madison. He has gained hands on experience in both the field and the lab, from conducting bird and herp surveys to analyzing wildlife data. He worked with the Zuckerberg Lab on ruffed grouse research and snow cover dynamics and also researched moose browsing patterns in the backcountry as part of the Wolf and Moose Project on Isle Royale. Outside of research, Nico is a CALS Ambassador, where he shares his experiences with prospective students and helps promote opportunities in agricultural and life sciences. Nico is especially interested in combining field-based ecology with science communication to help make research more accessible and understandable to a wider audience.

Nico has been spending his spring semester studying abroad in Kenya. We look forward to having him share some stories of his experiences with the Kemp community, as well as sharing his unique take on the research and activities supported by the station. 🍷

---

*To learn more about the Maple Syrup Program offered by University of Wisconsin's Division of Extension, visit [maple.extension.wisc.edu/](http://maple.extension.wisc.edu/)*





emerging from my tent to the sounds of shouting as YCC delegates quite literally dived at a tip-up outside that had just gone down as we had left it!

Later that night, members learned how to flesh and prepare fish from WCC chaperones. We enjoyed a hearty fish fry from pre-caught stores of walleye,

perch, and bass alongside our meager catch from the day's outing. The night ended with games, including a spoons tournament and charades. On Sunday members who had a shorter drive home headed out to Stacks Bay in Minocqua Lake to try their luck at a second wind. Overall, members greatly enjoyed participating in the activities while learning more about ice fishing and safety. 🐟

## Winter YCC Program at Kemp

By YCC Delegate Alyssa

Youth Conservation Congress members from across Wisconsin gathered at Kemp Natural Resources Station the weekend of January 16 to participate in a winter program about ice fishing. Participants spent Friday evening discussing fishing regulations and proper safety in preparation for their morning ice fishing excursion.

YCC members set out on the ice at 8:00 am Saturday with sleds, tents, and four wheelers. Delegates and WCC members tested the ice with radar equipment to establish where the ice was best for fishing and set up tents and tip-ups. Around lunchtime, Wisconsin DNR Warden Malachi Schmitz spoke to our group about ice safety and the equipment he uses to keep himself safe on the ice. He demonstrated how to use ice picks, what to do when someone falls in the water, and how to prevent yourself from falling in.

While Warden Schmitz was speaking, a line set by YCC delegate Stuart gave the YCC their first catch of the day with a northern pike pulled in by delegates Owen and Zachary. Later on, delegates Stuart and Parker caught small perch. Two other fish were caught later that night, but for the most part there wasn't a big catch. Despite the lack of bites, being out on the ice was a worthy experience. I remember



*The Youth Conservation Congress (YCC) is an initiative by the Wisconsin Conservation Congress (WCC) and was established at the request of the Natural Resources Board (NRB). This group functions under the umbrella of the Wisconsin Conservation Congress. The purpose is to give students a voice and instill a sense of ownership, civic pride and advocacy in these future stewards of our state's natural resources. The goal of the program is to effectively engage, educate and involve youth in the management and protection of our natural resources and foster a conservation ethic through participation in the Wisconsin Youth Conservation Congress. (Source: WDNR website)*



## Fly Field Collection

By Margrethe Wolynese, Entomology 2nd BS  
Student, University of Wisconsin

The way a dipterist, one that studies the “true flies,” engages in fieldwork differs greatly from that of a coleopterist, one that studies beetles, or another specialty within entomology. Collection methods shift depending upon what one is interested in collecting. This most recent frigid spring term visit to Kemp Station was to have centered on fieldwork collecting techniques and collecting insects from the order Diptera, the “true flies,” for the Advanced Taxonomy of Diptera course (ENT 375/701), and conditions did not make that endeavor easy.

I have visited Kemp Natural Resources Station once prior during a similar time of year, but the lake had been less frozen then, the early signs of spring more forgiving, and at the time we had been interested in larvae, which involves traipsing through leaf litter, turning over logs, looking under bark, and occasionally wielding a hatchet on a particularly interesting dead log with signs of insect activity.

This spring visit instead involved looking for two-winged, haltere-possessing insects, and the weather did not provide conditions conducive for flight. Earlier this season, at Hemlock Draw, had also proven fairly difficult, though during another collecting event I found some success stirring up leaf litter in wetland and riparian habitats and swiping the escapees with a sweep net afterwards to hand-transfer them into collection vials with 80% ethanol. The fieldwork and collection for this course carried more weight than others I have completed in taxonomy courses, as Advanced Taxonomy of Diptera (ENT 375/701) is part of Dr. Daniel K. Young’s ongoing survey of fly diversity at Kemp Station and another Wisconsin field site in the Baraboo Hills, Hemlock Draw.

As part of my entomology studies, I have been privileged to take several advanced taxonomy and field studies courses over the last year, and there is something restorative about forest bathing with purpose at Kemp in mid-April. The wind over the rough terrain into the small dips on the rolling hills, the opportunity for solitude, or perhaps even just a moment

to enjoy the Lyrid meteor shower during the collecting trip. It was not, however, weather conducive for flight and collecting flies. Our dusky arrival was met with rain and moderate temperatures, and my immediate



*Fishing spider, Dolomedes tenebrosus*

venture out to a favored grove of birch I have monitored with each visit proved to have a 100% failure rate in hand-catching anything small that dared fly at my headlamp before the temperature dropped below 50° Fahrenheit. The highlight instead was spotting a familiar fishing spider, *Dolomedes tenebrosus* on a large rotting deciduous stump, exactly like the ones I had seen there during summer and fall 2025, a reminder of both the permanence and ephemeral nature of the site.

Once the temperature dropped the first night, it stayed cold for the remainder of the visit. Nothing was in flight with the cold and gusts over the icy lake the following blustery day. Dr. Young set up his yearly Malaise trap in the same “flyway” as the year previous. As a group, we may have collected only five or six specimens total, and I myself was entirely unsuccessful despite no lack of effort. The wind gusts and cold proved too formidable for the flies to take flight, even when provoked, and the previous night’s rain had matted down both old and newly emerging flora, making sweeping with a net difficult. In a truly scientific fashion, sometimes the interesting things learned were not what was initially set out to be known, but something entirely different. The stars of the fieldtrip became the arachnids — assorted orb-weavers, long-jawed orb weavers, a fishing spider, and an abundance of ticks.

Over time, across each season and each course, I have come to appreciate Kemp not only for its insects but for its broader fauna, particularly the arachnids that have become an unintentional but constant

(Continued on Page 7)



## Ducks in the Woods

By Karla Ortman, Editor



Kemp Station maintains two wood duck nest boxes on the property. During the winter the boxes are checked for needed repairs, cleaned out, and new nest materials are added, about 3-4 inches of fresh wood chips. Unlike the chickadees who carry moss and grass into the nest box on my garden post, wood ducks do not carry nesting materials to their chosen nest cavity. Studies on wood ducks indicate that more than 90% of North American wood ducks nest in natural tree cavities rather than artificial nest boxes (<https://doi.org/10.1002/jwmg.70059>). They will select a large, mature tree with an abandoned woodpecker hole or a decayed hole by a broken limb. In this scenario, the hen uses whatever natural debris is in the cavity. In both scenarios, the hen adds down from her breast feathers to provide insulation for the eggs.

This winter when the Kemp boxes were cleaned out, Matt brought feathers and a couple eggs to the office (*photo above*). Measuring the egg and searching the Internet confirmed that they were indeed wood duck eggs. A wood duck hen typically lays 12-14 eggs, one per day, and begins incubating them once all are laid. This method helps ensure that they will all hatch within a 24-hour period, unless an egg is not viable, which appeared to be the case with the eggs Matt found in the boxes.

In researching the wood duck, I discovered many interesting facts:

- The male serves as the hen's protector while she is laying her eggs, accompanying her to and from the nest cavity. Once she starts incubating the eggs, he goes off and does his own thing, which is essentially hanging out and molting.
- During incubation, lasting 28-32 days, the hen turns and adjusts the eggs to heat evenly.
- The hen leaves the box only twice a day to feed, covering the eggs with down to keep them warm.
- Wood duck hens practice brood par-

asitism, the act of laying eggs in other birds' nests, a tactic to increase survival.

- Wood ducks often have two clutches in one season.


- This duck does not quack. Instead, the female produces

a loud squeal, "oo-eek" and the male a soft whistle.

- The wood duck has claws on its feet which allow it to perch in trees and their long, wide tail and broad wings help them maneuver through dense forests.

My parents live on the west side of Madison, not far from campus. A pair of wood ducks decided an old "squirrel house" in the yard makes a good nest box. The pair was seen perched on the nearby wooden garden arbor, still as statues, until suddenly the female got a bit animated before swiftly disappearing into the nest box. The male stood guard, presumably while the hen was laying an egg. But what exactly will happen on "jump day," when the chicks leave the nest box? After hatching, the hen stays with the chicks for 24 hours. Jumping begins after the hen leaves the box and, from the ground, calls to the chicks. One by one, they jump and follow mom to a nearby pond. The nearest "pond" to the yard is a good two city blocks away. We theorize they will make their way to a wooded parkway that runs between two roads and follow it to the pond. It is a scary proposition, at best!

It is estimated that within the first 90 days of a wood duck chick's life, only about 30-40% survive, which explains the large clutch size, and the two clutches in a season. They can fly at about 9 weeks of age.

Prior to the 1918 Migratory Bird Act, wood duck populations were declining greatly due to hunting pressure and habitat loss from the heavy timber harvests of the time, particularly around wetlands. The three factors credited for the healthy wood duck population we have today are the protections provided by the 1918 act, increased beaver populations, which helped restore wetlands, and nest box programs. 



## Kemp Station Field Day

Friday, June 12, beginning at 1:00 pm

Join us for this triple header event to explore the northern forests and some of the plants that call the forest home. Sessions are indoors at the Connor Forestry Center building. No registration required, attend any of the three sessions you wish.

1:00 pm - **Plant Basics & Some Northwoods Favorites:** We will briefly review what defines a plant and the plant kingdom. Then brush up on terminology used for keying out plants and take a closer look at some Northwoods species and their stores. Lead by Mary Barkowiak, retired WDNR botanist

2:00 pm - **An Introduction to Sedges:** Do sedges have edges? Learn what is special about this plant, how to identify and about some of the common species in northern Wisconsin. Lead by Libby Zimmerman, UW-Madison, Dept. of Botany

3:00 pm - **Northwoods History, as Told by Forests:** We will investigate accumulations of pollen, charcoal, and other forest detritus to explore how northwoods forests have responded to environmental changes over thousands of years. Lead by Sara Hotchkiss, UW-Madison, Dept. of Botany

Hosted by

## Oneida County Land and Water Conservation Wetland Awareness Workshop

Date: Friday, July 10, 9:00 am - 1:30 pm

Location: Kemp NR Station, Connor Forestry Center

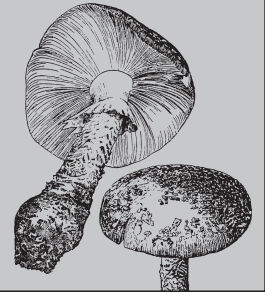


Join us as we welcome Aaron Marti, WDNR Stream Biologist and other specialists to learn about wetlands and the crucial role they play in maintaining the health of our waters. This workshop is FREE. Please bring a bag lunch. For more information or to register, contact Oneida County Land and Water at 715-369-7835.


## Fungi Fest

Friday & Saturday, August 21 & 22

Fungi Fest is back! Plan now to join in the fun and learning. Friday evening will include a fungi tasting/cooking session, and a presentation about fungi basics and research. Saturday morning kicks off with a foray, followed by a table talk to review the found fungi. Wrap up the day with some short talks on various fungi related topics. Throughout the event there will be some awesome fungi microscopy to check out and plenty of mycologists to pose questions to. When available, the final details will be posted at [kemp.wisc.edu/outreach/](http://kemp.wisc.edu/outreach/).



## Fly Field Collection (Continued from Page 5)

presence in my fieldwork there. The memories I am lucky to have collected at Kemp Station — bracing against a feisty wind on a bluff, quiet cold nights with stars and a meteor shower, failed collection attempts, and a dark fishing spider on a stump in my favorite niche across the seasons — will remain just as persistently as well. 



*A mink! See back page for story.*



University of Wisconsin  
Kemp Natural Resources Station  
9161 Kemp Road  
Woodruff, WI 54568



Nonprofit  
Organization  
U.S. Postage

**PAID**

UMS



## Mink (*Neovison vison*)

It was one of those bitter cold winter days when Matt sent me the photo of the mink on page 7. Matt works as Kemp Station's Facilities Technician and since he is out and about a lot on the property, he comes across surprises like a mink in the dumpster! My first reaction upon seeing the photo was a concern that the critter had gotten itself trapped, but Matt assured me that the furry varmint made a mad dash after being discovered. An article on the Wisconsin Wetland Association website, describes mink as "...agile and fierce fighters, killing prey with a hard bite to the back of the skull. Prey includes muskrats, mice, rabbits, shrews, fish, frogs, crayfish, insects, snakes, waterfowl, and land birds. Mink are opportunists, feeding on whatever is most abundant or most easily caught. They occasionally kill more than they can eat and will cache carcasses in the winter and revisit them to feed." Was the mink foraging in the trash or pursuing another critter that was feeding on the trash? We will never know for sure. Because they are semi-aquatic, mink are most often found along streams and other wetland habitats with undeveloped shores, and forage in a range of up to 3 square miles. The Wisconsin DNR website reports that a litter of 3-6 kits are born in April or May in a den. The kits are born hairless at birth but quickly grow hair and open their eyes after 25 days. At 5-6 weeks they are weaned but stay near their mother until fall. Interestingly, a startled mink may squeal, hiss or snarl and then release a scent similar to a skunk.

### **Kemp's Point Volume 27, Number 1**

*Published semi-annually by the University of Wisconsin-Madison's Kemp Natural Resources Station. To receive this free newsletter or update your address contact:*

*Karla Ortman, Editor  
Kemp Natural Resources Station  
9161 Kemp Road  
Woodruff, WI 54568  
(715) 358-5667  
kemp@cals.wisc.edu*

*This newsletter is also available as a PDF at the Kemp website, [www.kemp.wisc.edu](http://www.kemp.wisc.edu)*