

Kemp's Point

A newsletter of the Kemp Natural Resources Station
Volume 5, Number 2 - Fall 2004

Field Camp Trains Tomorrow's Foresters

Earlier this summer, Kemp Station hosted an intrepid and eager group of 22 UW-Madison forestry students. They were at the Station to attend a 3-week field class known formally as Forest Resources Practicum, but more affectionately as Forestry Field Camp. Field Camp is one of the most memorable experiences during a forestry student's education. If you studied forestry, you, too, can no doubt recall some fond memories of your camp experience. It's a time when all of the theory and principles learned in the classroom literally come alive. The days are long; the work is hard; and the friendships made are forever.



Above - Dr. Ray Guries shows students some of the finer points of ground flora identification. Right - Students sift sand to make a track station. The station was baited with animal scent and the students returned periodically to check for tracks.

Forestry Field Camp is a team-taught, interdisciplinary class. Over the years, the content has evolved to reflect the dynamic nature of the forestry profession. This was particularly true in 2004 when Camp underwent a major change in focus. Historically, Camp had been an upper-level course that covered topics as diverse as tree measurements, ecology, management, and forest policy. In 2004, that focus changed from an *introduction to forestry* to an *introduction to the forest*. In addition, the target audience changed to include those students who were just beginning their forestry studies. "We

wanted to get the students in the woods as soon as possible in their undergraduate careers," said Volker Radeloff, Assistant Professor in forestry and Field Camp co-coordinator. "Camp not only gets student excited about forests and forestry, it also provides a solid foundation of real-world experience that subsequent courses can tap into and build upon."

Under the new design, students conducted a comprehensive inventory of the forest as both a complex ecosystem and an important natural resource. They learned about the many biotic and abiotic components of the forest, how these components interact together, and what products and services they provide to society.



Students were organized into teams of three or four. Each team was assigned a sizable tract of land on the nearby

American Legion State Forest. Tracts ranged in area from 200-300 acres and included at least three different forest types, some wetland, and some shoreline. This diverse land base exposed students to the many different plant communities that can comprise a forest and to the wildlife populations which these communities support. Students did early morning songbird counts, checked live traps for small mammals, dug soil pits, assessed streams for water quality, identified ground flora, and cruised timber. Field data were compiled and

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Field Camp (Cont'd from Page 1)

analyzed and ultimately organized into a final report that the students presented in the woods to their peers.

“It was really neat to see,” said Anna Pidgeon, Associate Scientist in the Dept. of Forest Ecology & Management and one of the Field Camp instructors, “just how much the students learned during Camp.” Dr. Pidgeon noted it was particularly rewarding to hear the students discuss topics like timber volume, songbird populations, and plant diversity all in the same presentation, moving seamlessly from one topic to the next. “They definitely came away with a



A stream assessment turns up an interesting find -- a northern water snake.

Getting down and dirty, students get hands-on experience learning about forest soils.



greater appreciation for these complex environments we call forests. They should be proud of their accomplishments.”

Indeed, the students should be proud. Field Camp was an intense 3-weeks but a valuable addition to their traditional, on-campus education. The lessons learned will prepare them well not only for their subsequent classes but for their professional careers as tomorrow’s stewards of our forest resource.

-T.S. 🌲

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

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Students use a Biltmore stick to cruise timber and determine the volume of sawlogs and pulpwood in the forest.



Wild Wonders

On Whiskey Jacks and Tamaracks

Each year there's a day when I know summer is really over. The smell of autumn is in the air and the sunlight suddenly looks different. This may not be a welcome day for some because it means the cold and snow of winter is around the corner. But those who enjoy seasonal change feel their spirits lift in anticipation of Mother Nature's upcoming show. Since we moved to northern Wisconsin, this particular seasonal change has brought a visitor to our home who we don't usually see when the landscape is green and warm.

He usually arrives silently, gliding from tree to tree. If he speaks, his words are soft and inquisitive. When he lands, he hops about, investigating; walking is not in his repertoire. He's usually not alone either. With him is his mate and perhaps a young'un that will soon be venturing out on its own. Dressed from head to tail feather in various shades of gray, the first visit from the Whiskey Jack is my sign that autumn has begun.

Commonly known as the Gray Jay or Canada Jay (*Perisoreus canadensis*), "Whiskey Jack" is one of many informal names given to this bird. Native Americans knew this bird as "wiss-ka-tjon" or "wis-ka-chon". The story goes that lumberjacks of Canada's northern forests dubbed the bird "Whiskey Jack" as the birds visited lumber camps looking for food. Other nicknames include Venison Hawk, Lumberjack, Meat Bird, Camp Robber, and Grease Bird.

I had never seen a Gray Jay before moving to the Northwoods. I'd heard of these sociable birds from a friend who camped in the Upper Peninsula with her husband. She shared tales of these jays hanging around their campsite, looking for hand outs. Always keen on wildlife encounters, I was intrigued by her stories. So the first time a Gray Jay appeared in our yard, I was thrilled.

Gray Jays are birds of the remote forest. Preferring

northern coniferous and coniferous-deciduous forests, their range is concentrated in Canada; however, it does extend into the U.S. where similar habitat and altitudes prevail. Large stands of conifers, including balsam fir, black spruce, jack pine, tamarack and white cedar, are good places to find Gray Jays. And one could say they're a perfect winter bird.

They are expert at collecting and storing what they need to survive the long, cold winters of their northern range. In fact, they are almost obsessive in their collecting behavior. Combine that with their fearlessness and curiosity and you have a bird that will come to humans for handouts, even feeding right from the hand. These behaviors are how the bird obtained some of its names, like Camp Robber.

Gray Jays are biologically adapted to be hoarders. A special, enlarged salivary gland enables them to cover collected food with a sticky coating that helps it to stay put where hidden. Cached food may include insects, berries, carrion, fungi and human food scraps.

Gray Jays mate for life but if a mate dies, the survivor will usually mate again. Begging is the first phase of courtship which begins in the fall of the year. This advances to feeding and mutual preening as nesting time approaches. Typically nest building occurs in late-February or early March, although late-January nest building is on record. A bulky nest is built next to the trunk of a conifer, often in a young spruce or balsam fir within a cluster of trees. The nest's outer layer is composed of sticks and dried leaves, perhaps with interwoven cocoon shells, spider silk and wasp nest pieces. Next a thick layer of inner bark, usually cedar or willow, is added. Finally, a thick layer of fur and feathers, including the adults own down, is added for warmth. It



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is not surprising that materials are cached during the early phases of courtship in anticipation of nest building.

Gray Jays lay 2-5 eggs and incubation lasts about 17 days. It's not uncommon for the birds to have eggs on the nest while temperatures are still below freezing and snow is deep on the ground. Nestlings have even been observed as early as mid-February! After about 15 days in the nest, the young are ready to fledge and are fed by their parents for the next 2-3 weeks. In early summer, the dominant offspring drives its siblings from the parent's territory in a "brood reduction" mechanism. It's theorized that this prevents the other young from memorizing locations of cached food. Studies have estimated that 80 percent of the banished young do not survive without parental protection and example. Finally, before nest building begins again for the parents, the remaining juvenile leaves the parental territory.

Why we only see Whiskey Jacks around our house in fall and winter may be related to their yearly routine. I think our property is beyond their main territory and we provide a source of additional food for caching as they prepare for winter. During winter, I often see them cleaning out the suet baskets — they're especially fond of suet.

Keep your eyes and ears open for Whiskey Jacks when you find yourself in their habitat. You'll need to listen close, because unlike their cousins the crow and blue jay, the Gray Jay will likely be speaking in a soft tone. Guaranteed you'll be drawn to this handsome bird.

Besides contributing to the habitat of the Whiskey Jack, tamaracks are neat trees to observe. *Larix laricina*, also known as the eastern larch, is one of my favorite Northwood's trees. I think of it as a Northwood's tree, but it's actually found throughout most of Wisconsin. Wisconsin is nearly the southern-most extent of the tamarack's main range, which reaches just into northern Illinois and Indiana. Having one of the widest main ranges of all North American conifers, it extends from the Atlantic Ocean to central Alaska. In Wisconsin, tamaracks are commonly associated with lowlands, with their

wet, organic soils, but this tree can tolerate a range of soil types. In the more northern part of its range tamarack can be found growing on drier sites.

The tamarack is a deciduous conifer. Deciduous because it sheds its needles in the fall and a conifer because the tree produces seeds in a cone. My first memorable encounter with these trees took place during an autumn visit to Northern Wisconsin — I was so taken by the "golden pine trees!" My then-forestry student-boyfriend, now husband, explained their story. Now as a Northwoods resident, I have the pleasure of seeing stands of tamaracks regularly.

In summer a person enjoying the forest may not notice the uniqueness of this tree compared to its other pine relatives, like the balsam fir, black spruce, or white pine. But when you have the opportunity to observe tamarack over the course of a year, you come to appreciate its special qualities.

It was a frosty winter morning that got me thinking about how much variation can be seen in a tamarack stand throughout a year. The morning was damp and cold and a silvery frost covered the trees where the sun hadn't yet reached. I was struck by how pretty the bare branched tamaracks were. On a frost-free winter day, the trees are mostly grey, with orangish-brown coloring the youngest growth on the branches.

With spring's approach, as the earth gradually warms, I keep a close watch on the tamaracks for their tiny needles to emerge. The tamaracks display a unique, green color for only a short time before the deeper greens of summer take over. Come autumn, the tamarack needles turn a brilliant gold, once again showing off what's special about this conifer. In some places where tamaracks border a road or path, fallen needles blanket the road in gold, casting a magical light.

Of course, there's more to a tree than how pretty it is. The tamarack's cone and seed production is quite impressive. The cones are small, at most about three-quarters of an inch in length. Cone production varies based on location within the range, whether the tree is open-grown or within a forest and the

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Learning on the Job: Kemp Summer Internship

This summer Kemp Station was fortunate to have John Gritt, an undergraduate forestry student from UW-Madison, on staff as an intern. One day I visited with John about his summer experience.

Can you tell me a little about yourself ?

I grew up in the small city of Sheboygan Falls, WI. Currently, I am a senior in the Department of Forest Ecology & Management at UW-Madison. I'm planning to graduate in the winter of 2005.

What brought you to Kemp Station this summer?

Well, at the beginning of the summer I was there for a 3-week field course called Forestry Field Camp. The idea of doing a research project and working at Kemp Station was offered to me by Drs. Tom Steele and Volker Radeloff. When I was asked if I wanted to be an intern at Kemp, I really had no idea what I was getting myself into. Now, I am absolutely grateful for the opportunities given to me this summer.

I understand you spent some of the summer working on a research project for the Department of Forest Ecology & Management at UW-Madison. Can you tell me about this?

It's a study investigating road and housing changes in northern Wisconsin since the 1930's. Using aerial photography and a computer program called GIS, I created a series of maps that shows when roads and houses were constructed.

Why is this research project important?

This research is important because it shows quite accurately the amount of development going on in the area. I should mention that this research is not meant to criticize those people constructing new homes but rather to document how drastic the change has been in the Northwoods over the last 70 or so years.



What was your fieldwork like?

Fieldwork ranged from using GPS (Global Positioning Systems) to map the grounds, buildings, and features of Kemp Station; burning slash with Gary, meeting with local officials and long-time residents to gather historical information about the area; and helping other scientists who were conducting field work out of the station.

You also participated in the Family Forestry Expo for forest owners and the public. Tell me about that.

The Expo was held at the Camp 5 Museum in Laona, WI and was a rewarding experience. I presented a poster showing my collected data and I also brought some old aerial photographs of the Camp 5 area for stereoscopic viewing. The day was truly rewarding because I had the opportunity to talk with many people who live in the area I am studying.

What did you learn this summer that you think is really interesting?

I now have a greater understanding of northern

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Summer Internship (Cont'd from Page 6)

Wisconsin and the history of its landscape, ecology, and natural resources.

What other kinds of things did you do while staying at Kemp?

The usual outdoor activities: hiking, fishing, canoeing, and the occasional death trap of going mountain biking with Tom. (Just kidding, Tom.)

What was the best experience for you during the internship?

There were numerous occasions where I had to meet and interview people that I didn't know, and ask them about their experiences and historical observations regarding the area. I was quite nervous going into a lot of these meetings, but as the conversations progressed, so did my confidence in speaking with them.

How do you think the internship experience will help you in the future?

I think the best thing was that I had to work independently. I think this internship was also a strong "resume builder" for my future.

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tree's age. For example, open grown trees between 50 and 150 years old are reported to produce the greatest quantity of cones. A single tree may produce 20,000 cones containing more than 300,000 seeds in one year!

And the seeds are *teeny*, approximately one-tenth of an inch long, with wings measuring about one-quarter of an inch long. Even though many seeds are produced, only about 4-5% actually germinate as rodents eat about half of the produced seeds and fungi or bacteria cause the loss of others.

Besides providing seeds as a food supply, tamaracks have other ecological roles. Porcupines enjoy the tree's inner bark and snowshoe hares feed on tamar-

If you had this summer to do over again, would you choose the internship?

Absolutely. This summer internship exposed me to many aspects in the field of forestry. I wouldn't have got that experience through most other internships.

What's next for you?

Well, this fall I am continuing the research from my internship. I have just finished collecting all the data and I hope to finish a lengthy analysis and report by the end of the semester. If all goes well, I will present my results at a scientific meeting next spring. Next summer I hope to get more professional experience and then graduate in December.

Thank you, John. Good luck in your pursuits.

-K.O. 🐾

Tom Steele notes: "John's summer experience was funded by a grant from the College of Agriculture & Life Sciences Summer Internship Program. The program provides undergraduate students with valuable learning experiences at one of the College's off-campus research stations. We are most grateful for the financial assistance provided by Associate Dean Margaret Dentine and the CALS Research Division. Their support allowed us to conduct some important research in the area and it created a rewarding experience for John. We are also grateful to John for the outstanding job he did." Regarding John's comment about "death trap" mountain bike rides, Tom says, "It was just a little spin through the woods."

rack seedlings. Some of your favorite migratory birds may utilize tamarack stands for nesting, including Nashville warbler, veery and song sparrow.

And let's not forget tamarack as a renewable natural resource. The main commercial use of tamarack in the U.S. is pulp products, especially the transparent paper in window envelopes. Because it is rot resistant, it is used for posts, poles and railroad ties. Other products include rough lumber, crates, and fuelwood.

No matter where you live, you can enjoy the subtle seasonal changes expressed in nature. I encourage you to watch, during your commute, or your daily walk. You'll be delighted with all the wild wonders that surround you.

-K.O. 🐾



Mead Residence Hall Update

The Stanton & Dorothy Mead Residence Hall project continues to move ahead. We experienced some challenges in the early stages as the result of being a state building project. These challenges have since been overcome but they delayed the construction start date. The planning and design team was faced with a difficult decision: to push ahead with winter construction this year or postpone the project until next spring when conditions are more favorable. We opted for the latter. The architectural firm of PMSI has come up with an outstanding design that fits the unique mission and character of Kemp Station. We did not want to compromise this design by trying to build the residence hall in the throes of a Northwoods' winter. Although we are genuinely disappointed by

this delayed start, we are confident that it is the right decision in the long run. When complete, the new residence hall will provide scientists and students with a wonderful place to live and work for many decades to come.

Despite the delay in swinging hammers and singing saws, site work has begun. Tree harvest and stump removal are well underway. Our goal is to have the site completely prepared so that construction can begin as soon as the frost comes out of the ground next spring. True to our mission of natural resources conservation, trees harvested from the site will be milled into paneling and used in the new building. This way, the trees will remain on-site, just in a different form. We are most grateful to the Pukall Lumber Company of Woodruff, WI, for doing the

sawing and milling. In addition, Pukall Lumber Company is donating all of the beautiful maple flooring that will be used throughout the building. It is the generous support of all our private donors that make this building an exceptional facility for natural resources research and education.

Naming opportunities for the building still exist. If you would like to support construction of the new Mead Residence Hall, you can make your gift payable to UW Foundation – Mead Residence Hall Project and mail it to: University of Wisconsin-Foundation, P.O. Box 8860, Madison, WI, 53708-8860. For more information, please contact Marcy Heim at 608-263-6669 or Tom Steele at 715-356-9070. -T.S. 🍁



Lakeside view of the new Stanton & Dorothy Mead Residence Hall

Look deep into nature, and then you will understand everything better. --Albert Einstein



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