

# FOREST RESOURCES & ENVIRONMENTAL SCIENCE

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**MichiganTech**

## Greetings from Houghton

Could it actually be twenty-seven years ago that my parents dropped me off in the parking lot of Co-Ed Hall? They gave me a kiss and said, "See you at Thanksgiving." Then they left, and I stood there and cried for a while. Being from downstate, I thought it really wasn't possible to be at college and any **further** from home.

Flash forward almost three decades, and I am getting out of my car to help my daughter unload her college stuff and move into Wadsworth Hall. It is a beautiful late-August morning, warm and sunny. There are tons of people on campus, gold-and-black welcome balloons are everywhere, music is blaring, and I stand there and do one of the things I do best: I cry for a while. It isn't really possible for her to be at college and be any **closer** to home. So why do I feel like I am dropping her off downstate?

It was then that I realized that when your child leaves for college, it is not so much the physical but the emotional separation that is hard. She was excited, cheerful, full of life, and bouncing with energy. I was miserable.

Since that August day, we have seen her once or twice a week. She emailed me, "I ♥ college." And she is making all the expected roommate/dorm food/college classes/new friends transitions that I made. It is fun to watch her experience it all and see her world expand.

As you would guess, in twenty-seven years some things have changed. To start with Co-Ed Hall is now McNair and Wadsworth is "the" place to live. No, really! The University renovated Wads and it is amazing. There's a waiting list for the rooms that have private baths.

But over the years some things haven't changed. There is still K-Day and the Hobo Homecoming and Tech Hockey and Husky Football and all the festivities that go with these events. The one benefit of having done it all too—is that I know exactly what questions not to ask!

—Carrie Richards '84

## Groundbreaking on Underground Research Tunnel



Groundbreaking was held in June on the new facility that will allow researchers to study the dark and dirty world beneath our feet.

At the official ceremony, shovels pushed into the hillside behind the USDA Forestry Sciences Laboratory to kick off construction of the new Forest Rhizotron. When it is completed, this seventy-five-foot tunnel will give scientists from Michigan Tech and the Forest Service a chance to study up close what's really going on underground.

"This will be a rare opportunity to study tree roots," said **Alex Friend**, leader of the USDA Forest Service's lab in Houghton, who is spearheading the project.

The half-million-dollar concrete tunnel will be the size of a large hallway, with removable high-strength glass windows installed along its *Continued on page 2*

Rhizotron groundbreaking day. (l-r) **David Reed**, MTU VP for Research; **Dale Tahtinen**, VP for Government Affairs; **Peg Gale**, SFRES Dean; **Dan Greenlee**, MTU CFO; **Glenn Mroz**, MTU President; **Kurt Pregitzer**, SFRES Professor and Ecosystem Science Center Director; **Mike Henricksen**, MTU Board of Control chair; **Alex Friend**, SFRES Adjunct Faculty and Project Leader, Belowground Processes that Sustain Productivity & Ecosystem Function in Northern Forests; **Christian Giardina**, SFRES Adjunct Faculty and Forest Service Research Ecologist; **Ruth Gleckler**, Forest Service Support Processes Specialist; **Noah Karberg**, Forest Service Ecologist; **Erik Lilleskov**, Forest Service Research Ecologist; and **Martin Iskra**, Yalmer Mattila Contracting President.

## Wow! New Field Course in Yellowstone Is a Big Success 'I am just completely psyched about the outcome of this class'

Talk about getting out of the classroom! A new summer class gave students just that opportunity to get outdoors and get their hands into some of the most important conservation issues affecting Yellowstone National Park.

The course, titled Conservation Issues in Yellowstone, entailed one week of concentrated in-class learning, followed by a road-trip to Yellowstone for a ten-day field trip exploring park controversies and management issues.

At Yellowstone, students met with representatives and experts embroiled in the controversies central to the course—gray wolf management, grizzly bear recovery, snowmobiling in the park, bison and brucellosis, habitat management of Yellowstone's northern range, and predator conservation.

National Park Service biologists, resource planners, and representatives of outside agencies, such as the Predator Conservation Alliance and the Buffalo Field Campaign, gave formal presentations, followed by group brainstorming about potential solutions to *Continued on page 4*

## Message from the Dean



Peg Gale '77

*“Our faculty and staff work very hard to meet the needs of our students and stakeholders. . . . Together with you, our alumni and friends, we continue to strive to make the School and Michigan Tech a national university of choice.”*

Dear alumni and friends,

The leaves have turned and most are on the ground, but the color of the landscape is still exceptional—oak leaves are brown and remain on their branches; tamarack are a brilliant yellow; pines and spruces are green and stand out across the landscape; and the paper birch and aspen bark are more highly visible in the forests.

By the time you receive this newsletter, the snows will be upon us, carpeting our lands with a new view of our forested region. Just as our viewscape changes with the seasons, the School is also changing. Yet, we still see some of the same “trees” that support and enhance these changes.

Some of these recent changes are:

We have a new faculty member, **Rod Chimner**, who is teaching wetlands, restoration ecology, and advanced peatland ecology. (Read his bio on page 5.)

We have funding from the Department of Energy for a Climate Change Center directed by one of our faculty, **Kurt Pregitzer**. (Read more on page 3.)

We have many new projects, such as carbon management in the UP. You will hear more about this project and others in correspondences, personal visits, or future newsletters.

And, as always, one of the most exciting things at this time of the year is seeing new students and old students return in the fall. Our total student numbers are: 142 undergraduates and 87 graduate students, with our Forestry BS still the largest of our degree programs, with 75 undergraduate students. (See chart below.)

One of the highlights of the last year is the successful reaccreditation of our BS in Forestry program through the Society of American

Foresters. We are not sitting back and basking in the glory. Instead we are reviewing what we offer our students and how we can help them retain more of the information they learn.

We will hire a forest hydrologist this coming year and will incorporate more hydrology into the forestry degree program and into the other undergraduate and graduate degree programs.

I often hear from stakeholders about our forestry degree program and what our students need to be successful as a career forester. We have been discussing many of these points, such as how to put more grading, scaling, marking, and assessment into our forestry classes.

Our faculty and staff work very hard to meet the needs of our students and stakeholders. Together with you, our alumni and friends, we continue to strive to make the School and Michigan Tech a national university of choice for forestry, forest ecology, wildlife ecology, and biotechnology.

If you want to know more about what we are doing here at the School, please visit our website ([www.forest.mtu.edu](http://www.forest.mtu.edu)) and if you want to share your thoughts on any of our degree programs, email me ([mrgale@mtu.edu](mailto:mrgale@mtu.edu)) or call me (906-487-2352); I would love to hear from you. We need to hear from those of you who have recently graduated. Do you have the tools, training, and scientific basis to be an effective decision-maker in the forest?

Here’s wishing you many great changes for the coming year!

### Tunnel...(continued from page 1)

length. Scientists will be able to take out the windows to study the ecology of the complex systems surrounding tree roots.

In particular, Friend said, researchers plan to study carbon sequestration, the process by which plants “inhale” carbon dioxide out of the atmosphere and store carbon in the soil. Maximizing carbon sequestration could be a way to reduce the amount of atmospheric carbon dioxide and possibly mitigate global warming.

Professor **Kurt Pregitzer**, whose work focuses on underground systems, is among the MTU researchers who will be using the rhizotron. “It’s exciting,” he said. “We’ve never been able to directly observe and sample in real time the biological phenomena that occur in the soil. It’s really a diverse world. The food web there is poorly understood, but it sustains life on earth, including clean water and the health of forests.”

“The rhizotron really sets Michigan Tech apart to have this facility on campus,” Pregitzer added.

The facility was expected to be finished in November. It is being funded by the USDA Forest Service North Central Research Station in St. Paul, Minnesota. ■

### Five-Year Enrollment Statistics

|  | 2001       | 2002       | 2003       | 2004       | 2005       |
|--|------------|------------|------------|------------|------------|
| Forestry                                   | 91         | 74         | 58         | 84         | 75         |
| Applied Ecology and Environmental Sciences | 60         | 58         | 55         | 46         | 46         |
| Wood Science                               | 10         | 7          | 4          | 0          | 1          |
| Wildlife Management and Ecology            | -          | -          | -          | 2          | 20         |
| Total undergraduate                        | 161        | 139        | 117        | 132        | 142        |
| Master’s                                   | 42         | 49         | 55         | 46         | 48         |
| PhDs                                       | 16         | 25         | 28         | 40         | 37         |
| Total graduate                             | 58         | 74         | 83         | 86         | 85         |
| <b>Total students</b>                      | <b>219</b> | <b>213</b> | <b>201</b> | <b>218</b> | <b>227</b> |

#### The breakdown of 2005 graduate students, by program is:

|  |    |
|--|----|
| Forestry (MS)  | 28 |
| Applied Ecology (MS)                                     | 2  |
| Forest Ecology and Management (MS)                       | 9  |
| Forest Molecular Genetics and Biotechnology (MS and PhD) | 17 |
| Forest Science (PhD)                                     | 25 |
| Master of Forestry (MF)                                  | 4  |

## Faculty Focus:

### Kurt Pregitzer—Ecosystem Expert and Advocate

**Kurt Pregitzer** likes to stay busy, both in and out of the school. As the director of the Ecosystem Science Center at Michigan Tech and as an active professor, his teaching schedule and research keep him on the go. After hours, you can find him on Tech's Nordic trails or walking the family Labrador retriever, Lucy.

Eleven years ago, Pregitzer came to the School of Forest Resources and Environmental Science from Michigan State University, where he was a professor in the Department of Forestry. Ask him why he came to Houghton and he'll tell you he missed the north woods. Pregitzer teaches the undergraduate forest ecology class and the graduate terrestrial ecology class. In his early years at Tech, he also taught dendrology and Fall Camp.

After completing his Bachelor's Degree in Forestry from the University of Michigan, Pregitzer spent a year as a research fellow at the Tree Breeding Center in the Hessen Forestry Research Institute in Hänn-Münden, Germany. He returned to the University of Michigan to complete his Master's in Forestry and his PhD in Forest Ecology.

Pregitzer's professional affiliations over the years include serving on numerous panels for the National Science Foundation and being elected chairperson of the Michigan Chapter of the Society of American Foresters. Other service and honors include:

- ▶ 2000-02 project leader for the US Forest Service North Central Research Station in Houghton, where he established a new research work unit.
- ▶ 2002 Barrington Moore Memorial Award for outstanding accomplishments in the advancement of forest biology, the highest award in his field from the Society of American Foresters.
- ▶ Recognition in 2004 by Thomson-ISI (Current Contents) as one of the world's most highly cited scientists, which puts him in good company—in the top 2 percent of all scientists worldwide. Pregitzer is currently MTU's only ISI-Highly Cited Scientist in the ecology/environment category, which means someone must be reading his papers!

At Michigan Tech, the heart of Pregitzer's research work lies in the Ecosystem Science Center (ESC). The ESC ([www.ecosystem.mtu.edu](http://www.ecosystem.mtu.edu)), established by Pregitzer in 2003, is designed to advance the understanding of how ecosystems function and how human activities influence ecosystem processes. Through collaboration among faculty, staff, and students, the center's two main objectives are to: (1) foster ecosystem research and (2) educate graduate and undergraduate students in ecosystem science.

Currently, the ESC is one of MTU's most active research centers with over \$2 million annually in expenditures. Many of the School's graduate students, faculty, and staff have ongoing work through the center (see "Groundbreaking on Underground Research Tunnel: on page 1, and "Tech Named National Climate Change Center" below).

When he's not teaching or involved in his research, Pregitzer can be found enjoying the northern forests he loves. "My family and I are avid cross-country skiers. We love living in a community where access to recreational opportunities is, literally, right out our back door. He and his wife, Maria, like to cook and garden, and Pregitzer still likes to stalk the elusive white-tailed deer.

One thing is for sure: Pregitzer lives in, loves, and is always learning from the ecosystems that surround him. ■

### Tech Named National Climate Change Center

Michigan Tech was chosen by the US Department of Energy to help spearhead a multi-million-dollar, national, research program on global climate change and its effects on ecosystems and the atmosphere.

More than \$38 million has been allocated over the next five years to four regional centers of the National Institute for Climatic Change Research (NICCR). In addition to the midwest regional center at Michigan Tech, centers will be located at Pennsylvania State University, Duke University, and Northern Arizona University.

Professor **Kurt Pregitzer** will head the Michigan Tech center. Pregitzer, director of MTU's Center for Ecosystem Science, has led numerous research studies on the effects of climate change on forest ecosystems.

"The center will competitively fund the best research that investigators from around the region propose," Pregitzer said. "We are all very excited about the role that the Department of Energy is playing in advancing our understanding of climate change and its impacts on ecosystems."

Michigan Tech was chosen primarily because of Pregitzer's ideas on how the NICCR could add to America's knowledge of global climate change and his compelling vision for how Tech can add to the initiative.

For more information, see this website. [www.forest.mtu.edu/news](http://www.forest.mtu.edu/news) ■



**Kurt Pregitzer**

*The heart of Pregitzer's research work lies in the Ecosystem Science Center (ESC), established by Pregitzer in 2003, to advance the understanding of how ecosystems function and how human activities influence ecosystem processes.*

*Pregitzer will head the Michigan Tech Center of the National Institute for Climatic Change Research (NICCR). Tech was chosen by the US Department of Energy because of Pregitzer's ideas on how the NICCR could add to America's knowledge of global climate change and his compelling vision for how Tech can add to the initiative.*



## Yellowstone...*(continued from page 1)*

the controversies.

Armed with high-powered spotting scopes and binoculars, the class looked for wildlife along park roads and in the back-country during their day hikes. Species recorded by students include wolves, coyotes, foxes, grizzlies with cubs, black bears, elk, bison, moose with calves, bighorn sheep, mountain goats, pronghorn antelope, eagles, ospreys, trumpeter swans, sandhill cranes, American white pelicans, and many more. "Yellowstone is really the teacher" said instructor **Greg Wright**. "We are fortunate to experience and interpret the sights, sounds, and food web effects of an intact ecosystem. To take in all the powerful dynamics of a place like Yellowstone is such an incredible learning opportunity for the students."



"One goal of the course is to expose students to the political and human dimensions of conservation" said Wright. "Management of animals and park resources is pretty straightforward while they remain in the park, but wolves, grizzly bears, elk, and bison pay little attention to park boundaries. When they leave the park and enter bordering national forests, state, or private land, other agencies (federal, state and private) get involved and cooperative management becomes enormously complicated and difficult."

Wright, who conducted his master's study on the elk and wolf dynamics at Yellowstone for two years, and later taught for the Yellowstone Institute, said he organized the class to get students involved. "I thought it would be a good idea to give students the chance to go out and learn about the big conservation issues both in the classroom



and in the field," he explained. The course helps students put issues into perspective.

"Yellowstone has a lot of wildlife and environmental issues that are of national concern, including the elk management and wolf management," Research Assistant Professor **John Vucetich** explained. "Students watch this on the news and read about it in class, but on the field trip they get to see firsthand what's going on."

Wright said the course was a success in its very first year and it will continue to be available every summer. "I thought it went great. We got out there safely, there were no incidents when we hiked, everything was safe," he said. "And the students learned a great deal. I am just completely psyched about the outcome."

*Information for this article was taken from an article that appeared in the Daily Mining Gazette, written by Kelly Fosness. ■*



## Awards and Recognitions

**Ann Maclean** served on the USDA panel for Small Business Innovation Research—Forest and Related Resources.

**Shekhar Joshi** served on the National Science Foundation's panel for Metabolic Biochemistry.

### Recent Funding

**Andrew Storer** received \$109,207 for a two-year project from the USDA, Forest Service, Northeastern Area State and Private Forestry, for "Modeling Phloem Removal from Ash Stands to Reduce the Density of Emerald Ash Borer While Maximizing Genetic Density of Ash."

**Kurt Pregitzer** received \$35,000 from the

USDA, Forest Service, for "Stable Isotope Analysis to Elucidate the Physiological Basis of Silvicultural Treatment Response in Great Lakes Pine Ecosystems."

**Victor Busov** received \$69,142 for the first year of a three-year, \$289,444-project from the US Department of Energy for "Genetic Modification of Gibberellic Acid Signaling to Promote Carbon Sequestration in Tree Roots and Stems."

**Martin Jurgensen** received \$10,000 from the USDA, Forest Service, Southern Research Station, for "Interactions of Soil Phosphorus, Fumigation, Soil Bulk Density and Ectomycorrhizal Colonization on Jack Pine Seedling Growth at the James W. Toumey Nursery in Watersmeet, Michigan."

**Scott Harding** and **Chung-Jui Tsai**

received \$1.4 million from the DOE for "A genomics investigation of partitioning into and among flavanoid-derived condensed tannins for carbon sequestration in Populus."

two books, *The Impact of Carbon Dioxide and Other Greenhouse Gases on Forest Ecosystems* (CABI Press 2001), and *Air Pollution, Global Change and Forests in the New Millennium* (Elsevier Press 2003).

received \$1.4 million from the DOE for "A genomics investigation of partitioning into and among flavanoid-derived condensed tannins for carbon sequestration in Populus."

**Ann Maclean, Dave Shonnard, Barry Solomon, David Flaspohler, Kathy Halvorsen, Chris Webster, John Sutherland, Dave Hokanson, and Joan Chadde** received \$1.7 million from the NSF MUSES Program for "Renewable Energy from Forest Resources: An investigation into the viability of large-scale production of sustainable transportation fuels from lignocellulosic biomass."

**Rolf Peterson** received \$4,446 from Earthwatch Expeditions.

**Kurt Pregitzer** and **Don Zak** (University of Michigan) received \$1,725,271 from the DOE for "Ecosystem Response to Elevated Tropospheric Carbon Dioxide and Ozone is regulated by Plant-Microbe Interactions in Soil."

**Andrew Storer** and **Linda Nagel** received \$109,207 from USDA Northeastern Area State and Private Forestry for "Modeling Phloem Removal from Ash Strands to Reduce the Density of Emerald Ash Borer While Maximizing Genetic Density of Ash."

**Joseph Bump** (graduate student) received \$14,762 from the EPA for a Greater Research Fellowship.

### Faculty Publications

See recent articles authored by faculty, staff, and researchers.

[www.forest.mtu.edu/faculty/pubs](http://www.forest.mtu.edu/faculty/pubs)

**David F. Karnosky**, professor of forest genetics and biotechnology, received the Scientific Achievement Award from the International Union of Forestry Research Organizations (IUFRO) on August 8, 2005, at IUFRO's XXII World Congress in Brisbane, Australia. The award was one of ten awarded at the congress, which is held every five years.

Karnosky (third from left) was honored for his long-term research on genetic aspects of air pollution and climate change. He has written over two hundred scientific publications including



## New Faculty— Meet Rod Chimner

**Rod Chimner** recently joined the faculty of the School of Forest Resources and Environmental Science as a visiting assistant professor of wetland ecology. He comes to MTU from the Natural Resource Ecology Laboratory at Colorado State University where he was a research scientist. Chimner is also currently the president of the Rocky Mountain Chapter of the Society of Wetland Scientists.

Chimner earned his BS in Earth Sciences from Northern Michigan University. He worked as a wilderness instructor and a research technician for the Forest Service before earning his MS degree from Michigan State University in the Forestry Department. He investigated northern white-cedar regeneration in a forested wetland near Escanaba. He earned his PhD in Ecology

from Colorado State University, where he examined hydrologic impacts to mountain peatlands in Colorado. Chimner's post-doctoral work was as a wetland ecologist with the Institute of Pacific Islands Forestry, Forested Wetlands Division, USDA Forest Service, where he studied carbon cycling in tropical peatlands in Micronesia and Hawaii.

Chimner's research interests focus on wetland ecosystem science, ecohydrology, and wetland restoration. He is currently developing methodology for assessing wetland conditions using the hydrologic and carbon cycle in wetlands in the Rocky, Sierra Nevada, and Andes mountains. He is researching how carbon accumulates and cycles in peatlands worldwide. He is using this to: 1) understand how peatlands will be affected by climate change and other environmental perturbations, and 2) how to manage, conserve, and restore peatlands. In addition, Chimner also uses stable isotopes

to identify the source of water used by riparian trees and shrubs and quantify how hydrologic modifications alter the water source used or increase water stresses in these plants.

Chimner is looking forward to conducting research in and around Houghton—a region of abundant wetlands. He plans to investigate carbon cycling in peatlands and also get involved with wetland restoration projects. His teaching responsibilities include an undergraduate wetlands course, and in winter semester he will teach a graduate class on peatland ecology and co-teach a graduate restoration ecology class.

Chimner moved here with his wife, **Sigrid Resh**, who is a forest ecologist, their four-year old son, Galen, and their then two-week old daughter, Sage. He and Sigrid are excited to be close to their families, who all live in Michigan.

[www.forest.mtu.edu/faculty/chimner](http://www.forest.mtu.edu/faculty/chimner) ■

## Outreach and Recruitment Directions *by Stacy Cotey*

In September, Michigan Tech held its annual open house for prospective students and their parents. Over 250 students attended the campus-wide event. The School of Forest Resources and Environmental Science hosted a reception in conjunction with the open house.

Dean **Peg Gale** gave a tour of the School, and **John** and **Leah Vucetich**, both research assistant professors, gave a presentation on the moose and wolf populations on Isle Royale. Posters and demonstrations on research taking place in the School were also on display. Associate Professor **Shehkar Joshi** and his students outlined career opportunities in biotechnology. A poster on global climate change highlighted research being done by Professor **Kurt Pregitzer**. Graduate students from Associate Professor **Andrew Storer's** lab presented information on exotic species. By using a

log-bucking computer simulation, Professor **Jim Pickens** demonstrated how different cut lengths can change the value of logs. Lecturer **Maria Pregitzer**, who teaches vegetation of North America, had a display on identifying local conifer species.

The open house gave potential students the opportunity to meet our friendly

faculty, students, and staff as well as learn about the fascinating research being conducted. This is just one of the many events held each year to promote the School. If you would like to help spread the word about Michigan Tech through high school visits and presentations, please contact me: telephone **906-487-2417**; email [srcotey@mtu.edu](mailto:srcotey@mtu.edu)



## Emerald Ash Borer Found in UP

Associate Professor **Andrew Storer** says it's time to learn to live with the emerald ash borer. In the battle with the exotic, invasive beetles, now is the time to shift the goal from eradication to living with it. Storer has been tracking the spread of the emerald ash borer, which was detected for the first time in the Upper Peninsula late last summer.

The glossy green beetles are native to northeast Asia and have devastated the ash tree population in southeastern Michigan in recent years. Their larvae tunnel under the bark of ash trees, ultimately causing the death of the tree.

The natural spread of the borers is slow; most beetles do not travel more than a couple miles in their lifetime. So curbing their spread should be easy, except humans have inadvertently expanded their range exponentially by hauling infested firewood hundreds of miles north on camping trips.

This is probably how the borers made it to Brimley State Park, in Chippewa County, where they were found Sept. 7 in a trap tree established and monitored by Storer's team in collaboration with the

Michigan Department of Natural Resources and the USDA Forest Service. The Michigan Department of Agriculture plans to cut down all ash trees within half a mile of the infested tree in an attempt to halt the spread of the insects.

"This will likely not be the last time we have to work to eliminate populations of this beetle from the UP," Storer predicts.

He added, "We must all avoid moving firewood that may harbor the beetle. This insect is not going to be eradicated from Michigan, and we must adjust our activities to reduce its spread."

Biological control will be an option in the future, Storer says. Until then, he adds, management efforts should focus on living with the insect by selective removal of ash in areas close to infestations, local eradication of small populations, and continued detection efforts. ■





## Our Amazing Alumni Make Us Proud – Again!

It's amazing how our little homegrown chili challenge has morphed into a big, university-wide event at the annual Tech Reunion.

A few years ago, a couple of our faculty and staff put their chili recipes to the test for the enjoyment of our alumni and others at the School. This year, the School again hosted a campus-wide chili challenge that included six enthusiastic teams.

In the end, the chili from the Office of Student Affairs, "Don't Worry, Bean Happy," won the People's Choice Award, and the team from System Administrators Council—with their "/dev/chili/"—took the top honor, Chili Champs 2005, as voted by a "highly-qualified" panel of judges from the MTU Alumni Board, who were in town for the reunion.

Other reunion events included two inductions into the School's Honor Academy, presentation of the 2005 Outstanding Alumnus Award, a retired faculty luncheon, and socializing with visitors and our grads from the 1955 and 1980 eras, who were celebrating their 50th and 25th reunions.

Plan ahead. Next year's Michigan Tech Reunion is scheduled for August 3-5. We'll be sure to have lots of fun, food, and friendship at the School too!



Each year the School presents an Outstanding Alumnus Award; the 2005 recipient is **Paul Essinger** (BS '83, MS '86). Paul's education and career have taken him to the position of president and owner of Hiawatha Log Homes in Munising. His company recently won the distinction of being named one of the "50 Companies to Watch in Michigan." Paul says that a Tech education prepares a student to continue to learn, work, interact, and prosper in the "real world." (l-r: **Glenn Mroz, Paul Essinger, Jil-Anne Essinger, and Peg Gale**)



**Carl Trettin** (BS '76, MS '80) was inducted into the School's Honor Academy in August. Carl, who is recognized for establishing a soil research lab at the Ford Center in Alberta, is also known nationally and internationally for his work in the ecology and management of forested wetlands. Carl now resides in Charleston, South Carolina, where he is a project leader of the USFS Center for Forested Wetlands Research. Carl was the School's 2004 Outstanding Alumnus. (l-r: **Carl Trettin, Marty Jurgensen, and Peg Gale**)



The School's Honor Academy inductions in August also included **Robert (Bob) Todd** ('51). Bob enjoyed a thirty-eight-year career, mostly with the federal government, that he sums up as, "a good career, working with and meeting hundreds of people from Florida to Alaska, and Oregon to Kentucky, in diverse political, social, and environmental communities." Bob is a good friend and supporter of the School, often contributing handmade woodworking items to students in the SAF/Forestry Club for their fundraising projects, or to promote the School. (**Bob Todd and Peg Gale**.)



A few of the 1955 gang got together, laughed about old times, and caught up on what the curricula and being a student are like today. (l-r: **Bill Schwarting, Dale Tubbs, and John Stewart '56**). A special thanks goes out to Dale for helping get in touch with our 1955 alumni.

## Don't Blame the Big Bad Wolf: Hunting, Drought Cause Elk Decline in Yellowstone

In the ten years since gray wolves were introduced to Yellowstone National Park, elk numbers have dropped by over 40 percent. But don't be too quick to blame the big, bad wolf, cautions a Michigan Tech scientist. Years of drought and pressure from the elk's primary predator, the human hunter, appear to have had a far greater impact on the region's elk population.

"You don't need wolves in the picture at all to explain the population drop," said Research Assistant Professor **John Vucetich**. "Whether or not wolves had been introduced, you'd have seen fewer elk."

He's not surprised, however, that many people point fingers at the wolf as the main culprit. His work shows that the timing of the elk decline is coincidental

with wolf reintroduction and that other factors are to blame.

In nature, the relationship between predators and prey is complex. Wolves certainly prey on elk, but they tend to take weak or vulnerable animals.

"Most of the elk killed by wolves would have died even if the wolves had not killed them," Vucetich said—either from old age, disease, or the effects of the drought. Hunters, on the other hand, kill more randomly, so they can have a bigger impact on the survival of the herd by taking out animals of peak reproductive capacity.

Assistant Professor Michael P. Nelson, an environmental ethicist in the Department of Philosophy at the University of Idaho, predicted that Vucetich's work would not be readily accepted by some interest groups.

"One of the main motivators behind the effort to remove wolves from the endangered species list in the West is the assumption that they are largely responsible for noticeable elk herd reductions," Nelson said. "If that's true, then wolves are therefore linked to decreased hunter success rates, and therefore linked to decreased hunting tourism dollars. Vucetich's findings will be viewed as surprising because so many people are invested in the claim that wolves are responsible for elk herd reductions."



## Mackinac Island Overrun by Norway Maples

Mackinac Island could be on the verge of being overrun by an exotic European import. The culprit is the Norway maple. And the island's famous horses may have played a crucial role in planting the encroaching seeds.

"In the eastern US, where they've become established, diversity is much lower than in forests made up of native trees," says Assistant Professor Chris Webster. And if given a chance, Norway maples can take over. "It leafs out one week earlier than the sugar maple, and its leaves stay on one week longer. It out-competes native species, and it really hurts the spring flowering plants."

In addition to reproducing, proliferating, and growing quickly, Norway maples are hard to kill. Its roots send up many suckers after the main trunk is severed, so logging doesn't slow it down. Only the application of powerful herbicides to the stump can effectively kill it back.

In 2003, Webster and a team of students began studying the species distribution on Mackinac Island, where Norway Maple were introduced about a century ago. Because the trees blend into the landscape, islanders never thought of them as a problem until they came down with the sticky, unattractive, tar-spot fungus, to which Norway maples are particularly vulnerable.

What caught the researchers' attention was the unusual distribution of the trees along the island streets and in clusters in woods.

As it turns out, that's no accident. "There's a unique circumstance on Mackinac Island," Webster said. "It has a lot of horses, and they produce copious amounts of manure. Residents used to sweep it up in town and haul it out to compost in the forest."

Inadvertently, folks on the island were seeding Norway maple into the forest and providing it with a good dose of fertilizer," Webster said.

Norway maples haven't overrun Mackinac Island's native vegetation—yet. But as this generation of trees matures and sets seeds, the area could see an explosion in their numbers and maybe even the end of the natural landscape.



## Class Notes

### Sightings of Alumni and Friends

#### Come see us. We like visitors!

Former faculty member **Rolf Leary** stopped by this summer to say hello. He was in town to meet with Blair Orr and talk about the Peace Corps and Compatible Technology International. Rolf is a volunteer with CTI, which is located in St. Paul, Minnesota. CTI's engineers design simple food-processing equipment for people in Third World countries.

**Choonsig Kim** (PhD, FFS, '94) visited Professor Marty Jurgensen. Kim has a new position as head of the Department of Forest Resources at Jinju National University in Gyongnam, Korea.

**Ken Roberts** (Surveying, '84) paid us a visit when he was in town to drop his son off for an MTU summer sports camp. He and his wife **Nancy (Chaffin) Roberts** (land surveying and civil engineering, '84) live in Crystal Falls where Ken is a taxidermist and Nancy is an associate and project manager with UP Engineers & Architects, Inc.

### Alumni Updates

Tell us about your work and life. Email [carrie@mtu.edu](mailto:carrie@mtu.edu)

#### 1971

**Byron Sailor** has retired from the Michigan DNR after thirty-two years. He lives in Baraga and has started his own consulting business, Landlooker Forestry. Michigan United Conservation Clubs (MUCC) named Byron "Forestry Conservationist of the Year" in the summer of 2005.

#### 1974

**Gary Nummer** and his wife Tonia stopped by the school this summer. They were in the area for a couple days and came by to ask about former faculty members **Hammer Steinhilb**, **Vern Johnson**, and **Norm Sloan**. Gary also got an update on the

Ford Center at Alberta and the Otter River cabin. As a student, Gary was the treasurer of the Forestry Club. He was glad to hear it is still active.

#### 1978

**Nancy (Stoddard) Sailor** is a "fantastic quilter, homemaker and part-time secretary for the church," reports her husband Byron Sailor (see above).

#### 1982

**Mark Cramer** emailed that every year in September he longs to be back in the Copper Country, but hasn't been back since 1984! In October of 2003, he was promoted to deputy commissioner of the Kentucky Department of Fish and Wildlife Resources. He oversees all program implementation in the Divisions of Wildlife,

Fisheries, and Information and Education. He has also been coordinating the development of the division's comprehensive wildlife conservation strategy. Mark says, "My Tech education was the cornerstone of my career in wildlife management and I value it dearly."

#### 1986

**Valerie Novak** (MS) has been a "Right-of-Way" Forester with the Michigan Department of Transportation in the Upper Peninsula for eleven years.

#### 1995

**Jodie Buffman** is a forestry technician with the US Forest Service in Mississippi. Her main duties are marking timber and assisting with the prescribed burning program.

#### 1998

**Sandy Hubscher** (MS, FMGB, '04) and her husband **Tim Eisele** (BS Metallurgical and Materials Engineering '84, MS '87, and PhD '92) had a baby girl, Samantha Mira, on August 11, 2005. She weighed 8 pounds.

#### 2001

**Tom Seablom** and his wife **Sonya** had a baby boy, Thomas John, Jr., April 2, 2005, who made an impressive entry into the world at 9 lbs, 7 oz, and 20.5 inches long. The Seabloms live in Alberta and Tom is working as a forester



Thomas John Seablom, Jr.

for the Michigan DNR.

#### 2001

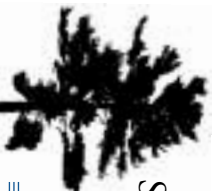
**Patrick and Lisa (Johnson) Smith** are now proud parents. They sent an email saying that they had a baby boy born on May 8, 2005. His name is Jacob Patrick, he weighed 7 lbs, 15 oz and, "He is doing wonderfully!"

#### 2003

**Michael Jones** (MS) and **Anna Carolina Tabora**, had a son, Liam Alexander Jones, born in Tegucigalpa, Honduras. Michael is currently working as a forestry consultant in Honduras and Carolina is completing her medical internship.

#### 2003

**Angela (McGrail) (MS) and Alioune Diop Nakoulima**, had a daughter, Aisatu, born on July 6, 2005. Aisatu weighed 7 lbs, 5 oz, and was 19 inches long.



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### *Calendar of Events*

Great Lakes Invitational  
Hockey Tournament.....**December 29-30, 2005**  
Winter Carnival.....**February 10-11, 2006**  
Alumni Reunion.....**August 3-5, 2006**