Kemp's Point

Volume 23, Number 1, Spring 2022

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

What I Did For Spring Break

By Joshua "J.D." Butcher, UW-Madison

Friday

Pulling into Kemp Station I was excited. Although I couldn't spend spring break in Florida, what place is really better than the Northwoods of Wisconsin? We soon realized that rather than just a shack to live in for a week, being at Kemp was almost like being at a resort. After making our first in-person introductions, we turned in to bed looking forward to the busy week of Forest Operations camp.

Saturday

We woke up to fresh coffee and some cold cereal -- all you need to start off the morning! We made our way to an active logging site where we met Wayne, a third-generation logger who has been in the business his entire life (*above, second from right with students*). He was a goldmine of insight into the industry, having started off in 1983 dropping trees by hand before mechanizing in 1987. We had the opportunity to ride behind him in his Ponsse harvester as he harvested trees on a clear cut -- seeing the action from inside the cab was mesmerizing. It is astonishing how far technology has progressed, as the harvester was able to fell the trees then delimb and cut to the specified length.

While it was impressive watching the machinery work, talking with Wayne made me nostalgic for the old days of logging. He grew up cutting trees by hand. Wayne mechanized in order to remain economically competitive. While this is the way the world works, change being the only constant, you can't help but romanticize the not too distance past where you would trek into the woods and cut each individual tree, calculating where to cut to control the fall, and then hauling them out.

After a day of talking with loggers, we made our way back to Kemp where we spent some time tapping maple trees for syrup. It was great fun as none of us had tapped for syrup before, and I can't say any respectable forester should go through life without having tapped trees.

Sunday

Today we got into real forestry work, which was a challenge after we lost an hour to daylight savings time. Seeing the clocks at 5 am required quite a bit of coffee, especially as college students!

Running on caffeine, we hopped in the trucks to meet one of our instructors Matt, a consulting forester (*above center with students*), who had a timber thinning for us to mark. This work really cemented in me that forestry is both a science and an art (*above right, a student marks a tree*). The job was to thin a recreational stand under Managed Forest Law. We

(Continued on Page 2)

Spring Break *(Continued from Page 1)*

were to mark trees, favoring the retainment of higher quality timber, while maintaining habitat for wildlife and providing for the regeneration of trees. It was a bit overwhelming, but eventually we got into a groove where we could quickly make a judgement call on what trees to take and what trees to leave.

We also learned that walking through thick hazel brush in snowshoes is quite the challenge! Not a person came away unscathed, all having fallen over at least once due to tripping up on the many snags in our way!

Monday

Today we got to experience the other side of the equation in forestry. Rather than the production of the raw material, we witnessed the mill side where wood is turned into a marketable product.

We began by visiting Kretz Lumber, a hardwood mill in Antigo. We were walked through the process of turning logs into boards. It started by exploring the yard where the lead forester, Nate, explained the process of scaling and grading lumber (*photo above*). This is where logs are sorted by species and quality, and logs are estimated for board footage.

Next was the de-barker, where logs are stripped of their bark. This was followed by the room where the debarked logs are cut into boards. Finally, the boards are graded and sorted into differing piles. Everything ran by gravity, starting high moving downward as the logs progressed through the mill.

Finally, we entered a separate building that housed the kilns in which the wood is dried. We stepped into one kiln for a short time, and though it was very hot at a whopping 140 degrees, it felt quite nice after being out in the cold of the yard!

After Kretz, we made our way to the PCA mill which makes corrugated medium for cardboard. We were not able to enter the mill itself, but we had the opportunity to learn the process of making paper and explore the yard. We saw the log trucks constantly coming and going from the scaling office where they are weighed. We topped off our visit watching semis loaded with wood chips being raised up about 35 degrees to unload onto the ground. It was something to see, that huge truck so high in the air! (*at right*)

At the end, we swung by the property where we marked trees yesterday and saw a Ponsse harvester, as well as a dozer, that had been dropped off to cut the sale. It was quite interesting to see progress being made on a project we were involved with.

Tuesday

Today we ventured up to the U.P., which I was very excited about because I had never been there before. Our destination was Bessemer Plywood Corp. which is a large manufacturer of plywood. Even driving to the mill was great, being able to see all the beautiful scenery. This was quite the tour, as it began with viewing what was described as the Cadillac of de-barkers. It was a ring de-barker which increased the mill's volume by 10% as it allows for the utilization of more of the logs. Also of note was the machine used to plug sheets of veneer to keep the value high. When a sheet of veneer has a few defects, the sheet can be cut and plugged to make it a high-quality veneer sheet. (*above, students stand among stacks of plywood sheets*)

After visiting Michigan, we made our way to Action Flooring, which is not a sawmill but rather buys lumber to turn into hardwood floors. They have their own kilns, as they want to make sure wood is dried to their own standards rather than relying on

(Continued on Page 6)

Overwintering at Kemp Station: It'snow Big Deal

By Daniel Young, UW-Madison

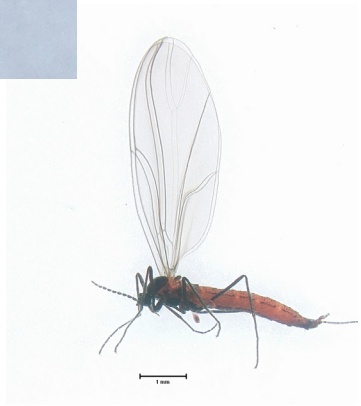
If you were 5 millimeters long, would your idea of a fun day be to walk around naked on the snow during mostly overcast, 29°F weather near Jyme Lake? It very well might be if you were the tiny gall midge *Catocha barberi*!

Gall midges are very small flies in the family *Cecidomyiidae* (I know, tiny fly – big name). Five species in this genus are known from North America. *Catocha barberi* was first discovered in 1907. Two specimens were originally collected by well-known entomologist and naturalist, Herbert Spencer Barber: "Two midges belonging to this species were taken flying in the woods during cold weather, the temperature being below 30° F, … in December 1907." Ironcially, this never before known, new discovery was actually made near Crab Lake, Vilas County, Wisconsin – approximately 25 miles north of the Kemp site.

The two original specimens collected by Barber hung out in the Diptera (= fly!) collection of the United States National Museum in Washington, D.C. for six years until they were rediscovered and examined by famous gall midge specialist, Ephriam Porter Felt. In 1913, Felt formally described the new species, naming it after his colleague, Barber (hence, *Catocha barberi*, or Barber's *Catocha* midge). Actually, from what little we know of the group, they probably do not actually form galls on plants as do most gall midges. Nothing is really known about the life history of our North American species of the genus *Catocha*, but a European species is known to develop as larvae in mosses. Plenty of moss at Kemp and in the Jyme Lake area! In his 1913 paper, Felt stated, "It is probable that these forms are sylvan." (That's old school from the Latin *sylv-* meaning forest – so, of the forest!) He indicated our species of *Catocha* midges (there are now five species on North America), "are doubtless boreal in habitat." Works for me--Kemp and the Jyme Lake area are certainly boreal. *Catocha barberi*, or a closely related species was reared from larvae collected in moist, decaying wood beneath loose bark, in Pennsylvania.

Prior to the current discovery, the only literature record for *C. barberi* in Wisconsin was from its original description by Felt (1913). The Kemp Station record reported here comes 115 years after the original collection of *Catocha barberi* from Wisconsin, and 109 years after it was formally described by Felt, who named more than 200 species of gall midges!

This species has also been recorded from Minnesota and the Yukon Territory as well as New Hampshire, Alaska, Ontario, Saskatchewan, and probably Pennsylvania. The specific site of the recent Kemp collection event was just north of the boardwalk leading to Jyme Lake. Second-growth forests of eastern hemlock, pines, and northern hardwoods dominate the canopy near the microhabitat; scattered black spruce dominates the woody vegetation on the periphery of the sphagnum mat.



The single adult female specimen I collected while snowshoeing at Kemp on 13 January 2022 is now permanently housed in the Insect Research Collection (WIRC) of the Department of Entomology, University of Wisconsin-Madison.

Diseased, Decayed, Defective, and Dangerous: When Tree Risk Gets Personal

By Glen Stanosz, UW-Madison

Late last summer I was at Kemp Natural Resources Station to provide an evening outreach presentation on tree risk. To attentive participants I explained that although trees provide a variety of benefits to society, trees also lose branches or break when forces exceed their structural strength or the root-soil connection. Certified arborists with the additional tree risk assessment qualification (TRAQ) are trained to estimate likelihood of tree failure and impact to a "target," and to consider the potential consequences. Tree failure can cause severe damage to houses and other structures, deny access or use of infrastructure, and injure or kill people. Measures to mitigate risk can include tree removal. But my past recommendations for the "one-cut ground-level prune" (that is, cutting down the tree) have never been personal….never personal until that visit to Kemp.

Leaning oak (arrow) that posed high risk to the cabin.

During this trip to Kemp my wife and I were staying in the little cabin on the west shore of Kemp's Point. Built almost 100 years ago, this provides accommodation for visiting scientists and other researchers (and their families) working in the northwoods. It began as a one-room structure with a screened porch. With addition of heat and plumbing in the 1960's, and expansion to include a bedroom, kitchen and bathroom, the cabin is now a simple but cozy temporary home. Staying in the cabin provides enjoyment of sunsets and contributes much to the "sense of place" that makes Kemp so special.

It seemed a coincidence that on a walk the morning after my presentation a very obviously defective tree caught my eye. Just left of the narrow concrete steps that rise from lake level up the steep bank behind the cabin was an old oak. The trunk was decayed, hollow, and cracked so that one could see right through the trunk. However, although likely to break and fall at any time, this tree seemed to pose only very low risk. It leaned strongly to the north, away from the steps and parallel to the bank. So the only consequences of its impending failure would be a loud crash and a few crushed understory seedlings, shrubs, and herbs. Although very structurally defective, this tree need not be removed. Its cavity continues to provide a haven for wildlife, and its acorns are both a source of food and seedlings that will be the future oaks of Kemp's woods.

But while examining this obviously decayed tree, I noticed the strong lean of another nearby oak. The sizeable trunk of this second tree (let's just say bigger around than me) appeared to be intact, but the lean was directly toward the cabin, just a few yards away! Lean alone did not suggest failure of the tree anytime soon, but fungus structures were present on the base of the tree. While somewhat deteriorated, these could be identified as the spore-producing fungal fruiting bodies, *Niveoporofomes spraguei* (also known as *Fomitopsis spraguei*). This potent wood-decay fungus decomposes both the cellulose and lignin of wood, especially low in tree trunks and supporting roots. Advanced decay of the structure responsible for anchoring trees, especially when accompanied by lean, jeopardizes their stability. No doubt this oak was likely to fail, at any time, especially given a prediction of coming stormy weather. And whenever this large tree weighing many tons did fail, it would almost assuredly strike the cabin. Consequences (both destruction of the structure and

(Continued on Page 5)

Tree Risk *(Continued from Page 4)*

Lean directly toward cabin and decay fungus fruiting bodies at tree base (arrow) contributed to estimate of high risk.

severe injury or death of occupants) would be most severe. Thus, estimated risk was not just high, but very personal. An immediate response was appropriate.

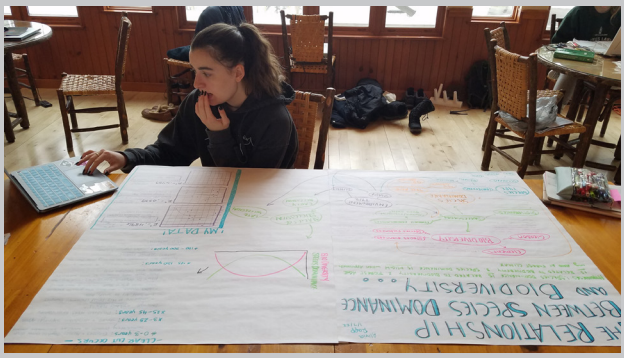
I shared my estimate of high risk with Kemp's Superintendent, Professor Scott Bowe. And needless to say, personal risk was immediately reduced when my wife and I packed up and moved from the cabin. And in the weeks until this tree could be felled, the cabin remained vacant as other visitors were accommodated in the Lodge or Mead Residence Hall. Dr. Bowe subsequently arranged for professional removal of this good tree gone bad. Fortunately, in the interim, despite late summer and fall storms the tree did not fall and it was eventually removed cut down without incident.

It is a surprise to many people who are tree owners (or managers of land where trees are present) that they have legal "duty of care" for trees. There is an expectation for the tree owner or manager to act as a "reasonable individual." Although lacking the education, training, and experience of a TRAQ certified arborist, *the reasonable individual should recognize when a tree might be obviously dangerous, and should request qualified assistance.* The TRAQ arborist will consider site and tree factors and consequences of failure to potential targets in developing an estimate of risk. But it is the responsibility of the tree owner or manager to decide how much risk they are willing to accept, and also choose the measures that will be implemented to mitigate risk.

Learn even more about tree risk at Kemp Station on June 11 -- details are available on Page 7.

Winter Science Excursion

Students from Milwaukee Institute of Art & Design spent a few days at Kemp Station in January, each taking on a unique project related to natural resources. Here are a few photos of their adventures.



Hands on Learning

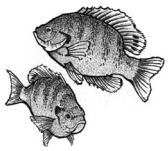
Shiitake Mushroom Workshop
Saturday, June 11, 10:00 am

Join Drs. Glen Stanosz and Scott Bowe, UW-Madison, for an introduction to Shiitake mushroom cultivation. This hands-on demonstration will begin with a discussion of the life cycle of Shiitake mushrooms. We will demonstrate how hardwood logs are prepared, inoculated, and tended to grow these delicious mushrooms. Come ready to work! Participants will be asked to form an assembly line to prepare and inoculate logs that can be taken home at the end of the session. You will have an opportunity to perform each step in the Shiitake process so you have the skills to build your own mushroom garden. Chicken shiitake wild rice soup will be served at the end of the session. Advance registration required with Karla at 715-358-5667 or kortman@wisc.edu. Fee: $10 per person payable in advance; Registration limit: 15 (An additional session may be added if there is sufficient interest.)

Plant ID Workshop
Wednesday, July 6, 9:00 am - 11:30 am

Join Alex Graeff, botanist for the National Ecological Observatory Network's Great Lakes Domain, for an outdoor-based plant identification workshop. The session will emphasize recognition of common vascular plant species found in typical north woods plant communities, and terminology and morphological features important for plant identification. While exploring the forests and bog at Kemp Station, we will apply identification techniques to the plants we encounter while discussing tidbits of north woods ecology. The hike will be about 1 mile, but with plenty of time stopped to discuss plants! It will include some moderately strenuous rolling terrain and some time on the bog mat.

Fish Up Close!
Date: July - date TBD



Geared for kids, but all ages are welcome to join members of the Wisconsin Cooperative Fishery Research Unit, UW-Stevens Point, for a close up look at fish – the life history, unique characteristics, anatomy and the environment in which they live. Learn how scientists determine the age of a fish. Various specimens will be available to view and touch, along with special equipment used to study fish.

Spring Break *(Continued from Page 2)*

anyone else (*right, students with bundles of flooring*). This was also a very good tour, providing a clear understanding of what the process looks like.

Wednesday

On our last day we visited a paper manufacturer in Rhinelander (*left, students visit the famous Hodag*). The tour was very nicely laid out to explain their process of making paper. One of the nice things was the use of radio headsets so we could easily hear everything said during the tour. We were also able to hold paper in the process, which gave us a tactile understanding of what they were doing. It was very hot in in the mill and were told that in the summer they may work all day in temperatures up to 110 degrees!

Seeing all of the mills and loggers really made clear what goes on in the industry after we, as foresters, administer a timber sale. We all came to have nothing but respect for what these guys do.

When we returned to Kemp, it was time for goodbyes. I was not ready to head back down to Madison, as nothing beats staying up north. But we had a wonderful pancake and sausage brunch and took off. This was probably the most enjoyable trip I have taken as a part of academics.

Evening Presentations

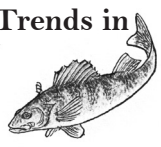
Tracking the Golden-winged Warbler
Monday, May 23, 7:00 pm, Emily Filiberti

Birds in North America are facing considerable population decline, with over half of all species declining in the past half-century. This is particularly true for the Golden-winged Warbler, a neotropical songbird that has experienced over a 70% population decline since 1966. Due to their imperiled status, they are currently being considered for listing under the Endangered Species Act. To better understand drivers behind their population decline, and to aid in giving an informed listing decision, we have initiated a range-wide collaborative effort to assess annual survival of both males and (the more elusive) females through the use of radio telemetry. Join Emily Filiberti, a Master's candidate at the University of Maine, to learn more about her contribution to this widespread effort through deploying and tracking these NanoTags on Golden-winged Warblers right here in Oneida County.

Diseased, Decayed, Defective, and Dangerous: When Good Trees Go Bad
Saturday, June 11, 7:00 pm, Dr. Glen Stanosz

Trees provide a variety of benefits to society. But trees also lose branches or break when forces exceed their structural strength or the root-soil connection. Tree failure can cause severe damage to houses and other structures, deny access or use of infrastructure, and injure or kill people. Landowners have legal "duty of care" for trees on their properties, including responsibility to obtain expert assistance when appropriate. Learn how qualified arborists assess tree risk by estimating likelihood of tree failure and impact, and the consequences to property and people. Dr. Glen Stanosz is the UW-Madison emeritus professor of tree and forest health, and is also a certified arborist with the additional qualification in tree risk assessment.

Walleye and Yellow Perch Recruitment Trends in Northern Wisconsin
Monday, June 20, 7:00 pm, AnaSara Gillem



Some northern Wisconsin lakes have shown declining trends in walleye recruitment over the last two decades. Recent research suggests that walleye and yellow perch recruitment are influenced by similar factors, but the current status of yellow perch recruitment in northern Wisconsin is unknown. The objective of this study is to determine if lakes with declining walleye recruitment also show signs of declining yellow perch recruitment. In 2021, six lakes located in the Minocqua area were sampled and additional lakes will be sampled this year. Learn more about this study and what the preliminary data show from AnaSara Gillem, a Master's student in the Wisconsin Cooperative Fishery Research Unit at UW-Stevens Point.

Special Events

Wisconsin Insect Fest
Friday, July 29 - Sunday, July 31

After a successful Wisconsin Insect Fest event in 2019, the UW-Entomology department is pleased to announce that the Wisconsin Insect Fest will be coming back to Kemp Station this summer. A full schedule of activities will be announced in the coming months. Just like the 2019 event, this year's WIF event aligns with National Moth Week (nationalmothweek.org) and nighttime insect surveys are being planned as part of this year's event, in addition to many other fun activities for all ages. When available, details will be at kemp.wisc.edu/outreach.

Fungi Fest 2022
Friday, August 25 - Saturday, August 26

Whether you are new to the fabulous world of fungi, or have been studying it for years, this event is certain to please. On Friday evening, join us for presentations on one or more fungi topics. Saturday morning will start off with a foray, followed by extensive discussion about the morning's collections. When available, details will be at kemp.wisc.edu/outreach. Lodging is available for visitors coming a distance at a rate of $18 per person, per night. Contact Karla for details, karla.ortman@wisc.edu.

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

Find us on Facebook

Nonprofit
Organization
U.S. Postage
PAID
UMS

Common Raven (*Corvus corax*)

One day in January my husband, Bill, scrambled a few egg yolks and put them outside to see who would eat them. Bill was working from home so he monitored the feeder for activity. He sent me a video of squirrels removing chunks of egg from the feeder and burying them in the snow. Then came the video of a raven bouncing from limb to limb in the large red pine, seemingly chasing a black phase grey squirrel about in the tree. Bill said the chase had been going on for some time. Given the habits of the raven, this behavior seems quite appropriate. Ravens are opportunistic omnivores and will eat practically anything. Surely scrambled egg would be quite a delicacy. Like other members of the Corvid family, ravens are intelligent -- they watch and learn. I suspect this particular raven saw the squirrels enjoying some kind food item and came in to get a closer look. The squirrel did not seem terribly bothered by its pursuer, despite the size difference. Ravens are large birds, about 21-26 inches long. To distinguish the raven from the crow, check out the tail feathers -- on the raven they are wedge-shaped or pointed versus the fan-shaped tail feather pattern of the crow. In the wild, a raven can live up to 21 years, the longest of all birds built for perching. I enjoy hearing the calls and sounds that the ravens make. They are known to mimic sounds. Based on that, there may be monkeys living in the forest near our home because that is what the ravens often sound like to me! Ravens are also known to behave in a playful way and even trick other birds and animals. In the end, maybe it wasn't about the egg at all...perhaps the raven and squirrel were just having a fun game of tag.

Kemp's Point
Volume 23, 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