People Who Enrich Our Lives

This past month, I had the distinct pleasure to meet with several groups of alumni. The University’s Alumni Reception at the Society of American Foresters National Convention in Albuquerque, NM provided a chance to meet with alums who are retired, working in the profession, and some of our undergraduate students attending the convention. More recently, the department hosted a luncheon for Twin Cities metro area alums, largely from the 1940s-50s. (We have so many alumni that we had to break up the group to fit into a restaurant!) This first trial run went exceedingly well, and we plan to host more gatherings around the metro area and state.

What do I take away from these gatherings? The senior alumni have had diverse and very productive careers, making many contributions to forestry, forest products and numerous other areas — both related and unrelated to natural resources. They have great stories from their experiences! Currently working alumni are actively involved in the front page stories of today; managing national, state and private forest lands, growing the forest based economy, and dealing with the ecological, economic and social issues of the day.

And the students? They will soon join the ranks of alumni, but for now they enjoy and learn a great deal from the stories and contacts of current alumni. It is one of the key ways we learn - by example in terms of character, dedication, experience, and wisdom.

My thanks to you for your consistent participation. Your stories are more important than you may think. You enrich our lives.

Alan Ek
Professor & Head, Forest Resources

Preparing Rural Minnesota

Currently, the Emerald Ash Borer (EAB) has only been found in the Twin Cities metro area and Houston County, but the rest of the state is still at risk of infestation. A project through the Department of Forest Resources and the University’s Extension Service (partnering with the Minnesota Department of Natural Resources. the Minnesota Department of Agriculture, and the US Forest Service) is working to empower and enable Minnesota communities to deal with this risk. The project is called the EAB Rapid Response Community Preparedness (EAB RRCP).

The EAB RRCP project involves six communities [Crookston, Hendricks, Hibbing, Hutchinson, Morris, and Rochester] spread across Minnesota. The communities were chosen to provide a range of population sizes (from less than 1,000 to greater than 25,000) and to also represent the various eco regions of the state. This variety offers a unique, rural look at the EAB problem. “The rhetoric of EAB is largely focused in urban areas, but one of the questions I had was is there a regional difference in how dependent people were on ash?” said Gary Johnson, extension professor with the Department of Forest Resources and lead on this project. “My first goal is for communities to understand how vulnerable or resilient they are in relation to EAB and to have the tools to recognize that.”

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Three main components make up the project: inventory, reforestation, and energy audits. The inventory is the first and essential part of the project, providing the communities with the raw data necessary for future decisions concerning their trees. The inventory includes data on both public and private trees and information on the species, age class, crown spread, and a condition rating of the tree.

Secondly, each community is reforesting their area with a diversity of species. This portion of the project incorporates a research piece on gravel bed techniques, with each community receiving funding to put in their own gravel bed. “Gravel beds are a unique and innovative piece of urban forestry,” says Andi Dierich, a NRSM graduate student and key player in this project. Her thesis is comparing the cost and usability of gravel bed bare root tree stock to traditional stock. “This is one method we are looking at to provide communities with a way of achieving a greater diversity of species while saving time and money.”

The third piece of the EAB RRCP project is an energy audit to provide the communities with information on how different scenarios of canopy loss could affect energy costs. Factors such as topography, wind, insulation, age of homes, and windows are looked at, and then the past three years of energy bills are referenced [with permission]. This information determines the net potential impact of the loss of canopy on residential energy consumption.

As an example, in 1992, a tornado swept through the Chandler-Lake Wilson towns of western Minnesota and took out the entire canopy cover. A comparison study the following year found an eight-fold increase in average heating energy costs. A massive increase such as that demonstrates the importance of canopy cover, especially in wind swept areas like western Minnesota.

One of the most important and unique features of this project is that it is community and volunteer run. “We made local contacts to see if communities were interested in participating. If they were, we worked with them on defining their community interests, goals, and what they would like to get out of it,” Dierich says. From there, volunteer groups went through twelve hours of training on how to conduct inventories. “We provided the technical assistance, and they completed the inventory.”

With shrinking budgets, limited staff, and limited resources, volunteer work allows this project to reach further than otherwise possible. It also puts the end responsibility with the communities themselves. “We're going to give them the best information we can to make the best decisions, but this is their pocketbook, their community, and their responsibility,” Johnson says.

Though EAB is in the name of this project, the scope is much broader than just one invasive pest and a one-time project. This project has high hopes for empowering Minnesota communities to manage their urban forests and react to whatever they may face; whether it is EAB or other catastrophic events such as straight-line winds, tornados, or flooding. Additional grants are also in place to expand this project further. “Eventually, what we want is for all these to coalesce,” says Johnson. “With the information and resources available, they can start developing long term sustainability plans for their communities.”

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**Silviculture: Past and Future**

The forests of Minnesota are being affected by an array of emerging issues. There are environmental factors, such as climate change and invasive species, but also changes in how we use the forest, such as increased recreation and fuel for bioenergy. Researchers in the department are trying to identify ways to manage in the context of these emerging issues.

Assistant professor Tony D’Amato is one such researcher who is using the past to help us look forward. His lab has been looking back into history using tree-ring records and long-term datasets to determine what management systems may help our forests have increased resilience. “We’ve had changes in the climate before. They haven’t been as extreme as what we are seeing now, but certainly there has been prolonged drought or insect and disease outbreaks in the past,” says D’Amato. In the 1950’s, the Forest Service established numerous experiments in northern Minnesota, giving D’Amato a look at stands with over 50 years of known management history. With that information, he can inquire if certain stand structures or stand management regimes better allowed the forests to cope with the environmental changes they faced. Knowing how they coped in the past can better tell us how they might cope with change in the future.

With an increased body of scientific knowledge in this area, D’Amato is hoping to generate tangible management ideas about how to address future changes. He notes, “Managers are fickle. They’ve seen the flavor of the month way to manage many times over. We want long term empirical evidence that gives us insight into how to cope with uncertainty.”
What if one leaf could help us uncover the mysteries of forest ecosystems around the world? What if that same leaf could predict those ecosystems future in a warmer planet with less biodiversity? Thanks to decades of fieldwork by the Department of Forest Resources’ Peter Reich, the links between leaf design and ecosystem design are being revealed and Reich’s work is being awarded.

University of Minnesota Regents Professor and F.B. Hubachek, Sr. Chair Peter Reich was awarded the BBVA Foundation’s Frontiers of Knowledge Award in Ecology and Conservation Biology. This prestigious award honors Reich's lifetime of work, but the foundation emphasized his work in global metabolic plant ecology where he discovered universal rules of leaf design and the scaling of plant physiology from seedling to tree, from cell to ecosystem, and from the stand to the globe.

From something as small as a leaf, Reich has been able to link key characteristics to global processes. “Leaves only have a few functions they have to provide for plants, and because of that they have a predictable set of characteristics, which allow us to predict a lot about how an entire grassland or forest or crop system will behave physiologically,” explained Reich.

Reich's experiments have also demonstrated the way in which biodiversity loss impacts remaining species. As told by the award citation, Reich's work “radically improves our understanding of and ability to predict terrestrial ecosystem compositional and functional responses to global environmental change, including climate change and biodiversity loss.”

While Reich’s work in this area dates back over 20 years, he has led an ongoing ecological experiment called BioCON since 1997. BioCON examines how plant communities respond to three well-documented environmental changes occurring on a global scale: increasing nitrogen deposition, increasing atmospheric CO2, and decreasing biodiversity. A key and unique element of these experiments is that they are conducted in open air, avoiding the chamber effects normally created in enclosed experiments. In 2008 he began another world-class field experiment, called B4Warmed, in which forest plots are heated, again without chambers, to test their responses to climate warming.

Reich received his award in front of a crowd of Spanish dignitaries and international scientists in Madrid on June 23. “To receive this award is an enormous honor,” Reich said. “This award would not have been possible without the contributions of the many students, postdoctoral researchers and colleagues with whom I have collaborated over time. BBVA is impressively forward-thinking in recognizing and publicizing the importance of ecological science and conservation to the future health of our planet.”

The BBVA Foundation is the philanthropic arm of BBVA Group, a large Spanish banking and finance company. These awards honor world-class research and artistic creation in eight categories: basic sciences; biomedicine; ecology and conservation biology; information and communication technologies; economics, finance and management; contemporary music; climate change; and development cooperation.
With less than a year until graduation, Erin Setter is mapping her route and setting her goals. As a Recreation Resource Management (RRM) major in the Resource Based Tourism track, Setter wants to work in the field of tourism and travel. With a love for film, she is also working on a minor in Cinema and Media Culture.

With this, Setter says one of her dream jobs is to work with the Minnesota Film and TV Board. “They are the in between people working with production companies, encouraging them to come to Minnesota to do their filming,” she says. “They also help them find filming locations. You know the landscape, so you know where to send people.” This is what Setter calls her “realistic dream job.” But if she could do anything, it would be to host a travel show on PBS.

This love of travel and tourism started young. Each year, her extended family would do a camping trip, and each year her immediate family would do their own vacation trip. Setter says, “I’ve grown up traveling, and as I’ve discovered more of tourism, I really enjoy it!”

When it came time to decide on a higher education, Setter came to the University of Minnesota to visit with her brother, who was attending. He advocated the University to her and showed her around campus. While looking through a course guide book, she saw the many different ‘management’ majors but took special note when she read about Recreation Resource Management.

Setter came into the University declared as an RRM student and hasn’t looked back. “I’ve fallen more in love with it as time has gone by,” she says. “I’ve loved all the different classes I’ve had being pulled together. I’m getting a business background with marketing, management, and business law. I have my environmental classes; botany, soil science, and ecology, but I also have social science classes like psychology and social psychology. It makes me feel like this is a true college experience; you learn about one thing and talk about it in different ways.”

While here at the University, Setter is keeping up with her love of travel. In the summer of 2009, she traveled abroad with a group called International Student Volunteers. The first two weeks of the trip were spent in Croatia working on a bear refuge where they built fences and paths for the community. She then spent two weeks traveling with the group and enjoying activities such as rock climbing and hydrospeeding down a river. Setter will also be getting more international experience this January, traveling to Costa Rica to learn about sustainable development and ecotourism.

Carl Vogt: A Storyteller’s Story

After 34 years working with the University of Minnesota, Carl Vogt is retiring from his position as Extension Specialist with the Department of Forest Resources. Has he made a difference in these years? Ask any former student or colleague and you’ll find that Carl’s contributions have been large and legendary.

Carl received his first two degrees in forestry from New York State College and Syracuse University. After graduating, he accepted a position in Minnesota with the Department of Conservation. He came in as a forester trainee, learning about all aspects of the state’s forestry operations, and then worked as a district forester, cruising timber and developing forest management plans.

With a strong interest in conservation education, Carl moved his career in that direction. In various positions, he worked with educational programs for tree farmers, landowners, teachers, and even developed environmental education sites for schools across the country. During this time, Carl got a degree in secondary education from the University of Minnesota with a focus on teaching the sciences.

While conducting some of the many workshops he was involved in, Carl met Bill Miles, an extension forester with the University. This soon led to Carl accepting a position at the University working in extensions himself. Since then, Carl has been conducting a wide range of extension programs – everything from working with maple syrup producers to walnut management education. Carl has also been an active part in the department, advising the Forestry Club as well as teaching the key introduction dendrology course. With his many stories, slideshows, and hands-on activities, this class has long been a favorite of students.

Going into retirement, Carl is looking forward to tending his tree farms, hiking, skiing, and traveling to visit family across the country. Of course, he will still be stopping by the department now and then to share some stories, give the occasional guest lecture, and maybe (given a few years) make a dent in cleaning out his various collections stored in Green Hall.

Carl, best wishes and thank you for your many contributions!
The University of Minnesota Chapter of the Society of American Foresters would like to welcome all new members to the club this year. This fall, we participated with 123 Green to help in native prairie restoration by planting native grasses and working with other local volunteers. We are also holding our annual leaf raking fundraiser to raise money for our club. In October, eight of our students attended the 2010 Society of American Foresters National Convention in Albuquerque, New Mexico. While there, we participated in the National Quiz Bowl Competition. We are very proud of our team members who worked hard and put up a tough competition.

- Shanelle Dube, SAF Chapter Chair

For the first time in years, the Forestry Club is going to be practicing timbersports. We will be practicing underhand chop, single buck, double buck, log throw, traversing and many more! We hope to be good competitors at Conclave, the collegiate timbersports competition, which is to be held at Purdue this spring.

The big event this fall for the Forestry Club is the tree lot being held November 26th-December 24th. We will be selling all types of trees along with wreaths, garland and maple syrup. The tree lot is located near Larpenteur Avenue and Cleveland Avenue by the St. Paul campus (in the parking lot of the University’s Les Bolstad Golf Course). Proceeds go to fund club activities and the Forestry Club Scholarship.

- Celie Borndal, Club President

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Carl is notorious for his story telling, but this time we turned the tables and pulled together stories, thoughts, and memories of Carl from his students, friends and colleagues.

When it comes to working with the student groups and really giving them an environment that is both fun but also professionally engaging, I think Carl is unrivaled. Even though he works them like a task master out at his farm, they view it as the greatest experience. He is really the nucleus of those experiences. -Tony D’Amato, assistant professor

“Two boxes in, one box out!” -Charlie Blinn, professor

He gave me his cell phone number and said to call him at 1:05. So I call him up, and he starts talking, “Oh, yes, I’m in class. Oh, no, it doesn’t matter if you call me! The instructor doesn’t care! Call me any time!”

That was his way of telling the students that cell phones in class are a no-no. -Colleen O’Connor, staff

While this may reflect poorly on me, I was helping out at Carl’s tree farm a few years ago and accidentally broke one of his carefully tended balsam fir leaders. Carl took a pause from his shutterbug
tendencies, and I saw what suspiciously looked like tears beginning to well up in his eyes. He soon resumed his picture-taking duties, but I felt terrible. At that moment, I saw how much he values and loves the tree farm that he’s put his time and heart into over the years. -Emma Schultz, alumnus

Up in his office one day, Carl was making maple syrup candy on a hot plate and got distracted talking to someone. Before long, the candy had solidified into an ugly black mass and was emanating smoke such that the building was evacuated and the fire department was called. As I ran up to the second floor to figure out the source, I came across Carl running downstairs because of the alarms. I asked him what he knew about the source of the smoke and he said, “I have no idea!” It was a nice excuse to go outside, but we did ask Carl to make the candy elsewhere next time. -Alan Ek, Department Head

“Gooood night!” -Audrey Zahradka, undergraduate student

The Tree Ascension Group (TAG) was started in the fall of 2009. For a new club, we’ve seen a lot of interest and great attendance at club activities. Each week on the St. Paul campus we get together to climb. Club and non-club members alike are invited to come learn how to climb trees using professional techniques used by arborists in the tree care and urban forestry industry. Professionals from the industry visit and help us out, too. Learning to climb is not easy, but most students get the hang of it after only a few climbing events.

In the future, the club hopes to increase attendance, climb in different locations, and eventually build a strong group of climbers.

- Justin Meier, Club President

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SCHOLARSHIP RECOGNITION

As a department, we are proud of and thankful for the generous scholarship support from our many alumni. Our students appreciate and benefit from this support each and every semester.

Class of 1957 Scholarship
The department would like to thank and recognize the class of 1957 for its recent efforts in establishing a Class of ‘57 Scholarship fund. We would especially like to note the steering committee of the class, Robert Herbst, Ted Huller, Richard Manly, and Richard Waring, for their work in setting this scholarship up. This scholarship will assist undergraduate students studying forest resources and ecosystems.

R. N. Settergren Scholarship
The department wishes to thank and recognize Rene Needham Settergren and David Settergren for establishing this scholarship. As an alumnus with both her bachelor’s and master’s from the program, Rene has set up this fund to support students studying forest resources with a focus on the Cloquet Field Sessions.

For more information or to make a gift, visit us online or contact the Department Head, Alan Ek at 612-624-3400 or at aek@umn.edu