



MINNESOTA Forest Scene

Leading the way with education, research and outreach

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Performance & Fun

This newsletter ranges from special topics to performance and fun. Performance that makes a difference is evident in the awards noted for faculty and staff. Fun is seen in the many student activities and clubs.

I recall that when I started teaching, my training simply consisted of directions to the chalk storage drawer. Times have changed! Beginning in the late

1980s, the University increasingly invested in training for new faculty. This includes training for skills in the classroom and in the field, use of effective teaching pedagogy and instructional technologies, and advising students on coursework and careers.

What is the impact? The teaching awards for three faculty noted later in the newsletter are testimony of a faculty that is committed to teaching and learning. Results also show up in higher retention rates and highly motivated students. Additionally, another award reminds us how important our support staff are to making us all more effective. Congratulations to all for your invaluable contributions.

Dennis Anderson, noted outdoor writer for the *Star Tribune*, spoke at the recent 77th Annual Forester's Day banquet. Talking with Dennis afterwards, he was impressed that the students not only organized and conducted the day's events, but that they also were having fun together...something that seems in short supply in many higher education programs. This sense of community is not only extremely important for our current students, but I was reminded during a recent luncheon with alumni that they still retain this sense of community decades later.

In the end, successful teaching, learning, and fun can all go together, and we thank all those who make it possible.

Alan Ek, Professor & Head, Forest Resources

How Healthy are Minnesota Forests?

Forest health is a major topic of concern here in Minnesota and across the globe. There is always a new invasive pest or disease on the horizon. The changing climate raises major concerns about changing ecosystems along with increased incidents of drought, severe storms, and more fires. The forests will be changing, and it is important for us to learn about how forest health will be affected.

Traditionally forest health has been focused on single issues and their effects on the forest, but the faculty and researchers in our Department are putting together a more comprehensive look to increase our knowledge and ability to manage for the challenges facing Minnesota forests. This comprehensive look is putting together the puzzle pieces on how invasive pests, disease, fire, drought, and climate change will react together in our ecosystems and what that could mean for landowners, managers, and users.

"Although it might be easy to pick an exotic disease like white pine blister rust or an exotic insect like the emerald ash borer (EAB), there are also abiotic issues that need to be considered," says Associate Professor Andrew David. "The

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potential growing season droughts and winters that are shorter and warmer than average should be just as much of a concern as the insect or the disease of the year.” He points out EAB as an example of how warm winters increase EAB pupae survival, drought during the growing season causes ash trees to be stressed, and how the combination can increase tree mortality from EAB infestations, as well as other pests and diseases.

“All those studies of a single factor are interesting, and you can find whether there is a significant effect or not, but there are never single factors operating in the real world,” points out

Research Associate Lee Frelich. “It’s always several things happening at once. We need more of these multiple factor studies where we look at temperature, drought, deer, insects, or other suites of factors all at once and see how they interact with each other in order to produce a net effect.”

The forest ecology group (featuring Frelich, F.B. Hubachek, Sr. Chair and Regents Professor Peter Reich, and Associate Professor Rebecca Montgomery) in the Department is now conducting multiple factor studies to test real world scenarios. A large number of study sites across the landscape are necessary for the range of variables, and the studies also require statistical techniques that have only been developed recently. These new techniques will give us a better understanding of the complicated relationships a forest contains.

The additional research will help us deal more effectively with forest health challenges and to develop comprehensive approaches for management. “White pine blister rust is a good example of an integrated approach,” says David. “We know the life cycle of the disease, we know

the conditions that increase infection rates, and we have devised strategies to combat those conditions. Many recognize that we cannot plant white pine everywhere and expect it to survive the disease, but with judicious site choices, improved stock, and appropriate

management of seedlings and surrounding areas we have been successful in putting white pine back on the landscape.”

Success stories such as that are important to remember when the future of forests starts to sound all doom and gloom. Yes, the forests are facing many new issues, but this isn’t the first time their resiliency has been tested. Changes

will happen, and we need to be prepared. “I’m hopeful that we’ll understand how these things work,” says Frelich. “I don’t think we’re going to stop climate change or invasive species. We’re going to have to learn to live with them and therefore learning how they affect the forest is important.”

One benefit of the University of Minnesota is its location on the prairie forest border. That border ecosystem will be especially sensitive to a changing climate and gives the University and the Department unique research opportunities. The Department is also home to some of the best researchers in silviculture and ecology in the world. Says David, “The Department has some of the best and brightest researchers in their respective fields. In combination with others at the University and contacts who have worked with these researchers, we have the ability to approach the concept of forest health comprehensively. Together with our extension educators, outreach programs, and the connections we have forged, we can effectively reach a majority of practitioners and landowners in the state.” ■



Giving Thanks

The Department would like to give special thanks to the Minnesota Pesticide Information and Education (MNPIE) organization for recently creating the Theodore Allen Weidenfeller Scholarship, an endowed fund established to honor Ted Weidenfeller for his life-long commitment to educate the public and the forest resource management community on the economic and environmental benefits of integrated pest management. Ted was highly respected by his peers and viewed as a pioneer in the industry due to his attention to detail, focus on scientific information, and personal innovation.

The scholarship is intended to recognize and pass on to future generations Ted’s passion for education, innovation, and stewardship in order to preserve and advance the field of industrial vegetation management. Scholarships will be awarded to junior or senior Forest Resources students, with a preference for students from Minnesota who have excellent communication skills and experience or strong interest in hands-on, field-oriented, natural resource management. Thank you to MNPIE for your generous gift and thanks to those of you who wish to honor Ted’s legacy with additional gifts to the fund.

In addition, we would like to thank our many individual and generous donors whose gifts impact the lives of our students and the quality of our department. Your continued support helps us maintain and enrich our programs. Thank you!

Professor Ken Brooks retiring

After 42 years working in the field of hydrology and watershed management, 37 of which have been as a professor here at the University, Professor Ken Brooks is retiring this summer. Ken received his Bachelor of Science degree in Range Science and Watershed Management at Utah State University, and a Master of Science (1969) and PhD (1970) in Watershed Management from the University of Arizona. After that, he served as an officer in the U.S. Army Corps of Engineers from 1970-1973 and as a hydrologist with the Hydrologic Engineering Center from 1973-1975.

In 1975, Ken then began his career here at the University where his research and teaching focused on the hydrologic effects of land use, forest and wetland hydrology, hydrologic modeling, riparian-stream channel processes, and watershed management. He was the 2000-2001 recipient of the University's distinguished teaching award for Graduate-Professional Teaching.

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What have you enjoyed most about your time here in the Department?

I've enjoyed most the people, the atmosphere, and the culture of this department. We have the best support staff that anyone could hope for, and I thank Janelle, Clara, and Colleen for making my job much easier. They are like family. Our faculty has evolved considerably over my career, but we have always had a congenial group of top notch teachers and scientists who seem to enjoy working together. Early on I benefitted from the leadership and support of Dick Skok as Dean, and subsequently that of Alan Ek, both of whom became good friends. They provided me with the flexibility and opportunities to pursue my interests, including considerable international work.

I have also enjoyed teaching and working with students. I find it rewarding to follow their careers over time. I've had graduate students go on to become professors at different institutions and many have had great careers with and held leadership positions in agencies such as the Minnesota Pollution Control Agency, US Forest Service, and as principle hydrologists with the National Weather Service's stream forecasting units.

What is one of the most important things you have learned over the years?

A couple of things come to mind. One is to find good graduate students, give them support, and then stay out of their way. Secondly, although writing textbooks can be rewarding professionally, it is not a good way to supplement your income.

What advice would you give to incoming students?

Students should follow their interests and get into fields they really enjoy. I was attracted to natural resource management because I had a passion for the outdoors – the forests, wildlife, and water resources. It seems today that many students with a similar passion get on career paths that take them away from natural resources. Students need to



look into the variety of natural resource careers that are out there and realize that it can be a great career. When I was Director of Graduate Studies I was surprised to see the variety of backgrounds of applicants for our graduate program, including some who already had established careers in fields as diverse as retail sales and theater. They pursued our graduate program because they wanted to get into a career that they enjoy. It can be difficult to switch careers, but I know many who have been successful and enjoy their work.

What are you looking forward to in retirement?

I'm looking forward to doing some things that I want to do and when I want to do them. My wife, Pam, and I have some travel plans already to go to Europe for a couple of weeks and will also visit friends and family out West. We enjoy taking road trips but now will be able to stop and see the things we always rushed by to get back to work. We both enjoy fishing and the outdoors, so I think we'll be plenty

busy enjoying ourselves I hope.

When not traveling, hunting or fishing, I'm afraid Pam has many tasks for me. Over the years I kept saying "I don't have time to do that now" or "I'll do it later." Well, later is now.

Although I suspect there will be opportunities to work professionally, I'm going to pick and choose only those activities that are interesting to me and not become over obligated.

Any additional thoughts you'd like to share?

I have to mention that when I first came here we had only lived in a new house for 18 months in Davis, California. When I was offered this job, my wife wasn't very excited about leaving Davis, but we decided it would be a good opportunity. I remember saying "We'll spend three or four years here and then I'm sure there will be opportunities for us to return to the mountains in the West." Well, there were opportunities but we're still here. It must be the people and some of the 10,000+ lakes that I have not yet fished. ■

Student Spotlight: Rachel Liechty

Rachel Liechty, a Master's candidate in our Natural Resources Science and Management program, is following her passion in both her personal and professional life. A backpacker herself, Rachel is researching the uses and users of long-distance, backcountry trails. Specifically, she is looking at thru-hikers (those who complete a long-distance trail start to finish) along the Pacific Crest National Scenic Trail.

The Pacific Crest Trail (PCT) is a 2,663 mile trail starting at the Mexican border, winding through the Sierra Nevada range and the Cascade Range, and ending in British Columbia, Canada. Trails such as the PCT cover extreme distance, include an intense range of biomes, are in the backcountry while also passing through towns, and include users from casual day-hikers to competitive thru-hikers. These unique traits pose unique challenges to recreational managers.

Using written accounts from thru-hikers on the PCT, Rachel is conducting a qualitative analysis to give a glimpse into the trail experience and provide for better management of these trails. She also hopes to open the door for additional research on backcountry trails like the PCT. "Looking at the literature, there were some gaps," says Rachel. "It really started as an exploration of these people's experiences, and it hadn't been touched on in the research. It's only been looked at on the Appalachian Trail and only in a handful of studies."

This research and her studies also have a strong connection to her personal passions. Rachel herself enjoys backcountry backpacking and has completed multiple long-distance trails. Her first experience was in 2009 completing the 1,200 mile Pacific Northwest National Scenic Trail from Glacier National Park to the coast of Washington state with her now husband, David, and a friend. She joined the trip at the last minute and found it to be right up her alley, "That cured what I was looking for in terms of wanting to find a passion outside of work."

For their next trip, Rachel and her husband decided to take on the PCT. "Part of that trip was already planned before the research, and it all fell together where I was seeing these gaps in existing research and we were going to do this trip," she says. "I didn't want to do formal research on the trip, but I could incorporate it as a pilot study to get a taste of what these experiences really are and get a lived experience of this thru-hiking phenomenon."

They started out on the PCT in April 2011, and along the way Rachel had many informal conversations with thru-hikers and people in the community that helped enrich her understanding of her research.

Though the data will speak for itself, she wanted to better relate to the subject. "Crunching data and numbers doesn't speak a language to me," Rachel says. "In our field of recreation and leisure studies, more mixed methods are being encouraged, and it's important, at least it was for me, to understand both realms."

There is one important detail about Rachel and her husband's long-distance, backcountry, backpacking on the PCT that can't be missed; they did it with their one-year-old daughter, Hazel. "We decided we wanted to do the PCT, and that decision was talked about when I was pregnant," says Rachel. "So we were like, well, why not with a baby?" Many months of planning, logistics, training, and short trial trips with



Rachel with daughter, Hazel, enjoying nature's novelties on the Pacific Crest Trail

Hazel were done before they made their decision to go. "We took every day as a new day because if there was anything Hazel was not happy with we would be done."

Averaging 20 miles a day, the family made it from the southern point of the PCT at the Mexican border to Yosemite Valley, but with record snow amounts in the mountains, they decided not to continue further. Deep snow, steep slopes, and high river crossings were not something they were willing to risk with their daughter. "We ended up doing as much and as many pieces of the trail as we could," Rachel says.

After taking a break, the Liechty family did return to complete the John Muir Trail, going 215 miles from Mount Whitney, the highest summit in

the contiguous United States, to the valley of Yosemite National Park. On this shorter trail, they were able to ease their pace. "It was really fun because we didn't have to go that much with Hazel, and she just loved everything and was hugging trees and rocks," says Rachel. "We didn't carry any toys for her, and we had one book and one teddy bear. She was with mom and dad and was outside, and that's all she needed." They were the first family, with a baby, to complete the John Muir Trail. (Note: to answer the number one question the Liechtys get about these trips, they carried cloth diapers and were continuously washing and drying as they went.)

In the coming months, Rachel will be finishing and defending her thesis and then entering the job market. Rachel and David also plan to continue hiking with Hazel as much as they can. As far as future trail plans, Rachel says, "We'll continue hiking, but not on that scale because Hazel is getting to that age where she is walking and wants to examine everything at her own pace. And she should. We definitely have an itch, and we hope to expose Hazel to some of these areas and be together as a family as we do it." ■

Club Updates

This year, the student clubs have been extremely active. As written about in the last newsletter, the Forestry Club hosted the first Gopher Games in the fall with six teams visiting from the Midwest. The Society of American Foresters – UMN Chapter traveled to Hawaii in November for the national convention, and our team (Brandon Knopf, Shanelle Dube, Emily Silver, and Ryan Quinn) made it to the quarter-finals of the quiz bowl competition. The Forestry Club members have helped out on Carl Vogt's tree farm by harvesting holiday trees and also planting in the spring. The club had another successful holiday tree sale and students who worked were able to earn scholarship support for themselves.

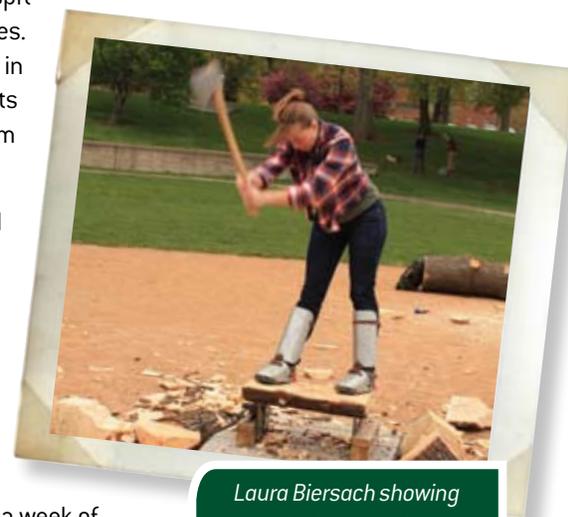


Brandon Knopf chopping his way to second place

The big news for the clubs this year has been the increased participation and action in timbersports activities. Students have participated in multiple timbersports events (Gopher Games, Klondike Days, and Conclave), have held on-campus practices, and worked with professional timbersports athlete Warrick Hellet to improve their form and techniques. They also were able to finally buy a new competition saw and two new competition axes. At this year's Conclave in Wisconsin, there were two stand-out competitors; Laura Biersach placed first in underhand chop and Brandon Knopf took second in the Stihl Collegiate Series. There have been major improvements in and lots of enthusiasm for timbersports this year, and it has made the Gopher team a competitor to watch out for.

The Forestry Club also held their annual Forester's Day events this April. The day included a pancake breakfast cooked by faculty and staff of the department. After that, students and visitors participated in underhand chop, cross cut, log roll, pulp toss, keg toss, and bolt throw out on the field. The Tree Ascension Group students were also there with tree climbing set ups where they were giving demonstrations and helping others try tree climbing themselves. The day's celebrations ended with a banquet and guest speaker Dennis Anderson from the Star Tribune.

The club members would like to thank the faculty, staff, and alumni who have helped them throughout the year. They also give special thanks to Mike Greenheck for giving them a week of experience on his walnut farms where they learned about private sector forestry and silvicultural practices for high value hardwoods.



Laura Biersach showing her winning technique

Awards and Congratulations

Congratulations to Dr. Dennis Becker, a 2011-2012 recipient of the Morse-Alumni Award for Outstanding Contributions to Undergraduate Education. Each year, the University community honors its best teaching professors with this award, and we couldn't be happier to see Dr. Becker receive this high honor. The Morse-Alumni Award has been recognizing exceptional faculty since 1965 and is named for the late Horace T. Morse, who served as the first dean of the University's General College from 1946–66 and who was a national leader in the field of undergraduate education. Many thanks and congratulations go to Dr. Becker for his continued efforts in the classroom, advising, and educational leadership.

Congratulation to Dr. Joseph Knight for receiving the 2012 Richard C. Newman Art of Teaching Award. This award is presented annually to faculty members who focus on the natural resource sciences, achieve excellence in teaching, and have a positive impact on students. As an alumnus of the School of Forestry, Richard C. Newman created the endowment to give recognition to our outstanding faculty. Dr. Knight fosters an excellent classroom experience and consistently receives outstanding reviews from students in his courses. Thanks for your hard work and dedication, Joe!

Congratulations to Dr. Anthony D'Amato for being a 2012 recipient of the CFANS Distinguished Teaching Award, Undergraduate Education. This award was established by the College of Food, Agricultural and Natural Resource Sciences to recognize those members of the faculty who have made significant contributions to education. Dr. D'Amato was nominated based on his outstanding performance in teaching, advising, research, academic program development, and educational leadership. He has shown great concern and dedication to his students, and his passion for helping students learn has made a major difference in their lives in the classes and beyond. Tony, thanks for your many exceptional efforts in the Department!

Congratulations to Janelle Schnadt, the 2012 recipient of the Alumni Society's Distinguished Staff Award. The Alumni Society's awards recognize those who make significant contributions to the College community. Janelle is always willing to take time out of her schedule to help out and does so with great caring. She helps create a welcoming atmosphere for all who come in to the office. This place wouldn't run without her! Thanks for your many contributions and amazing attitude, Janelle!



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