In this Issue

Michigan Tech
Michigan Technological University

SCHOOL OF

Forest Resources AND Environmental Science

A golden-winged warbler is measured for a banding study

FALL 2014

MESSAGE FROM THE DEAN

Dear Alumni and Friends,

Terry Sharik

As I enter my third year as dean of the School, I continue to marvel at what has been done over the past decades to get us to this point and what opportunities lie in front of us to improve our environment—here and beyond.

I would like to take this opportunity to focus on undergraduate enrollment and national trends, as well as our plans for a new degree program at the undergraduate level.

Our total student enrollment is at about 230 students (out of 7,100 for Michigan Tech as a whole), about two-thirds of whom are undergraduate students. Slightly over half of our undergraduates are forestry majors, with wildlife ecology and management contributing about 30 percent and applied ecology and environmental science (our broadest degree) comprising the remainder. The situation is reversed nationally, with forestry contributing only 17 percent and the interdisciplinary programs in natural resources and environmental science/studies making up nearly 40 percent of the enrollment.

What seems to be happening is that forestry is being viewed increasingly as a field that specializes in the management of wood resources, complementing specialties in wildlife management, recreation resource management, and watershed management. The upshot of this specialization process seems to be the emergence of natural resource management as an integrating force that cuts across all these disciplines and, thus, the emergence of interdisciplinary programs in natural resources.

Interestingly, these interdisciplinary programs enroll a higher proportion of women (nearly half) and underrepresented minorities (about 20 percent) than do the more-traditional disciplines, such as forestry (at about 17 percent for women and 10 percent for minorities). This has important implications for the future of our profession in that women currently constitute about 55 percent of undergraduate enrollment across all fields of study in the United States and minorities about a third. In our School, undergraduate female enrollment is at 33 percent, and minorities comprise approximately 4 percent (compared to 40 percent women and 14 percent minorities in natural resource programs nationwide). In other words, we have work to do both nationally and at Michigan Tech in terms of diversity in natural resources.

To stay current with national trends, we are working hard to create an interdisciplinary Bachelor of Science degree program in Natural Resources and Ecosystem Management (NREM)/Environmental Management (degree name TBD) to replace our Bachelor of Science in Applied Ecology and Environmental Sciences. The latter degree will be replaced by a Bachelor of Science in Ecology, offered jointly with the Department of Biological Sciences.

The Society of American Foresters recently instituted accreditation of academic programs in NREM to complement its accreditation of programs in Forestry and Urban Forestry. We hope to seek accreditation of our NREM degree program in 2015–16 and at the same time petition for re-accreditation of our BS and MF degree programs in Forestry.

While we expect that the new degree program in NREM will bolster our minority and female enrollment in general, we feel that our greatest opportunities for gains in this area reside with the Native American population, given our geography. As a result, we are making efforts to create a 2+2 arrangement with Keweenaw Bay Ojibwa Community College that would allow their two-year graduates to transfer to Michigan Tech to complete their bachelor's degree and perhaps go on to graduate school.

We are also in the process of establishing an agreement with Salish Kootenai College (SKC) in Pablo, Montana, to recruit students for our graduate programs. This will be SKC's first agreement with an educational institution located east of the Mississippi River. SKC is one of only six tribal colleges in the United States that offer bachelor's degree programs—and the only one with degrees that reflect the traditional areas of natural resources in their names (i.e., forestry, wildlife and fisheries, and hydrology).

Of course, this is just the beginning of our efforts to link with colleges to educate and train the natural resources leaders of tomorrow among the tribal nations. If you have suggestions, please share them with us.

We are also working to increase our cultural diversity by enrolling more international students through connections our faculty and staff have with colleagues around the world, facilitated by the fact that one-fourth of our tenure-track faculty are from Europe, Asia, and Australasia collectively. Moreover, Michigan Tech recently became only the second institution of higher education in the United States to form a chapter of the International Forestry Students' Association.

In closing, I hope this gives you a sense of how the School is doing its part to educate a diverse workforce that is fundamental to stewarding our natural resources well into the future. Please keep in mind that I invite your comments on anything we do. I can be reached by email at tlsharik@mtu.edu or on my cell phone at 734-972-2356. Better yet, drop by my office anytime to share your thoughts. Best wishes for the year-end holidays and a fruitful New Year.

Terry

Development and Outreach

I'm writing this note the day after returning from the Society of American Foresters (SAF) National Convention in Salt Lake City, where we enjoyed significant achievements. Forestry senior Lauren Rusin was on the winning team for Quiz Bowl. When Dean Terry Sharik took the students out to dinner following the competition, he reported that she was flying high—and rightfully so. Each year, we get to send a contingent of students to a few national conventions, and your gifts make that happen; we're excited about the investment that you made in their future. At the event, they serve as great ambassadors for Michigan Tech. If you happened to visit us during our alumni reception at the SAF Convention, thank you—twenty-five alumni attended, and they had the opportunity to meet with twenty-five of our students and faculty. Anytime you have fifty Michigan Tech Huskies in the same hotel room, you had better believe great stories will unfold—with any luck, we haven't scared off our new assistant professor of silviculture!

The SAF Convention happened on the heels of a visit from Adrian Leighton, chair of the Natural Resources Department of Salish Kootenai College in Pablo, Montana. We invited Dr. Leighton to visit with us in an effort to increase our underrepresented-minority enrollment in the program. This is a high priority for Terry, so he's using his personal treasure to create an endowment that will go toward recruiting and developing a more-diverse student body and faculty in natural resources. We're privileged to tackle this challenge, and we need all the help we can muster; therefore, if you have any advice, please give me a call at 906-487-2417.

In my last column, I mentioned the Sixtieth Anniversary of the Ford Center's transfer to Michigan Tech, which we celebrated in August. For those of you who attended the event in Alberta, I apologize that the audio didn't work during the program, but I hope you enjoyed the tours, the dinner, and the music. The Ford Center has had an important role in the education of generations of foresters, forestry technicians, and soils experts over the past sixty years, and it remains a highlight of our professional preparation efforts.

Autumn is upon us. As I look over the hill from my office the oaks (*Quercus rubra*) are stunning in their colors, and it gives cause for reflection. Thank you for everything that you do to make us successful.

Thank you for your continued support of our students and the School's teaching mission. We're immensely proud of our students and graduates, and our alumni and friends are the ones who enhance current students' experiences, ultimately helping to forge their success.

Chris Hohnholt

Just outside Salt Lake City at the IUFRO/SAF Conference, October 2014

Showroom at the 2014 IUFRO/SAF Conference

Spotlight on the Forestry Club

The Forestry Club has been hard at work. At the beginning of the year, we received a generous donation from Plum Creek that we put toward purchasing new equipment for Conclave. With those funds, we purchased a 1500 peg saw and a raker racing saw custom made in California. The club has also purchased a double-bit throwing axe and two sets of shin guards for underhand chop.

Our Forestry Club has recently become only the second US member of the International Forestry Students' Association. This association currently consists of sixty-nine other local committees in forty countries; in the United States, we join Oregon State University. Joining this organization allows club members to collaborate with other forestry students from around the world.

The Forestry Club also provided funding for ten students to attend the Michigan Society of American Foresters conference in Escanaba. The theme was regenerating forests. Students from the club were graciously hosted by the St. John family during their stay in the Central Upper Peninsula.

At this year's Conclave, hosted by the University of Minnesota in Cloquet, Minnesota, the club had twenty-seven students in attendance. Our team placed seventh (out of eleven teams). Everyone is very happy with the results, considering we competed with dated equipment.

Once again, Overstory, our spring banquet, was held to celebrate the faculty and students in SFRES. Many of the clubs associated with the School pitched in to help make the event memorable. Gifts from generous area sponsors made the event a success, allowing student organizations to continue their efforts.

Birds

Golden-Winged Warblers

Research Assistant Professor Amber Roth recently received $2,797 from the Copper Country Audubon Society to study golden-winged warbler genetics in the Western Upper Peninsula.

The golden-winged warbler is a species that has been declining across North America for the past fifty years. Roth led a pilot study in 2013, also funded by Copper Country Audubon, to collect feather samples for DNA analysis to begin to understand the population genetics of the species in the Western Upper Peninsula. Nine birds were sampled towards a goal of fifty individuals to provide an accurate profile of hybridization with the closely related blue-winged warbler. The project, which was conducted in the spring, involved volunteers from local schools, Michigan Tech students, local birders, and landowners, who helped to locate, capture, and band the warblers. The funds were used to cover student wages, travel expenses, and supplies. Roth, who is also a member of Copper Country Audubon, volunteered her time to oversee the project.

Male golden-winged warblers are captured in a mist net, their wings are measured, and then they are banded before being released

Bird-Window Collision Research

Michigan Tech's student chapter of The Wildlife Society recently led a bird-window collision research project on campus, involving students, staff, and faculty in surveying ten buildings across campus. The project is part of a broader effort of thirty-eight North American colleges and universities to examine bird-window collisions. The project garnered much support and interest locally: area birders made gifts and donated supplies.

Students will present their results at a Copper Country Audubon meeting, as well as on campus and in the greater community. The student chapter aims to make this its first long-term study. Additionally, two students plan to conduct further research on this topic for future assignments (a capstone project and an independent-study project).

Even a faculty member in the College of Sciences and Arts is creating a classroom assignment based on this research. Lisa Johnson, a new assistant professor in Visual and Performing Arts, hopes her design class will eventually create art installations that function to prevent bird-window collisions.

David explains how mist nets work

Mist-Netting Workshop

SFRES students have many opportunities to get involved in research and learn about sampling techniques, even outside of class time. This fall, Professor David Flaspohler offered undergraduate students a mist-netting workshop, which was very well attended.

Tennessee warbler held by SFRES student Anna Buckardt

Taking wing measurements

Alumni News

KEEPING CONNECTED

Awards

2014 Alumnus of the Year Award—Art Abramson

2014 Young Alumnus of the Year—Casey Jogerst

Art Abramson (center) receives the Alumnus of the Year Award

Notables

Alumnus Jon Fosgitt '96, forest management specialist with Compass Land Consultants, was featured in a special about the northern forests of the Great Lakes region, which aired at the end of February. The video, produced by Detroit Public Television's Great Lakes Now initiative, can be viewed online at www.greatlakesnow.org/2014/01/northernforests/.

Alumna Katrina Schnobrich, who graduated with a bachelor's degree in 1996 and completed a master's degree in forestry through the Peace Corps Master's International Program in 2001, received the President's Award for 2013 from FirstEnergy, where she is employed as a senior transmission specialist. Katrina was recognized for developing a best-in-class technology solution for FirstEnergy's vegetation management program. This transmission vegetation management application greatly enhanced FirstEnergy's ability to track and manage project work status, management decision making, and compliance reporting as required for meeting mandatory Federal Energy Regulatory Commission standards.

Alumnus George Lehrer '59 received the 2013 Forest Steward of the Year Award from Lumberjack RC&D Council Inc. George was honored for the work that he has accomplished on his property, including enrolling his land in the Managed Forest Law, harvesting over 19,000 board feet of hardwood and over 2,000 cords of pulp and bolts, building a wildlife pond, planting 500–3,000 trees annually, and harvesting over 200 Christmas trees each year. He is also a strong supporter of the forestry community, belonging to several forestry associations, hosting field days on his properties, and making his land available to local Boy Scouts.

Alumni Reunion and Ford Center 60th Anniversary

In the News

Funding Highlights

Associate Professor **Hairong Wei** received $2,499,997 from the National Science Foundation for "Inactivation of microRNAs in Crop Plants Using Short Tandem Target Mimic (STTM) Technology." The project aims to study if plant growth, development, and adaptation can be ameliorated for increased values with a newly developed, state-of-the-art technique that can disable some genes encoding small regulatory RNA species.

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Associate Professor **Rodney Chimner**, Associate Professor **Casey Huckins** (Biological Sciences), Assistant Professor **Amy Marcarelli** (Biological Sciences), Great Lakes Research Center Director **Guy Meadows**, and Senior Research Scientist **Colin Brooks** (Michigan Tech Research Institute) were awarded $499,887 from the US Environmental Protection Agency for a two-year research and development project, "Arresting the Spread of Eurasian Watermilfoil in Lake Superior."

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Assistant Professor **Joseph Bump** was awarded $135,333 from the Michigan Department of Natural Resources for a twenty-eight-month research and development project, "Survival, Mortality, and Dispersal of Wolves in Michigan."

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Assistant Professor **Evan Kane** was awarded $283,119 from the National Science Foundation for the first year of a five-year research and development project, "Collaborative Research: Long-Term Changes in Peatland C Fluxes and the Interactive Roles of Soil Climate, Vegetation, and Redox Supply in governing Anaerobic Microbial Activity."

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Professor **David Flaspohler** received $4,266 from the University of Minnesota for a research and development project, "Modeling Effects of Climate Change on Spruce-Fir Forest Ecosystems and Associated Priority Bird Populations."

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Professor **Christopher Webster** received $15,000 from the US Department of Agriculture—Forest Service for a research and development project, "Cross-Site Study of Harvest Gaps."

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Professor **Alex Mayer** (Civil and Environmental Engineering), Associate Professor **Rupali Datta** (Biological Sciences), and SFRES Associate Professor **Rod Chimner** received $144,710 from the Michigan Department of Environmental Quality for a research and development project, "Huron Creek Watershed Improvements Phase 1: Reducing Copper Loads from Stamp Sand Deposits in the Keweenaw Peninsula with Permeable Reactive Barriers."

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Research Scientist **Dana Richter** and Research Assistant Professor Tara Bal received $18,000 from the US Department of Agriculture—Forest Service for a research project, "Distribution and Impacts of Heterobasidion Root Disease in the Lake State and Development of a Standardized Early Detection Protocol: Year One, Michigan Tech Activities."

New Faculty Member

SFRES welcomes **Yvette Dickinson** as the new assistant professor of silviculture. Yvette, an avid fly-fisher, hiker, and amateur naturalist, hails from New Zealand. In 2011, she completed her PhD in Forest Resources at Pennsylvania State University, studying the influence of silvicultural management on forest structure. She comes to Michigan Tech from Colorado State University, where she taught silviculture and forest management as part of a postdoctoral fellowship.

Goodbye to Staff Members

Ruth Ojala has retired after twenty-three years at Michigan Tech. Ruth began her career at Tech in March of 1991, in the Financial Aid Office; she went on to work in the Registrar's Office, Information Technology, and Housing, including Daniell Heights and DHH, and served the School over the last three years. Ruth received the outstanding staff member award from the students at Overstory this past spring. Her presence in the School is greatly missed, but we all wish her the best in retirement.

Jim Rivard has resigned from his post as School forester. He has been a strong member of our community, teaching first-year students the basics of forest measurements, leading the FERM enterprise, and organizing the School's bowling club, just to name a few of his contributions. He is missed, and we hope he is enjoying semiretirement.

Deaths

Peter Baker—August 24, 1958–April 21, 2014

Peter Baker, 55, of Delta Township, passed away unexpectedly as a result of an automobile accident. Baker received a bachelor's degree in forestry from Michigan Tech in 1981 and worked for Lansing BWL as a utility forester for thirteen years. A longtime member of the Arboriculture Society of Michigan, he was elected the society's second board president in 2007 and continued to serve in various leadership roles. Baker was actively involved in coaching his children's sports teams and serving as a Cub Scout leader.

John R. Erickson, PE—January 8, 1934–August 14, 2014

John Erickson, 80, retired director of the USDA Forest Products Laboratory, attended Michigan Tech, receiving both a Bachelor of Science (1956) and a Master of Science (1968) in Mechanical Engineering. He began his career in forest and wood engineering research with the USDA Forest Service in 1962, when he was appointed project leader, forest engineering research, at the North Central Forest Experiment Station in Houghton. A long list of innovations in the forest harvesting area were developed at the Houghton laboratory under his leadership. In 1975, Erickson transferred to the Forest Service's headquarters in Washington, DC. During his career with the Forest Service, he served as director of forest products engineering research and director of the Forest Products Laboratory, retiring in 1993. In 1998, he joined the staff at Michigan Tech. While at Tech, he led a research and technology transfer program on the use of undervalued hardwood resources in engineering applications and also worked on the development of advanced tree and log assessment and grading technologies, which have been adapted for use worldwide.

John Erickson (L) and Bob Youngs at FPL's 75th Anniversary, 1985

Student News

Ashlee Baker, a senior in forestry, received one of just two Natural Resource Scholarships awarded by Ben Meadows each year. Ashlee has shown initiative as a student leader, organizing the nation's first student chapter of the Forest Guild, acting as treasurer for the Wildland Fire Club, and now serving as the alumni relations officer of Michigan Tech's SAF chapter. We are proud of Ashlee's leadership and expect great things from her in the future.

Lauren Rusin, a senior in forestry, was on the winning team at SAF/CIF/IUFRO World Congress International (forestry) Quiz Night. Lauren was randomly teamed with a student from Texas A&M and a student from Penn State. In total, thirty-two teams competed, with some students even being matched against classmates.

Left to Right: Terry Sharik, Lauren Rusin, Steve Hollis, Trevor St. John, and Mitchell Beach

FEEDBACK:
What would you like to see out of this newsletter?

We'd like your help in determining the direction of this newsletter. What do you like? What should we change? Is there information that you want that we aren't supplying? How would you feel about a receiving a digital copy instead of paper? Let us know by sending an email to hwabbott@mtu.edu or calling Hannah Abbotts at 906-487-1176.

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Update on Biomaterials Initiative

In October 2013, SFRES and the Michigan Society of American Foresters organized the first Michigan Biomaterials Conference, which was held in Traverse City. Biomaterials are organic materials that can be extracted from ecosystems (with wood and its derivatives being the most dominant).

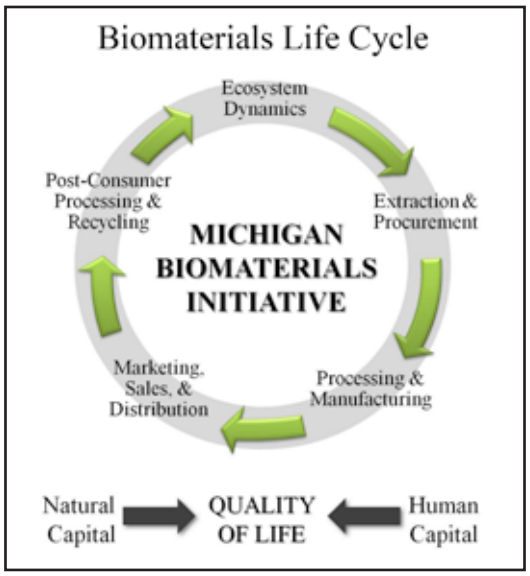
The follow-up to that conference was to form a steering committee to identify critical issues within topical areas related to biomaterials and develop strategies for working on these critical issues. The committee was convened in March on the Michigan Tech campus and identified areas on which to focus its efforts, including the following:

- the trends and future of biomaterials markets;
- private lands and state/federal lands—stability and potential to provide sustainable sources of biomaterials;
- health and integrity of the biomaterials manufacturing supply chain; and
- policy issues related to biomaterials.

The committee then identified critical issues within these five areas but made relatively little progress given time constraints, as well as developed a draft vision and mission for the initiative.

A major recommendation coming out of the meeting was to develop a strategic plan that would flesh out critical issues under each of the areas noted above, and then go on to specify objectives associated with these critical issues and strategies for meeting them, measures of success, priority levels, timelines, and costs. The committee did, in fact, produce a draft of the strategic plan in early September, and that plan is now under revision.

At its next meeting in late October, the committee formulated an organizational model for the initiative, worked to secure funds to make the organization operational, and began implementing other aspects of the strategic plan following the formulation of a business plan.



In order to coordinate our efforts at Michigan Tech and with the statewide initiative, the School is in the process of hiring a professor of practice in biomaterials.