



MichiganTech
**Dave Karnosky profiled in
Research insert**
**Marty Jurgensen recalls
30-plus years at Tech**

Black-capped chickadees (Poecile atricapilla) are usually seen more frequently in winter due to their winter flocking habit and attraction to feeders.

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Studies Secrets
of Caterpillar
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Trees as
Environmental
Markers



Calendar of Events

SFRES Holiday Social
December 14, 2007

**Midyear
Commencement**
December 15, 2007

**GLI Hockey –
Joe Louis Arena**
December 28–29, 2007

**FRES Natural
Resources Career Fair**
January 30–31, 2008

Winter Carnival
February 7–10, 2008

Alumni Reunion
August 7–9, 2008

Message from the Dean



Peg Gale '77

Dear Alumni and Friends,

As I write this, the leaves are almost off the trees and winter is beginning to show itself. Our first major frost was in early October this year, way past its usual time of early September. Although our “range of view” is narrow relative to geologic time, our weather seems to be changing. Lake Superior this summer was near an all-time low, due mainly to below-average precipitation. How these things will affect our forests and the organisms that live in them remains to be seen, but it does make me ponder what we can and cannot control as we work to sustain forest resources. It also makes me question how we educate our students and others on how best to manage these forests for future generations.

Foresters, whether they are ecologists, economists, entomologists, ornithologists, mammalogists, herpetologists, hydrologists, soil scientists, pathologists, geneticists, biometricians, or wildlife biologists, make choices that they hope will sustain the resource. Those choices are based on a complex set of data that does not take into account changes in climate.

What attracted us to forestry, environmental sciences, wildlife ecology and management, or biotechnology was probably founded in a love of complex natural systems. It is around that intricacy that we try to manage and develop

theories. But because of that same intricacy, our professional decisions are often no more than the “best laid plans of mice and men (and women).”

We teach our students and others what measurements and characteristics are needed to make informed decisions. Yet, we also want to instill in them a greater passion for natural systems and science. This is the only way we will be able to sustain many ecosystems across the landscape, by nurturing and enhancing a passion for the natural world in our students.

I hope you enjoy our fall/winter newsletter. It describes just a few of the many projects being undertaken by the faculty, staff, students, alumni, and friends of the school. It also hints at the passion we have, each in our own discipline, for the forest and related ecosystems.

Please let me know what your passions are related to managing, sustaining, and enhancing ecosystems. And please do not hesitate to email me (mrgale@mtu.edu) your thoughts on how, through education and research, we can better instill in our students a greater passion for the natural world.

Peg

Greetings from Houghton

It was great to hear from those of you who had stories to share about being Tech-recognized while wearing the Michigan Tech logo. Many of your tales boiled down to the same theme: it's a small world.

One cute logo story I really enjoyed was from former Michigan Tech faculty member **Bob Krear**, who taught biology from 1973 to 1984. Incidentally, after talking with him for a little while, I realized he had been *my* biology prof! I loved that class. I wonder how I did.

Anyway, Bob was fishing on the Snake River out in Wyoming back in about 1989 when he spotted something on a sand bar downstream. He waded down to it and discovered it was a backpack. He opened it to check for identification and was greeted by a Michigan Tech sweatshirt. It turns out that the owner, a Tech alumna, lost it while white-water rafting on the Snake. Bob was able to return it to her and make a new Tech connection.

One of my favorite shirts is the now-vintage Michigan Tech tee I bought at freshman orientation back in . . . well, let's just say it was a while ago. It has since become faded and dated and apparently very cool. My middle daughter likes to borrow my retro threads. And I have found that when I wear it, it is always a conversation starter. “Is that from when you were in school?” “Why, yes it is!”

I'm telling you, if you want to meet some new friends, or start up a conversation, just don a Michigan Tech sweatshirt and get out there. It won't take long.

—Carrie Richards '84



Dean Peg Gale sports a Michigan Tech hat while in Scotland.

Development and Recruitment

The School of Forest Resources and Environmental Science and Michigan Tech awarded 131 scholarships from 43 funds this year. With the cost of higher education rising every year, and state support failing to keep pace with inflation, scholarships such as these can make a huge difference for students struggling to earn a college degree. A few scholarships are highlighted below.

Jacques R. and Vann A. Jorgensen Scholarship—This renewable undergraduate scholarship benefits students majoring in forestry or wildlife ecology. Seven scholarships were awarded this year.

U. J. Noblet and the John C. Noblet Memorial Scholarships—Students residing in the Upper Peninsula qualify for these scholarships, renewable when the student

maintains a required grade point average. Two students received awards this year.

Loret Miller Ruppe International Scholarship—Students in the Loret Miller Ruppe Peace Corps International Master's Program in Forestry are eligible for this scholarship, which supports studies at Michigan Tech after they return from two years as a Peace Corps volunteer.

Helmuth and Charlotte Steinhilb Memorial Scholarship—This need-based award gives first preference to high school students from the Houghton area and secondly from the Upper Peninsula. Three were awarded this year.

Norman Sloan Memorial Scholarship—Each year, this scholarship is given to a senior in the amount equal to Michigan Tech's tuition.

Scholarship Endowed in Memory of James Lamy

James C. Lamy had a passion for practical, sustainable forest management. He also had great respect for Michigan Tech's forestry program, which is why his widow, Marion, has established an endowed scholarship in his memory for School of Forest Resources and Environmental Science students.

Graduating from the University of Michigan's School of Forestry in 1947, Jim spent most of his career with Abitibi Corporation. He was hired as chief forester in 1955 and retired as woods manager in 1988. He also served as a navigation and radar bombing instructor with the US Air Force, retiring as a major. In addition, he was active in various forestry organizations; for over fifty years he was a member of the Society of American Foresters and was appointed by the governor to serve on two state boards.

Jim was especially proud of the forest landowner assistance program he developed in northern lower Michigan in the 1950s. Many of those lands are still being managed under his program.

Marion and Jim's son, **Jon Lamy**, graduated from Michigan Tech in 1977 with a bachelor's degree in forestry. Jon recalls, “Even though my dad was a U of M grad, he recommended that I attend Tech. In serving with former department head **Gene Hesterberg** on several industry committees, my dad gained a high regard for Tech's hands-on, practical forestry program.”

The Lamy scholarship will provide full-tuition awards, which are renewable for up to four years. In keeping with Jim's interests, preference will be given to Michigan residents who have a strong interest in forest management and who demonstrate leadership.

This year's recipient is **Jacob Oswald**, a first-year student from Hillman, Michigan. This National Honor Society student comes to Michigan Tech with a strong interest in the outdoors, a 4.0 GPA from high school, and a score of 29 on his ACT.

The scholarship was funded with appreciated mutual fund securities. However, Michigan Tech has several gift-planning options available for those with similar philanthropic goals. To learn more, call the Office of Gift Planning at 906-487-3325 or send an email to Eric Halonen at ehalonen@mtu.edu.



Left: James Lamy (circa 1970), had a passion for practical, sustainable forest management. Right: James and Marion Lamy



Jacob Oswald

Alumni Sightings



Nick (MS, 1995) and Janet (Silbernagel) Balster and their children, Pace and Edie Lou Li, stopped by the school recently. Nick is an assistant professor of soil science at the University of Wisconsin-Madison. Janet is an associate professor of landscape ecology, also at UW-Madison. She has a practice in environmental design consulting. Read more about the Balsters at www.forest.mtu.edu/alumni.

It's always nice to see **Frank Lenning (1988)**. Frank is a high school math teacher in Marathon, Florida, in the Keys. After leaving Michigan Tech, Frank attended graduate school at Northern Arizona University, worked for the DNR, and did land surveying work.



Tom Hill (1988) was in the area for Michigan Tech's annual career fair representing the Wisconsin DNR, where he is the Iowa County forester doing private lands management. He and his wife, **Maria (Pacifi, ME 1989)**, live in Dodgeville, Wisconsin, with their children, Shelby, 12, and Tommy, 9.



James J. Widder (1957) was recently recognized for his lifetime contribution to the establishment and management of black walnut trees and other fine hardwoods. Widder received the Black Walnut Achievement Award given annually by the Walnut Council, Inc. The award is sponsored by the American Black Walnut Manufacturers Association. More at www.forest.mtu.edu/alumni.



Alumni Sightings

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Charlie (1984, MS 1986) and **Kathy (Teahan) Becker**, (1983, MS 1985) vacationed this summer in Switzerland, where they were able to catch up with fellow alumnus **Erich Tiefenbacher** (MS 1986) and rehash some old stories. Erich is a deputy state forester in Frauenfeld, Switzerland.



Left to right, Charlie Becker, Kathy (Teahan) Becker and Erich Tiefenbacher in Switzerland.



Mark and Ann Goetz

Mark (1986) and **Ann (Strickler) Goetz** (1982) were in Houghton recently, dropping off their oldest son, Stephen, an incoming Michigan Tech freshman, who is studying computing. Mark has his own business as a fee-only financial planner, and Ann works at Lenawee Christian School assisting students, predominately in algebra. They have two other children, Natasha, 16, and Wyatt, 13. Ann recently acquired master-gardener status and volunteers at Hidden Lake Gardens. Mark keeps a well-sharpened chainsaw to cut down the ash trees in their yard that have died from emerald ash borer infestations.

Awards and Recognitions

In Print

Assistant Professor **Jacqueline Grant** published a paper, "Ontogenetic Colour Change and the Evolution of Aposematism: A Case Study in Panic Moth Caterpillars," in the *Journal of Animal Ecology*, volume 73, issue 3. Her research describes how caterpillars defend themselves from being eaten while maximizing their own ability to eat.

In the News

■ Professor **David Karnosky** was cited in a *Los Angeles Times* article on a recent *Nature* paper on the effect of ozone on the uptake of carbon dioxide. The article, "Ozone Hampering Plants' Absorption of Carbon Dioxide," was picked up by a number of major newspapers.

■ Michigan Tech's Graduate School awarded a \$2,000 Finishing Fellowship to **Rodney Oakley**, a PhD student in molecular genetics and biotechnology. This award is supported by the Whirlpool Endowed Fellowship.

■ Professor **Blair Orr** was honored at a ceremony marking the twentieth anniversary of Michigan Tech's Peace Corps Master's International Program this fall. Representatives from Peace Corps were present at the

event, which honored Orr and the Master's International Program, the largest in the nation.

■ Michigan Tech has been selected by the Wolverine Electric Power Cooperative to conduct a biomass and co-location pre-feasibility study for their proposed electric generation plant at Rogers City, Michigan. Assistant Professor **Robert Froese** is leading the project, which will look at the potential to co-fire biomass with their clean-coal technology boiler, reducing fossil fuel consumption and greenhouse gas emissions. For more information, see www.wolverinecleanenergy.com/

■ Other news stories can be seen at www.forest.mtu.edu/news.



A reception was held at the school to congratulate Professor Blair Orr (center front).

Wood Protection Group Receives Accreditation

Under the direction of Professor **Peter Laks**, the Wood Protection Group recently received accreditation as a testing laboratory from the International Accreditation Service (IAS) under ISO 17025:2005.

The Wood Protection Group specializes in researching and testing the biological durability of wood and wood products. The accreditation covers thirty-one standard test methods.

The accreditation, the culmination of several years of effort, allows the Wood Protection Group's research and testing data to be used in the development of building codes.

Michigan Tech Honors Alumnus Dennis Teegarden

Dennis E. Teegarden (1953), professor emeritus of environmental science and policy management at the University of California at Berkeley, received the Outstanding Service Award from the Michigan Tech Alumni Association. It is presented to alumni and friends making significant contributions to the success of the Alumni Association and/or the University.

Teegarden earned a BS in Forestry from Michigan Tech in 1953. After service in the US Navy, he earned master's and doctoral degrees in agricultural economics from UC Berkeley. There he served as chair of the Department of Forestry and Resource Management and as associate dean of the College of Natural Resources.

Teegarden is a life trustee of the Michigan Tech Fund and was the school's 1993 Outstanding Alumnus.

In the Field



Senior Jake Wilkens

Eco-Tourism in Alaska—More than a Summer Job

Clip and zip. That's how wildlife ecology and management senior **Jake Wilkens** spent his summer. And from the sounds of it, it was quite an adventure.

Jake, who is from Alaska, was hired by Alaska Zipline Adventures to be an eco-tourism guide in Juneau, guiding visitors high above the ground through the Sitka spruce canopy on zip lines. Many of the trees used in the course are more than 300 years old, and the oldest is 450 years old and spans over 4.5 feet at its base.

The southeast corner of Alaska is a temperate rainforest almost the same size as West Virginia. Zip line touring is one way for visitors to experience the unique topography and beauty of the area while imparting minimum impact on the ecosystems. The zip line tour is a popular day excursion from many of the cruise ships that visit the Alaskan coast.

Jake helped visitors get strapped into harnesses. The tourists then climbed stairs to reach the starting point in the canopy. There Jake and other guides clipped the visitors onto the first of seven zip lines that span a one-mile expanse of the forest. Visitors zipped at heights of up to 90 feet off the ground, and across spans of over 700 feet. They also crossed a suspension bridge.

Jake went through special training in order to be a guide, and his company boasts a 100-percent safety record. Jake is CPR-certified and has taken courses in climbing, rappelling, ropes, first aid, and outdoor leadership through the National Outdoor Leadership School.

"It was a wonderful experience. I love the wilderness, and I love Alaska," Jake said. "I had a lot of fun and got to meet tons of great people." Jake plans to head back to Alaska after he graduates.



Jake demonstrates the use of the zip line in Juneau, Alaska.

Be Part of Your School's Success

We need your assistance to support the school. Here are some of the funds and scholarships that help us provide quality programs for our students.

Just select a program that matches your interest and return this form with your gift in the attached envelope to the Michigan Tech Fund, Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931-9989.

Or, you may donate online at www.mtf.mtu.edu. If none of these match your interests, contact Chris Hohnholt at 906-487-2417 or cahohnho@mtu.edu. We will help you make a difference!

- Ford Center**—for improvements and operations at the home of Fall Camp
- Alumni Memorial Scholarships**—established by alumnus Dennis Teegarden (1953) to honor former professors, staff, and students.
- Undergraduate Scholarships**—for students; awards are based on merit and/or financial need
- Peace Corps Scholarships**—for graduate students enrolled in the Loret Ruppe Master's International Program in Forestry
- Hammer Equipment Fund**—for equipment needed in the classroom and in the field
- Master of Forestry Fellowship Fund**—for graduate students in our professional forestry master's program
- Professional Meetings Scholarships**—for student support to attend professional meetings
- Jurgensen Teaching Excellence Fund**

Amount of gift

- \$50 \$100 \$200 \$500 \$1,000
 Other _____

Form of payment

- Visa MasterCard American Express Discover
 Check (made out to the Michigan Tech Fund)

Credit card number _____

Expiration date _____

Name as it appears on the card _____

Please send me more information about the School.

We'd love to hear from you!

Please enclose the latest news about yourself (new additions to your family, marriage, a new job, promotion, etc.). Or drop us a line at www.forest.mtu.edu/alumni/update.

Alumni Sightings

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Dan Siewert (1995) stopped in this summer. Dan is the line clearance coordinator for Wisconsin Public Service and lives in Rhinelander, Wisconsin. He is pictured here with Mary "The Finn" Jurgensen.



Professor Emeritus **Richard Crowther** visited the school this fall. Doc Crowther lives in Escanaba, Michigan, where he retired in 1985.

Faculty Focus

Teaching Legend Marty Jurgensen

"What's **Marty Jurgensen** up to these days?" It's a question often asked by visiting alumni. There is no denying it; Marty has had a huge impact on the academic and social lives of many students over the years.

His teaching style is unique, his humor is good-natured, and his tests are the stuff of legend. Marty jokes, "Today's students aren't as apt at taking my tests. They type very well, but they don't have the writing stamina, like the pre-computer students of yore, required for one of my exams."

All kidding aside, technology is the biggest change that Marty has faced in his almost forty years of teaching. "Today's students are much more visually astute. They're used to PowerPoint and multimedia learning." Other than that, Marty says they are a lot like the students from three decades ago. "They live, they learn, they enjoy life," he says.

Marty earned his BS and MS degrees from the State University of New York at Syracuse, and went on to North Carolina State to earn his PhD. He began his teaching career at Michigan Tech in 1970 and now ranks as the school's senior faculty member. He's been teaching so long that Michigan Tech President **Glenn Mroz** is his former graduate student.

Over the years, Marty primarily has taught undergraduate and graduate soils classes. An unofficial estimate puts the number of students he has taught at over four thousand. Yet Marty passionately states he has no plans to retire. The students keep him young, he says, and besides, he's having too much fun.

The school's bowling teams are just one of the ways that Marty enjoys himself. Marty has captained the teams for over twenty years; the many participants range from undergrads to former department head **Gene Hesterberg**. They socialize, laugh a lot, bowl a little, and have been known to enjoy a beverage every now and then. Visit the bowling team at www.forest.mtu.edu/students/groups/bowling.

Marty's love for teaching and students is confirmed by his commitment to both. In 2003, he demonstrated this by establishing the Jurgensen Teaching Excellence Fund to support teaching improvement in the school. To read more about Marty and the fund, visit www.forest.mtu.edu/faculty/jurgensen.



Marty Jurgensen

Timber Products Provides Gift-in-Kind

Dave Goetsch, a network support technician at Timber Products Company in Munising, Michigan, has donated twelve Husky FS/2 and FS/3 field computers to the school. The gift includes software, technical manuals, chargers, extra batteries, and cables. The units, valued at approximately \$1,500 each, will be used by students to collect data on forest inventory, log scaling, and grading.

Field exercises will be designed for three classes: Field Techniques, the FERM, and Integrated Field Practicum (Fall Camp).

"This is a great gift," said **Jim Schmierer**, school forester. "We can use them immediately to build our students' skill levels. We are very happy that Dave and Timber Products thought of us."

Gifts-in-kind are items that are both usable and have current value. Please consider such a donation if you have real estate, equipment, instruments, or other inventory that could benefit the school. Not sure if your item is usable? Contact **Ross Cooney** (906-487-1125 or rdcooney@mtu.edu) to discuss your gift and possible tax benefits from such a donation.

Family Ties

Soil Students Are Like Family

We've seen many "family ties" here at the School of Forest Resources and Environmental Science, and we've featured a few here in our newsletter. In this issue, we would like to highlight another type of family. If you have a suggestion for a family tie, we'd like to hear about it. Please contact Carrie Richards (carrie@mtu.edu).

With over four thousand former students, Professor **Marty Jurgensen** stays in touch with many. Some of his past students sent comments to show their support and respect for the soils program that is uniquely ours because of Marty Jurgensen.

Hua Ouyang (MS 1990, PhD 1994), a professor and deputy director of the Institute of Geographical Sciences and Natural Resources at the Chinese Academy of Sciences in Beijing and a noted soil scientist, says that Marty's work is known internationally in Europe and Asia.

It was because of him Hua went to Michigan Tech for his master's and PhD degrees. Hua says, "Marty is one of the best teachers I've ever had; he succeeded in finding the balance between keeping lectures informational and interesting. He showed incredible capacity to incorporate research into his lectures."

Hua also credits Marty with helping him develop his knowledge of forest soils and his research skill. "Now as a professor and director, I try to use those same convincing, effective techniques with my students and at our institute." He added, "Marty influenced my career decisions and has continued to guide me."



Deborah Page Dumroese (MS 1985) earned her PhD from the University of Idaho in 1988 and is a research soil scientist for the research branch of the US Forest Service in Moscow, Idaho. Twenty-two years after leaving Michigan Tech, she still collaborates with Marty on projects around the world. Deb exclaims, "That's longer than I've been married."

Deb says Marty has been both mentor and devil's advocate. He has suggested lines of study or methods of analysis that she may not have thought of on her own. Perhaps the most important lesson learned from Marty was how to question data, regardless of who collected it, and not to assume it is correct. She joked, "He also has a way of nudging (sometimes kicking) me along on priorities for papers or old data."



Joe Jacobsen (1980) learned from Marty to keep trying and keep striving to do better and that sooner or later you will get there. Joe says that Marty taught him how to get excited about dirt (er ... soil). Coming from Iowa, he had worked with farm soil, but Marty taught him more—that soil was loaded with information, and that it needed to be better understood. Joe says, "I believe that Marty and Michigan Tech taught me to look at the details."

Joe is now the radiation safety officer for Battelle in Ohio under its Nuclear Regulatory Commission license as well as serving as a health physicist with the US EPA Emergency Response Program. "I continue to realize—now at fifty years old—that there is always more in the details than meets the eye and there are matters just waiting to be better understood and communicated."



Former soil student **Hua Ouyang** is now a professor and deputy director in Beijing.



Deb Page Dumroese is now a well-known soil scientist.

Alumni News

Keeping Connected

1971

During a visit this summer, **Ron Studer** recounted fond memories of his days at Michigan Tech, including days at the Otter River Camp and fire tower lookout duties on Isle Royale. Most of his career was spent with the Toledo Metroparks, in Ohio, where he was park superintendent. He later was director of parks and recreation for the city of Hancock until 2004.

1977

John Parry works for the USFS traveling throughout New England and New York working with their Urban Forestry Programs.

1978

Shelley Mitchell has been with New Hampshire Public Television for over three years, working in philanthropy, specifically major donations and planned giving. In January 2007, she started a PhD program at the University of New Hampshire in the Department of Natural Resources and Environmental Science. She is focusing on corporate social responsibility with an emphasis on environmental stewardship and sustainability.

1984

Doug Ottosen works for the Kaibab National Forest in Williams, Arizona, as the deputy fire staff officer. Kaibab surrounds the Grand Canyon on the north and south sides. Doug also sent some comments about the Michigan Tech logo's recognition factor. Read more at www.forest.mtu.edu/alumni/.

1992

Don Bragg (MS 1995) and **Hope (Pruden) Bragg** (1995) welcomed son Stephen Charles Bragg August 12, 2007. Though four or five weeks early, Stephen weighed in at 11 pounds 3.6 ounces, and was 23.5 inches long (no, those aren't typos). Here's a link to their blog: www.braggfamilysouth.blogspot.com.

1996

Mary Hindelang sent in a great little story about her experiences meeting new friends and colleagues by virtue of the Michigan Tech logo. Read the entire story at www.forest.mtu.edu/alumni.

Alumni News Keeping Connected

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1997

Karen (Owens) (MS, PhD 2001) and **Keith Lannom** welcomed a baby boy into the world on June 12, 2007. Bryce Owens Lannom was 9 pounds, 7 ounces, and 21 inches long. Bryce and family are all doing well. Karen and Keith are looking forward to Bryce's first Copper Country tour.

1999

Jacob Himes passed away September 10, 2007, in Duluth, Minnesota, at the age of 33 after a struggle with cancer. He is survived by his wife, Danielle, and four children. The faculty and staff of the school express their condolences to Jacob's family and friends.

2001

Gregory Dupuis moved in 2003 from Texas to Sun Prairie, Wisconsin, to work as a certification supervisor for TECO, a third-party certification and testing agency for OSB, plywood, and other engineered wood products. In summer 2006, he married Abby, and in the summer of 2007 they had a baby girl, Nataly Louise Dupuis.

2002

Tammie (Martinson) Paoli (MS, BS Biological Sciences 1999) has taken a position with the Wisconsin DNR in Peshtigo as a fisheries biologist. She will focus on management of yellow perch, brown trout, and northern pike in Green Bay.

2004

Sara Kenieth (MS) was recently hired as the 4H youth educator in Wexford County, Michigan. She also coordinates adult volunteers and is involved in grant writing, program development, and fundraising.

2004

Sarah Brodeur-Campbell (MS) and her husband, Mike, welcomed a son, Alexander Thomas Brodeur-Campbell, on April 27, 2007.

Around the School

■ **Maria (Stoneberg) Janowiak** has joined the staff of the school as a research scientist (outreach). She earned two degrees from Michigan Tech, a BS in Forestry in 2005 and an MS in Forest Ecology in 2007. She is married to **Rexx Janowiak** (2002) and lives in L'Anse.

■ **Jingwei Yin** has joined the school staff as a research associate. She holds a master's degree in cell and molecular biology from Purdue University and lives in Houghton.

■ **Catherine Tarasoff** has joined the faculty of the school as a visiting assistant professor teaching Forest and Landscape Ecology. She earned a BS in Natural Resource Management from Thompson Rivers University and a PhD in Crop Science—Weed Ecology from Oregon State University.

■ **Tin Lizzie Days**, a vintage car and craft show, was held in July at the Ford Center; 26 cars and 16 vendors participated. The car show and craft tables were a hit with the over 300 people in attendance. The date for next year is June 28, 2008.

To see more pictures of this year's show, visit www.fordcenter.mtu.edu/TinLizzie.

■ **Sigrid Resh** has joined the faculty of the school as a visiting assistant professor teaching Forest and Landscape Ecology. She earned a BS in Merchandising Management and Economics (dual major) and an MS in Resource Economics from Michigan State University. She has a PhD in Forest Ecology from Colorado State University.



Old model Fords at Tin Lizzie Days.

SFRES Students Take Silver, Gold in Forestry Competition

Student teams in Assistant Professor **Chris Webster's** Integrated Resource Assessment class took first and second place in the Upper Midwest Forestry Capstone competition.

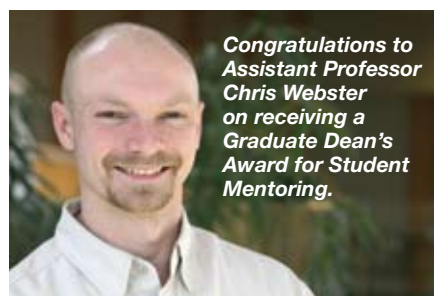
The contest is sponsored by three Wisconsin-based forest products industries: Flambeau River Papers, of Park Falls; Plum Creek Timber Company, of Tomahawk; and Stora Enso North America, of Wisconsin Rapids. Five student teams from Michigan Tech, the University of Wisconsin at Madison, and Iowa State University submitted senior capstone projects designed to solve a particular forestry problem in a holistic way.

"The Swedetown Tract" plan, developed by **Wade Mapes, Cassie Miller, Chris Schmiede, Blair Tweedale** and **Travis Winchester**, took first place and an award of \$1,000. "The Little Gratiot River" plan took second place and \$600; team members were **Brandon Bal, Rob Benson, Robin Conklin, Marcy Erikson** and **Chad Fortin**.

The competition recognizes excellence among senior forestry students in Indiana, Iowa, Michigan, Minnesota and Wisconsin. For more information visit www.forest.wisc.edu/competition.

Ford Gives Fords

Dan Kapp, of Ford Motor Company, presented the keys to a new King Ranch truck and an Eddie Bauer Explorer to Dean **Peg Gale** and Michigan Tech President **Glenn Mroz** in September. The vehicles used at the Ford Center, the school's education and research facility, in Alberta. As a managed partner with Michigan Tech, Ford provides funding in support of diversity programs, undergraduate Enterprise and Senior Design projects, the Career Center, and the Ford Partnership for Advanced Studies program.



Congratulations to Assistant Professor Chris Webster on receiving a Graduate Dean's Award for Student Mentoring.



Capstone students receive quality educational experiences.

Reunion Review

What a turn out! Those alums from the class of 1957 know how to celebrate. The fun-spirited crowd included alumni, former and current faculty, friends, and guests. There were eleven alumni from the class of 1957. Oh, the stories!

Amidst the University's reunion activities, the school took time to honor some of its own.

Gene Arntsen (1964) was inducted into the school's Honor Academy, and **Robert (Rob) J. Olszewski** (1978) was named the school's 2007 Outstanding Alumnus. New this year was the school's Outstanding Young Alumnus Award, which was presented to **Justin Miller** (2000).

Plan ahead: Next year's Michigan Tech Reunion is scheduled for August 7-9, 2008.

Gene Arntsen (1964) — The Newest Honor Academy Member

Gene Arntsen grew up in the Calumet area and attended the public schools, graduating in 1957. Gene enrolled at Michigan Tech where he "majored in pool and pinochle." He left Tech after only one year, working as a night clerk at the old Hotel Scott and also as a logger, cutting spruce and balsam with a Swede saw.

Eventually, Gene made his way to Milwaukee and found work as a draftsman for Cutler Hammer for about \$450 a month. Gene returned to Tech three years later with an improved attitude and graduated with a BS in Forestry in 1964 and a BS in Engineering Administration in 1965.

In 1992, Gene formed his own company, A & M Forest Marketing Corporation, which harvests and markets timber products almost exclusively from its own lands.

Gene's second company, Bird's-Eye Creations, was established in 1993. About 90 percent of the products manufactured are from bird's-eye maple; the rest are from curly maple and plain maple.

Away from the woods, Gene is very active in real estate, coin buying and selling, hunting, fishing, and entertaining seven grandchildren. Gene says with a smile, "I have absolutely no plans to retire."

2007 Outstanding Young Alumnus—Justin M. Miller (2000)

In 2001, **Justin Miller** established Green Timber Consulting Foresters, Inc. in Pelkie, Michigan. Green Timber is involved in a variety of forestry-based consulting projects across the Upper Peninsula and elsewhere.

Justin currently employs several Michigan Tech foresters, including **Rexx Janowiak** (2002), **Jim Pelkola** (1999, MS 2001) and **Michelle (Niemela) Miller** (2002). His seasonal technicians are from Tech too: **Adam Gahagan** (2006) and student **Matt Carothers** (2009).

Justin and his wife, Michelle, have a one-year-old daughter, Ayla. They are very happy to have the opportunity to reside in the Copper Country and be involved in School of Forest Resources and Environmental Science activities.

Robert (Rob) J. Olszewski (1978)—2007 Outstanding Alumnus

Rob Olszewski was born and raised in Wyandotte, Michigan. He graduated from Tech in 1978 with a forestry degree and a hydrology concentration. He then attended the University of Georgia and received his MS in Forest Hydrology in 1980. While at Tech, Rob met his wife, **Mary Girard**, a 1979 Michigan Tech graduate in accounting.

Rob began his career in 1980 as the state forest hydrologist with the Florida Division of Forestry in Tallahassee. His duties focused on water resources issues. He is now the vice president of environmental affairs at Plum Creek, the largest private timberland owner in the United States. He has a staff of nineteen specialists working on issues including water, wildlife, endangered species, forest certification, and recreational leases.

Rob is involved with the Society of American Foresters, the American Forest and Paper Association, and the American Water Resources Association.

Rob says, "As I have moved to various positions throughout my career, I've realized how important the early years are in forming building blocks of knowledge that you can call on in the future. My experience at Tech provided the perfect building blocks for my career, both in terms of direct knowledge gained and teaching people how to learn. This is a critical point—the quicker you learn that you must have the ability to learn, and be an active learner throughout your career, the more successful you'll be."



A great turnout from the class of 1957! Left to right: Arden Maikich, Tom Gelb, Neil Paulson, Bruce Whitmarsh, Dick Norlin, Dick Madison, Don Jones, Bernie Mayer, Ron Sadler, Gerald Byrd, and Richard Bird.



Gene Arntsen (left) is joined by Art Abramson (1964) and Dean Peg Gale as he receives his Honor Academy placque.



Professor Jim Pickens (left) and Dean Peg Gale present Justin Miller with his award.



Assistant Professor Jackie Grant

Defensive Upchucking: A Key to Caterpillar Survival

by Marcia Goodrich, senior writer

Vomiting is not as straightforward an activity as one might think. Humans generally throw up to empty ourselves of whatever nasty things we may have ingested. Caterpillars, however, employ this tactic to avoid being eaten.

Assistant Professor **Jacqueline Grant** is fascinated by caterpillars, and thus she chose their regurgitation practices as a subject for her PhD dissertation on the gut morphology of Lepidoptera larvae.

Jackie discovered that not all caterpillar barfing is the same, contrary to popular belief among entomologists, who often ruminate on such matters. Caterpillars have a variety of defensive weapons in their arsenal, and the more potent the weaponry, the less they rely on vomiting to gross out predators.

"They have lots of defenses," Jackie explains. Monarch butterflies, for instance, have a horrible flavor." Others just do their best to look inedible. "There's a caterpillar that looks like a bird dropping, and it's so good at it, it doesn't need to throw up."

Jackie looked at thirty-six species of caterpillars and found that all butterfly and moth larvae are not created equal. "If you rely primarily on regurgitation for your defense, one part of your digestive tract, the crop, is enlarged, so you can be a more efficient puker," she says. "The best pukers have the biggest crops."

The panic moth caterpillar, for instance, is extremely good at puking. "They throw up all this nasty stuff on spiders, and the spiders go away," Jackie says.

Jackie herself seems immune to the caterpillar ick factor. "I just like them," she says of her research subjects. "I think they are fascinating and beautiful. Even the spines are elegant and symmetrical."

Jackie has revealed the fascinating and beautiful in another oft-disparaged group of creatures: young salamanders and tadpoles. She was commissioned by the US Geological Survey to paint portraits of all the larval salamander and pollywog species found in Great Smoky Mountains National Park. Her thirty-six watercolors appear on a USGS poster, which is displayed in the atrium of the school.

She has been painting amphibians and reptiles for seven years, since she attended a workshop as a graduate student at Cornell University. One of Jackie's early efforts, a toad atop a toadstool, was auctioned by the Society



PHOTO: FOREST & KIM STARR, UNITED STATES GEOLOGICAL SURVEY, BUGWOOD.ORG

The monarch butterfly caterpillar—*Danaus plexippus*—may be pretty, but it tastes horrible, protecting it from most predators.

for the Study of Amphibians and Reptiles and raised more money than any other item, she reports, still surprised at its success.

Jackie studies amphibians as well as paints them, and is beginning two studies on frogs, one on the genetics of chorus frogs in South Dakota's Black Hills, the other on the effects of road salt on native frog species. Other projects will address earthworm population genetics in the Huron Mountains and the effect of deer scat on hemlock groves.

Jackie's interests have made her a popular speaker, particularly with children. She once brought in a salamander, a toad, a pair of sand boas and a corn snake for a presentation to second graders. "They loved it," she remembers. "I fed the salamander crickets. The students were lined up to see the feeding, and they got so excited they collapsed in a huge heap."

Another public event ended on a more serene note. "I took about a hundred people up to a local preserve to hear frogs chorusing in the spring," Jackie says. "Just as the sun set, the green frogs were finishing and the peepers started. As the sun went down, the gray tree frogs started. And then, in the background, the pickerel frogs started to sing.

"It was a lovely evening."

Bones Beat Trees as Markers for Environmental Change

by Marcia Goodrich, senior writer

Environmental change in the Earth's atmosphere is clearly writ in the bones of wolves, a Michigan Tech PhD candidate in forest science has discovered.

To track atmospheric change caused by human activity, researchers have long studied a variety of materials, from tree rings to air trapped in glacial ice. A problem has been "noise"—natural variability caused by sampling and random events that affect atmospheric chemistry. Noise can make it hard to tease out trends from the data.

Joseph Bump and his colleagues speculated that those trends would be picked up by top predators as well as by trees. And they further suspected that measurements from predators would show much less noise.

"Wolves consume many prey animals—a minimum of 150–200 moose contribute to an Isle Royale wolf's diet over the course of its lifetime—and the prey consume a whole lot of plants," Bump explains. "Just by being who they are, wolves and other top predators increase the sample size, because they do the sampling for us."

The team studied moose and wolf bone samples dating back to 1958 from Isle Royale National Park, in Lake Superior, the site of the longest-running predator-prey study in the world. In addition, they looked at 30,000-year-old bones from the long-extinct dire wolf and prehistoric bison pulled from the La Brea tar pits in Los Angeles. They compared the trend found

in the bone chronologies to trends already established for tree rings in North America.

They found that gray and dire wolves provide a much clearer record of environmental change than either the plants, the moose, or the bison.

"Since the widespread combustion of fossil fuels, we have put a human fingerprint on atmospheric carbon dioxide," Bump said. "That fingerprint shows up in trees, and it shows up in animals that eat trees, but it shows up with the least variation in the top predators."

"In a way, this whole study can be summed up by asking, 'How many trees does a wolf represent?'"

Their analysis opens the door to a new area of inquiry; the bones of predators dating back dozens to thousands of years are available at natural history museums all over the world.

Their paper, "Stable Isotopes, Ecological Integration, and Environmental Change: Wolves Record Atmospheric Carbon Isotope Trend Better than Tree Rings," appears in the Proceedings of the Royal Society-B, published August 7, 2007.

The coauthors are **Rolf Peterson** and **John Vucetich**, of the school; and Kena Fox-Dobbs and Paul Koch, of the University of California at Santa Cruz; and Jeffrey Bada, of Scripps Institution of Oceanography, University of California at San Diego.



PHOTO ILLUSTRATION: JOSEPH BUMP

PhD student Joseph Bump has discovered that wolf bones provide much better information on the state of atmospheric carbon dioxide than tree rings, the material usually studied by scientists.

Wanted: You to Be Part of HuskyLink

More than 8,500 Michigan Tech alumni have joined HuskyLink, the University's online alumni community, and more are signing up every day.

If you join, you can locate former classmates in the online directory, update your information so they can find you, email, chat, post photos and class notes, even create a special interest mini-site.

The new community can be found at www.huskylink.mtu.edu. Once you sign up, you can access the forestry group by clicking on "Clubs & Groups."

Any questions? Email alumni@mtu.edu.

Tech Scientists on the Trail of Pine-Killing Wasp

by Marcia Goodrich, senior writer

Scientists have found another exotic bug in Michigan that eats native trees, but at this point, it appears that the sirex woodwasp won't cause quite the same devastation as the emerald ash borer.

In part, that's because *Sirex noctilio*, a native of Eurasia, probably only attacks trees that are already stressed, says **Andrew Storer**, an associate professor in the school. "It is also possible that an important biological control agent of the woodwasp has arrived with it—a nematode worm that parasitizes the wasp larvae and sterilizes the adult female," he said.

The woodwasp damages and kills two- and three-needled pine trees, including Austrian, jack, red, and scotch pines. In Michigan, red pines are a significant source of timber, and jack pines are critical habitat for the endangered Kirtland's warbler.

Sirex woodwasps have found their way all over the world in wood packing materials and have destroyed up to 80 percent of the pine trees in some plantations. When the female wasp lays her eggs in the wood of host trees, she also injects a toxic mucous and a fungus. Acting together, the mucous and fungus mortally wound the tree, making a suitable environment for the wasp larvae to tunnel in the wood.

Sirex woodwasp was recently detected in Macomb County. The search team includes the US Department of Agriculture, the Michigan Department of Agriculture, the Michigan Department of Natural Resources and Michigan State University, as well as Michigan Tech.



PHOTO: DENNIS HAUGEN, BUGWOOD.ORG

The pine-eating sirex woodwasp, *Sirex noctilio*, has been detected in Michigan.