Clones of European Larch produced by tissue culture techniques (Photo by Dumroese).

Cover Photo: The sky is the limit with intensive forestry (Photo by Mroz).
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A Note from the Editor

The 35th FORESTER. This has been a year of change from our traditional inefficient ways to those of a high-quality, time and cost efficient system. Gone are the days of tedious layouts, backlogs in the darkroom, and unorganized advertising lists. Also leaving the FORESTER tradition for retirement is Dr. Crowther, our advisor of the past 27 years. Thank you for your unending enthusiasm and guidance.

This year's publication features the Center for Intensive Forestry, centered at the School of Forestry and Wood Products. We would like to thank Dr. Karnowski and Dr. Diner for their assistance in providing the latest information on this new and exciting course in the field of forestry.

Special thanks also go to Bengt-Olof Danielsson, Visiting Research Scientist from Sweden, my staff, and especially to Judy Buerckholtz for her dependable help.

Kas Dumroese  
Editor-in-Chief
Separation of individual plantlets from clusters developed on embryonic tree tissues. (Photo by Dumroese).
Capping a long and distinguished career as a soil scientist, Dr. Lindo J. Bartelli has added distinction to the Forestry Department as a faculty member since 1977 and more recently as Department Head.

Initially appointed an adjunct professor of forest soils, Dr. Bartelli divided his time between teaching in the Forestry Department and conducting research at the Ford Forestry Center. In August, 1981, he was appointed Acting Director of the Ford Forestry Center, and in January, 1982, he was named Head of the Forestry Department.

All of Dr. Bartelli’s activities at Michigan Tech followed a brief retirement during the winter of 1977, before he joined the MTU faculty. He had retired from the federal Soil Conservation Service at the end of 1976, following a long and distinguished career with that organization. After capping his SCS employment as Head of the Interpretation Division in Washington, D.C., Dr. Bartelli decided to forego the metropolitan scene and return to the area of his roots in Michigan’s Upper Peninsula.

Dr. Bartelli was born in Gaastra, Michigan, and spent his boyhood in Iron Mountain, where he graduated from high school. He then enrolled in forestry at Michigan State University. During the summers of his undergraduate years, he found employment in soil mapping work, and soon decided to change his major to soils.

After receiving his B.S. degree in soils, Dr. Bartelli began work with the federal Farm Security Administration in 1941. Soon he found an opportunity to transfer to the Soil Conservation Service but shortly thereafter his SCS employment was interrupted by World War II. Drafted into the Army in 1942, he spent a year in the ASTP program at Stanford University, then was assigned to Military Intelligence. He engaged in military intelligence work overseas for 1 ½ years.

Returning to civilian life in 1945, Dr. Bartelli resumed his work with the SCS. He was stationed at Luddington, Michigan, as a soil scientist, and in 1952 moved to East Lansing where he held the position of assistant state soil scientist. He also began graduate work at that time and received his M.S. degree from Michigan State University in 1952.

Later he was transferred to Champaign, Illinois, to become state soil scientist. While there, he continued graduate study and in 1958 received the Ph.D degree from the University of Illinois.

Dr. Bartelli spent several years at Knoxville, Tennessee, as assistant principal soil correlator for the Southern Region. He moved to Fort Worth, Texas, in 1964, when the regional SCS office was transferred to that city. There he became principal soil correlator for the region.

In 1973 Dr. Bartelli was transferred to Washington, D.C., where he was director of soil survey interpretations. He continued in this position until his retirement from the SCS.

On May 19 of this year, Dr. Bartelli retired from his position as Head of the Forestry Department. Dr. and Mrs. Bartelli now are enjoying life in their comfortable residence in Hancock and at their cottage on the shore of Petticoat Lake, near the community of Three Lakes, Michigan.

Dr. and Mrs. Bartelli (the former Sigrid Ojala) were married Sept. 6, 1941. They have two daughters. Mrs. Linda Black of Atlanta, Georgia, and Mrs. Sandi Witt of Columbia, Maryland. Each has two children, Linda, a daughter Kara, and a son, Chris, and Sandi, daughters Alina and Molly.

Retirement does not mean idleness for Dr. Bartelli. The couple enjoy trips to visit their children and grandchildren, and like to spend time at their cottage. Dr. Bartelli continues to put the finishing touches on the cottage, which he completed himself after the exterior had been constructed. He also is an avid golfer, fisherman and gardener. Reading is another of his keen interests.
Dr. Bartelli can look back on many accomplishments and honors he enjoyed throughout his career. These include membership in two honorary fraternities, Sigma Xi and Gamma Sigma Delta, publication of many books and research papers, and opportunities to speak in several foreign countries. Recently he served as an advisor to the Mexican Ministry of Agriculture under auspices of the World Bank.

The Forester, in this Salute, extends its best wishes to Dr. and Mrs. Bartelli for a long and happy retirement, along with its thanks to Dr. Bartelli for his steady hand in steering the Forestry Department through the uncertain waters of the past 2½ years, emerging trim and ready for further progress in forestry education and research.

Lindo and his wife, Sig.

Bartelli "Mokki" on Petticoat Lake.
Greetings,

Please accept my thanks for your help during my tenure as head of the department. Many of you went out of your way to do this. Thanks to you, Michigan Tech has an outstanding School of Forestry. I retire at the end of this academic year with mixed emotion. It has been fun, I enjoyed the many new acquaintances and my memories have been enriched with your enthusiasm. These have been pleasant times. Thus, I am saddened by the thought of leaving all of this. However, I will have time to do other things, things that require no schedule. Also, I hope that our paths will continue to cross.

Several changes have occurred in the School of Forestry. The Deanship has been reinstated — this, to me, is a very significant measure. It indicates the strong support President Stein and Vice President Whitten are placing behind forestry at Michigan Tech. Our School of Forestry is fast becoming the leader with outstanding programs in the various facets of Forest Science. A recent review by a team from the SAF Committee on accreditation of our undergraduate program was very encouraging.

We have experienced some staff changes with the retirements of Jim Meteer and Dick Crowther. We added new programs and new people — Dave Karnosky, tissue culture and genomics and Gary Lyons in forest economics.

Our enrollment looks very promising for next year. We have turned the corner and will probably have an encouraging increase in our class of freshmen and new transfers from other schools.

I leave with much hope in my heart, your continued help is needed to make our school the best.

Best Wishes,

Dr. Lindo J. Bartelli
Department Faculty and Staff

Dr. Lindo J. Bartelli
Head, Department of Forestry
B.S. Michigan State Univ.
M.S. Michigan State Univ.
Ph.D. Univ. of Illinois

Dennis A. Baril
Teaching Assistant
A.A.S. Michigan Tech. Univ.

Dr. Johann Bruhn
Assistant Professor
B.S. Utah State Univ.
M.S. Univ. of Michigan
Ph.D. Univ. of California

Mary Frantti
Administrative Aide

Dr. C. Richard Crowther
Professor
B.S. Iowa State Univ.
M.S. Iowa State Univ.
Ph.D. Univ. of Michigan

Dr. Alex Diner
Research Scientist
B.A. Moorhead State Univ.
M.S. North Dakota State
Ph.D. Auburn Univ.

Charles E. Hein
Assistant Professor
B.S. Michigan Tech. Univ.
M.S. Michigan Tech. Univ.

Carol Isola
Typist
Dr. Martin F. Jurgensen
Professor
B.S. Syracuse Univ.
M.S. Syracuse Univ.
Ph.D. North Carolina State Univ.

Peter Cattelino
Research Associate
B.S. Michigan Tech. Univ.

Dr. David Karnosky
Director, Center for Intensive Forestry
B.S. Univ. of Wisconsin
M.S. Univ. of Wisconsin
Ph.D. Univ. of Wisconsin

Dr. John Kotar
Assistant Professor
B.S. Univ. of Wisconsin
M.S. Univ. of Minnesota
Ph.D. Univ. of Washington

Dr. Rolfe A. Leary
Adjunct Associate Professor
B.S. Iowa State Univ.
M.S. Purdue
Ph.D. Purdue
St. Paul, Minn.

Dr. Gary W. Lyon
Assistant Professor
B.S. Univ. of Washington
M.S. Univ. of Washington
M.A. Univ. of Washington
Ph.D. Univ. of Washington

Daniel W. Miller
Faculty Assistant
B.S. Michigan Tech. Univ.

Dr. Roswell K. Miller
Associate Professor
B.S. Syracuse Univ.
M.S. Syracuse Univ.
Ph.D. Univ. of Michigan

James Meteer
Professor
B.S. Univ. of Michigan
M.F. Univ. of Michigan
Ford Forest Staff

Carl Trettin
Research Scientist

James A. Johnson
Research Forester

Eunice Padley
Assistant Research Scientist

Sharlene Kannainen
Senior Secretary

Ralph G. Duffek
Coordinator, Logger Safety Training Program

Julia S. Kucab
Assistant Research Scientist

Mark A. Anderson
Research Forester/Systems Analyst

David W. Wilson
Research Forester/Systems Analyst

Gary S. LeMasters
Assistant Research Scientist

Forest Technology Staff

Thomas L. Kelley
Assistant Professor
Forest Technology

Bernard W. Carr
Associate Professor, Coordinator
Forest Technology

James P. Dougovito
Training Specialist
Forest Technology
You cut it twice and it's still too short? (Bernie and Ivan Easton by Stanfield).

O.K. rookies, dis of course, is a log. (Irv at summer camp by Goetz).

Before you leave the bus you must pledge allegiance to proper silviculture! (Johnson by Eighmey).

You want me to tell you where to put your floppy disc? (Leary by Stanfield).

Three supervisors? LeMasters, Prof. Lin, and Ed Steiner laugh at Pat “Down in the pit” McGlew (Photo by Dumroese).
In 1981 the Forestry Department observed an “End of an Era” recognizing the retirement of Professors Vernon Johnson, Hammer Steinhiib and Dr. Gene Hesterberg. This year could properly be designated a “Year of Transition.” In 1984, MTU’s Forestry Department has taken on a distinctly new character.

Most obviously, more old faces are gone from the Department. Dr. Lindo Bartelli, who headed the Department for the past 2½ years, has retired. Prof. Jim Meteer and Dr. Richard Crowther took early retirement, Jim in February and Dick in May. Charles Hein and I. D. Wijayaratne have transferred to the School of Technology. Dan Miller resigned and has moved to Massachusetts.

New faces also have appeared in our midst. Dr. David Karnosky arrived in October, 1983, to head up a new program, the Center for Intensive Forestry in Northern Regions. Joining him in this work is Dr. Alex Diner, who also came to Tech in the fall of 1983. Dr. Gary Lyons joined the faculty in March, 1984, as an assistant professor.

Dr. Karnosky previously was Director of the New York Botanical Garden Institute of Urban Horticulture at Millbrook, N.Y. He holds B.S., M.S., and Ph.D. degrees from the University of Wisconsin — Madison, with majors in forestry and forest genetics.

Dr. Diner holds the position of research scientist and is engaging in tree tissue culture research in the intensive forestry program. He formerly conducted similar work at North Carolina State University, and holds a B.S. degree in biology from Moorhead State University, a M.S. degree in bacteriology from North Dakota State University, and a Ph.D. degree in plant physiology from Auburn University.

Before coming to Michigan Tech, Dr. Lyons held teaching and research positions at the University of Idaho, Washington State University, the University of Washington, and Colorado State University. He also engaged in research and consulting, and worked as a smoke jumper for the U.S. Forest Service for 14 summers. Dr. Lyons will teach and conduct research in forest economics and related subjects.

Other changes at the beginning of the school year include the transfer of Dr. Johann Bruhn from assistant professor to assistant research scientist, and the resignation of Dr. Margaret Herman who now is an officer in the U.S. Air Force. In addition to his research, Dr. Bruhn continues to teach a course in forest pathology.

Forestry research is receiving increased emphasis, keeping with current trends and goals of the University. These efforts are focused by the Intensive Forestry Center and the University’s BioSource program initiated earlier. Both are aimed at making Michigan’s forests more productive as the source of raw material to assist in growth of the state’s economy.

Bernard W. Carr, associate professor and coordinator of the Forest Technology program at Michigan Tech, recently was appointed to a three-year term on the Society of American Foresters Committee on Forest Technology School Recognition. The committee’s directive is to evaluate and review the content, goals and objectives of forest technology programs and make recommendations to the SAF National Council concerning recognition of these programs.

Dr. Glenn Mroz, Pete Cattelino, Dr. Bartelli, Dr. Martin Jurgensen, Dr. John Kotar and Prof. Robert Sajdak attended the national SAF meeting in Portland, Oregon, last fall. Dr. Mroz and Mr. Cattelino presented papers.

Dr. Bruhn presented a paper on mycorrhizae of red pine at a conference in East Lansing, Michigan, last summer, and co-authored with several graduate students a report to the Michigan DNR on herbicide treatment of forests showing oak wilt symptoms.

Dr. Gene Hesterberg, who retired as Department Head in 1980, received a singular honor from the Society of American Foresters by being elected to the membership grade of Fellow. Official recognition of this honor will be conferred at the 1984 annual meeting of the SAF in Quebec City, Canada.
Dr. Bruhn was elected first vice president of the Upper Peninsula Chapter, Society of American Foresters. He is slated to become chapter president in 1985.

Dr. Diner presented a paper, "Tissue Culture Perspectives of the White Pine/Bister Rust System" at the Southern Forest Tree Physiology Workshop at Rouge Mountain, in August, 1983.

Dr. John Kotar co-authored a paper with Dr. Michael Coffman of Champion International Corp., which Dr. Kotar presented at the SAF Region V Technical Conference in September, 1983. It was titled, "Ecological Landtypes: Their Practical Use in Silvicultural Decisions". Dr. Kotar presented another paper on ecological land classification at the International Symposium on Forest Land Classification at Madison, Wisconsin, last March.

Last fall, Glenn Mroz received his Ph.D. degree from North Carolina State University. He has been promoted to Assistant Professor. In addition to teaching courses in silviculture and soils, Dr. Mroz has been heavily involved in the research project to monitor possible effects of the Extremely Low Frequency communication system (ELF) of the U.S. Navy. Several Forestry Department faculty members are working on this project, in the central part of the Upper Peninsula. Dr. Mroz also presented scientific papers at Society of American Foresters meetings in Duluth and Escanaba, as well as at the national meeting in Portland.

Dr. Roswell Miller has been appointed to the Editorial Board of the Journal of Forestry for 1984-85. He presented a paper "Education for an Invisible Profession" at the 44th annual meeting of the American Congress on Surveying and Mapping in Washington, D.C., last March. He has been writing a series of articles on forestry for the Daily Mining Gazette, Houghton, and continues service on the Michigan Board of Registration for Foresters.

Dr. Miller is a contributor to the Second Edition of the Forestry Handbook, also, published this year by the Society of American Foresters. His contributions contained in the Fire Management chapter, cover "The Nature of Fire", "The Fire Environment" and forest fire behavior. Dr. Miller was one of four Michigan authors contributing to the Handbook.

Dr. David Reed is author or co-author of four papers presented at scientific meetings during the past year. They are "Compatible Individual Tree Volume and Taper Systems", at the 1983 Midwest Forest Mensurationists meeting at Brainerd, Minnesota; "Growth Comparisons of Tamarack and European Larch in Upper Michigan", at the Third North Central Tree Improvement Association Conference in Wooster, Ohio; "Compatible Individual Tree Taper, Diameter Growth, and Height Growth Functions", at the 1984 annual meeting of the American Association for the Advancement of Science in New York, New York; and "Volume of Northern Hardwood to any Merchantability Standards", presented by MTU Graduate Teaching Assistant Carolyn S. Richards at the 1984 meeting of the Michigan Academy of Science, Arts and Letters at Big Rapids, Michigan, in March.

Prof. Robert Sajdak also was active in presenting papers at several meetings on pesticides, forest fertilization and forest tree improvement.

Dr. Warren E. Frayer has been named Dean of the School of Forestry and Wood Products at Michigan Tech. Dr. Frayer has been Head of the Department of Forest and Wood Sciences at Colorado State University since 1976. He assumed his duties August 1, 1984 at Tech.

A forestry graduate of Pennsylvania State University in 1961, Dr. Frayer holds M.F. and D.F. degrees in forest biometry and computer science from Yale University. He joined the faculty at Colorado State in 1967. Previously he engaged in research work with the Northeastern Forest Experiment Station, U.S. Forest Service. He also served as a visiting lecturer at the Yale School of Forestry and Environmental Studies in 1974, and directed 15 workshops in forest inventory and data processing between 1968 and 1980.

Active in consulting, Dr. Frayer is well known for his expertise in sampling designs and in the design of computer-based forest inventory systems.

Dr. David Karnosky served as acting head of the Department of Forestry until Dr. Frayer arrived.

Dr. Richard Crowther retired from the Forestry Department after 28 years of service. For twenty-seven of those years he has been the advisor of the Forester, guiding the hundreds of student workers through tough financial times, lousy printing, and late deadlines. Without his dedication and conviction to this publication, we would not be publishing our 35th volume.

Thank you Dr. Crowther for your years of unselfishly given time and energy. Thank you for your photography, typing, layout work, advertisement solicitation, bookkeeping, and parties. The Department and the Forester staff will surely miss your efforts.

To you and Dorothy in your retirement, the staff of the 1984 Forester, speaking on behalf of the last 26 staffs, thanks you and wishes you the best!
1983-84 Dean's List

The following students of the School of Forestry and Wood Products earned 3.50 to 4.00 grade point averages for the 1983-84 school year.

*Achieved a 4.00 grade point average

Summer Quarter

Seniors: Patrick J. McGlew, Christopher D. Wiita*.
Sophomore Technicians: Kenneth R. Brummel*, Russell E. Smith*.

Fall Quarter

Freshmen: Anthony M. Furlich.
Sophomores: Brian R. Dixon, Susan B. Hart, Carol A. Waite.
Juniors: Jeffery J. McCombs.

Winter Quarter

Freshman: Michael W. Paddock.
Juniors: Keith S. Eldred, Jr., Rasheed K. Ladapo, Robert J. Sommer, Mary J. Sunblade, Carol A. Waite*.
Freshman Technicians: Heather A. Butler, Anthony M. Furlich,

The Forester congratulates these students on their fine achievements. Keep up your outstanding work!

How are students suppose to keep up their good grades when you do this to my aerial lab?

Aerial Photo Lab decorated in preparation for the Xi Sigma Pi luncheon (Photos by Eighmey).
Dean’s Award

R. Kasten Dumroese and Patrick J. McGlew are the 1984 winners of the Dean’s Award, presented to the top two graduating seniors in the School of Forestry and Wood Products. Students are judged on their records in scholarship, leadership and citizenship.

Kas achieved a grade-point average of 3.77. He has been Editor of the Forester for three years, and recently was one of four MTU students selected to tour the Lower Peninsula to present talks to high school students. He has been a resident assistant at Wadsworth Hall for two years. He is a member of the Student Advisory Committee of the Vice President for Academic Affairs, and the Forestry Department Student Awareness Committee. He also is a member of the Forestry Alumni Association Ad Hoc Committee.

Other activities include membership in the Forestry Club, Society of American Foresters, and Xi Sigma Pi. He is assistant minister and peer minister at Good Shepherd Lutheran Church, Houghton. Other honors include membership in Phi Kappa Phi and Phi Sigma honor societies, and listing in Who’s Who Among Students in American Universities. He is a recipient of the Michigan Tech Fund Scholarship, the Michigan Tech Student Foundation Scholarship, and the Garfield Scholarship presented by the Michigan Forestry and Park Association. He is the first MTU student to win the Garfield Scholarship.

Pat has a grade point of 3.73. He is president of the Forestry Club and vice president of Xi Sigma Pi at Michigan Tech. He also is chairman of the Eucharistic Ministry Council, of Houghton. His honors include membership in Phi Kappa Phi and Phi Sigma honor societies.

Pat has been a leader in activities including planning of the 1984 Xi Sigma Pi Symposium, the Forestry Club’s Community Service Days, sale of tree seedlings at the Copper Country Mall, and sale of firewood to student dormitories. He is participating in the dual degree program of Michigan Tech and Northland College, Ashland, Wisconsin, and will receive bachelor’s degrees from both schools.

The Dean’s Award was established in 1972 by Dr. Eric A. Bourdo, former dean of the School of Forestry and Wood Products.

Janshego is Winter Carnival Queen

Catherine Janshego was proclaimed Queen of the 1984 Michigan Tech Winter Carnival. This was a double honor as she was also selected “Miss Congeniality.” Cathy majored in Land Surveying and was President of the Douglass Houghton Student Chapter of the ACSM. Her other extra-curricular activities included working in the pro-shop and concession stands in the SDC, liaison for the Forum for Women in Surveying, and a member of the 1983-84 Senior Class Council. Cathy graduated in February and began work in Fort Lauderdale, Florida.

Congratulations Cathy!
1983-'84 School of Forestry and Wood Products and Forest Technology Graduates

Tom Becia
Forest Technology
RR 1, Box 95
Houghton, MI 49931
WORK EXPERIENCE: Soil Cons. Serv.
CLUBS AND ACTIVITIES: IM Sports, Hockey.

Charlie Becker
Forest Management
26622 Hass
Dearborn Heights, MI 48127
WORK EXPERIENCE: MTU Res. Asst., Project ELF.
CLUBS AND ACTIVITIES: Vice Chm. SAF, Forestry Club, APO, IM Sports.
HONOR: Xi Sigma Pi.

Don Bendzinski
Land Surveying
2177 Almeda Beach Rd.
Pinconning, MI 48650
CAREER INTERESTS: Construction surveying.
WORK EXPERIENCE: Skilled machinist.
CLUBS AND ACTIVITIES: Board member ACSM.

Rick Blom
Land Surveying
Box 394
White Pine, MI 49971
CLUBS AND ACTIVITIES: Board member ACSM, Veteran's Club.

Timothy Bottenfield
Forest Management — Biometrics
39435 Roslyn Dr.
Sterling Hts., MI 48335
WORK EXPERIENCE: MTU Res. Asst., Project ELF; MTU Res. Asst., Soil/Productivity/Habitat Relationships in N. Wis.
CLUBS AND ACTIVITIES: Forestry Club, SAF.
HONORS: Xi Sigma Pi, Charles Nelson Forestry Scholarship.

Brenda Brieske
Forestry
Rt. 1, Box 163
Stoddard, WI 54656
CAREER INTERESTS: Forestry, Tree Improvement.
WORK EXPERIENCE: MTU Res. Asst., Forest Pathology; Biomass Culture, US For., Serv. Genetics Lab; Dutch Elm Disease Technician.
CLUBS AND ACTIVITIES: MTU Ski Team, Ridge Roamers, SAF.
HONORS: Xi Sigma Pi, Phi Kappa Phi, Phi Sigma.
Ken Brummel  
Forest Technology  
149 Fuller WE.  
Grand Rapids, MI 49503

Kevin D. Bryers  
Forest Technology  
Rt. 3, Box 2515  
McMillan, MI 49853  
WORK EXPERIENCE: Seney Wildlife Refuge.

Judy Buerckholtz  
Forest Management  
18W615 S. Frontage Rd.  
Lemont, IL 60439  

John R. Carpenter  
Urban Forestry  
241 E. Stella St.  
Philadelphia, PA 19134  

Nancy Chaffin  
Land Surveying and Civil Engineering  
Rt. 1, Box 157  
Pickford, MI 49774  
CLUBS AND ACTIVITIES: Secretary ACSM.

Diane E. Clampitt  
Forestry  
9883 Winkel  
St. Louis, MO 63128  
WORK EXPERIENCE: Res. Asst., Priest River Exp. For.  

James Crandell  
Forest Management — Silviculture  
4160 N. Comstock Ave  
Hesperia, MI 49421  
WORK EXPERIENCE: Christmas Tree Trimming, MTU campus tree care, Timber Cruiser BLM.  
CLUBS AND ACTIVITIES: Forestry Club, SAF, Peer Group Counseling, Dial Help. HONORS: Ranger, Xi Sigma Pi; Publicity Officer, Pi Sigma; Michigan Competitive Scholarship, Univ. Student Award, MTU Scholarship.

Mary Anne Colucci  
Forest Management  
626 Morley Ct.  
Dearborn, MI 48124  
David L. Dhaseleer
Forest Management
Rt. 1, Paddock Rd.
Charlevoix, MI 49720
WORK EXPERIENCE: MDNR Fisherman’s Island State Park, Groundskeeper and Maintenance, Midwest Int.
CLUBS AND ACTIVITIES: Forestry Club, IM Sports, City League Softball.

Kas Dumroese
Urban Forestry
817 W. Cleveland St.
Freeport, IL 61032

David E. Fehringer
Wildlife Management
32110 Thorncrest
St. Clair Shores, MI 48082
CLUBS AND ACTIVITIES: Dorm Res. Asst.; Board member, Wildlife Society; Forestry Club; SAF.
HONORS: President, Xi Sigma Pi; Senior Class Council.

Brian Fettig
Forest Technology
HONORS: Tau Omega Pi.

Jonathan M. Field
Land Surveying
10011 Fieldcrest
Brighton, MI 48116
CAREER INTERESTS: Forest Land Management, Computer Applications.
CLUBS AND ACTIVITIES: Inter-Varsity Christian Fellowship, AWANA Youth Assoc.

Les Fuller
Forestry
394 Townline Rd.
Skandia, MI 49885
CAREER INTERESTS: Biometrics, Computer Applications.
WORK EXPERIENCE: Teaching Asst. For. Summer Camp; MTU Res. Asst.; Project ELF.
CLUBS AND ACTIVITIES: SAF.

Keith Graboske
Forest Soils
11946 Springdale Ct.
Romeo, MI 48065
CLUBS AND ACTIVITIES: Soils Club, Soil Cons. Soc. of Amer.

Roger Grandahl
Forest Technology
103 N. Timberline Trail
Crystal Falls, MI 49920
Doug Gullekson
Forest Management
124 Simmons St.
Mesick, MI 49668
WORK EXPERIENCE:
Cochrane Tree Co.
CLUBS AND ACTIVITIES:
SAF, IM Sports.
HONORS: Xi Sigma Pi.

Patricia Heins
Industrial Forestry
4290 Springbrook Rd.
Jackson, MI 49201
WORK EXPERIENCE: Res.
Asst. Ford Forestry Center.
CLUBS AND ACTIVITIES:
SAF.

Mike Holmes
Forest Measurements
12050 Ida West
WORK EXPERIENCE:
Programmer, MTU Forestry Dept.
CLUBS AND ACTIVITIES:
Forestry Club.

AnnaMarie Jaworsky
Land Surveying
2753 S. Vernon Rd.
Corunna, MI 48817
WORK EXPERIENCE:
Surveyors Asst., Instrument Tech., Draftsperson.
CLUBS AND ACTIVITIES:
Chairperson ACSM, MSRLS, ASCE.

Gerald Hancock
Management — Urban Forestry
80 S. Avery
Pont, MI 48054
WORK EXPERIENCE: Lease Landscaping, ELEIA Beach.
CLUBS AND ACTIVITIES:
Concert Lecture Board, SAF.

Mark S. Holden
Forestry
2 Chestnut St.
South Haven, MI 49090
WORK EXPERIENCE: Res.
Asst. Priest River Exp. For.
CLUBS AND ACTIVITIES:
SAF; Captions Editor, Mich. Tech. Forester; disc jockey.
WMTU: Co-Captain, Fencing Club.

Catherine Janshego
Land Surveying — Cartography
4065 Ponderosa Dr.
Trenton, MI 48183
WORK EXPERIENCE:
Engineering Testing, Drafting.
CLUBS AND ACTIVITIES:
President, ACSM, Senior Class Council.
HONORS: 1984 Winter Carnival Queen.

Brian J. Johnson
Wildlife Management
51344 Lang Rd.
Three Rivers, MI 49093
CLUBS AND ACTIVITIES:
Gary W. Larsen  
Forest Management  
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MTU Orienteering Club.  
HONORS: Xi Sigma Pi,  
Military Order of World Wars Award.

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Winnebago Co. For. Preserve, Davey Tree.  
HONORS: Xi Sigma Pi, Phi Sigma.

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Wayne Rowlison  
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HONORS: Most Valuable Member, Keweenaw Symph. Orch.

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HONORS: Xi Sigma Pi.

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HONORS: Xi Sigma Pi.

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HONORS: Xi Sigma Pi, ODK, Edward C. Henrickson Memorial Scholarship, MTU Student Award.

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CLUBS AND ACTIVITIES: Chm. SAF, Forestry Club.

John C. Zwier  
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Midlothian, VA 23113  
CLUBS AND ACTIVITIES: Program Coordinator, SAF; Forestry Club.  
HONORS: Fiscal Agent, Xi Sigma Pi.
Master’s Graduates

Robert P. Chadwick
"Hiking Trail and Campground Use at Isle Royale National Park."

Russell W. Johnson
"An Evaluation of Ground Application Techniques for Forest Herbicides."

Carolyn S. Richards
"Volume Estimation Systems of Northern Hardwoods to Any Merchantibility Standard."

Jon D. Forde
"The Effect of Fire on Bird and Small Mammal Communities in the Grasslands of Wild Cave National Park."

Deborah Page
"The Effect of Bedding on the Physical and Chemical Properties of Soil in Northern Idaho."

Robert J. Wagner
"Visitor Impact on a Nature Trail, Phase II."
You ate it?? (Johann and Dana Richter by Stanfield).

Von more cotyledon to schplit und vee vill haff das plantlet (Dr. Diner by Stanfield).

Charlie, you should see what I just cut in two (Charlie Becker and Mary Franti by Crowther).

Cute Ms. Carpenter (Photo by Schlachter).

Jim Dougovito promotes Forest Technology at the organization fair (Photo by Crowther).
The greater body of the FORESTER seems to play the part of refamiliarizing you, the reader, with our staff and emphasizing the special and annual events which have taken place over the past school year. However, our day to day lives here at the School of Forestry and Wood Products must be of interest to some. This article was written to give an overview of the people here, the things we do and what prospects some have for the future.

SURVEYING: As their profession demands, our surveyors just seem to be steady people. The man at the drawing board, Charles (Chuck) Hein, reports that enrollment in the surveying curriculum holds pretty steady at about 45 students. Surveying hosts no graduate students, but these 40-plus undergrads can commonly be found working on projects and drawings for Irv Ziemer or Ross Miller, or perhaps developing their skills at the computer applications now available to them. Chuck Hein's office is also a busy place as he freely and quietly gives advice to all who ask. I. D. Wijayeratne (known to students simply as I.D.) can be found in the same capacity, only down the hill in the Widmair house. These instructors must be doing a good job as placement in surveying related jobs tops the 70% mark. As far as undergrads are concerned, several are currently holding co-op positions in the wilds of Alaska, and summer jobs seem to be attainable.

Something new; the wilds of main campus will probably soon be the new home for all surveyors as they are scheduled to make a break from the Forestry Department. Chuck Hein will carry the new title which will go along with coordinating the new department.

WOOD TECHNOLOGY: "Wood Tech People" are getting hard to find in the halls these days. But perhaps this is only because the ones we do have are such hard workers. The Wood and Fiber lab at the end of the hall is always being swept up, only to be covered with wood and fibers again. Dr. Bernard Sun keeps a stiff hand on the minds of Tech's up and coming wood technologists. But the hard work will all pay off in the end as placement after graduation approaches the 100% mark in this department. They give Michigan Tech a fine reputation to uphold. Unfortunately, Bernie is going to be losing his right hand man this year as Dan Miller takes his leave of Tech. Dan formerly taught such upper level courses as Introductory Wood Mechanics, Wood Seasoning and Preservation, and Wood Products Process Analysis. Wood products, as in the past, will still be a topic for the future to expand upon. Wood and Fiber last year involved two graduate students under Bernie Sun, and most of their research involved studies in topics such as stabilizing dimensions of composite wood products, the material science and techniques of making fiberboards, and the thermal softening of wood and its effects on bonding and product quality. Wood can be a "hard" subject at times, but MTU's technologists master it well.

FORESTRY: The forestry degree of today, as it has always been, can only be attained by taking a wide variety of forestry related classes. Undergrads here at Tech choose from a long list of studies to fill up their schedules. Classes can be taken in anything from Ornithology with Norm Sloan, to Forest Pathology with Johann Bruhn, to Forest Soils with Glenn Mroz. These three topics alone cover the sky, the earth, and what is in between. To tie them all together, undergrads are required to take John Kotar's Forest Ecology class. And for diversity, classes in surveying and wood technology are also required. Forestry graduate students only re-emphasize the diversity theme. The 20-plus of them conducted research last year in topics ranging from habitat typing to nutrient cycling to Nitrogen fixation in decaying wood. These are to list but a few of the classes and topics offered, but it gives an idea of the many topics of discussion which float around the Forestry building daily. The 160 or so forestry undergrads mill about the halls daily, reciting their entomophagous insects over a game of hacky-sack, or discuss the new found pleasures of the department's new computer room. It is strange and wonderful things which are learned up here as opposed to the rest of Tech's campus, and the diversity of jobs which such an education throws before a person keeps the Foresters where they are at. Placement in the past few years has only been groping at the 50% mark; however, this instills fear in no one. For another common topic which Tech's Foresters will discuss with anyone is how they like what they are doing.
Gerry Vande Hei is presently serving as Chief of the Forest Management Section, Bureau of Forestry, Wisconsin Department of Natural Resources. He began his forestry education at St. Norbert's College, where he attended for 1 1/2 years before joining the army in 1952. After serving in Korea, Gerry returned to St. Norbert's for one semester before enrolling at Michigan College of Mining and Technology in 1955.

Following graduation in May, 1958, Gerry was hired by the Wisconsin DNR. Based out of Tomahawk, he worked for six months gathering statewide forest inventories. He was then promoted to Assistant District Forester in Douglas County, where he stayed until 1963 when he left to become District Forester on the Black River Falls Forest District. In 1965 Gerry transferred over to Manager of the Black River State Forest, where he supervised forest-related activities in Jackson, Clark, Eau Claire, and Monroe counties, as well as within the Black River State Forest.

Gerry left the Black River State Forest in the fall of 1966 to become liaison to the Menominee Indian Reservation; he served in this self-rewarding position for seven years. In May, 1973, Gerry became State Forest and Nursery Specialist, working three nurseries on five state forests, and six years later, in the fall of 1979, he accepted his present position as Chief Forester of the Forest Management Section, Wisconsin Bureau of Forestry.

The bureau oversees the management of all state forest lands and acts in a technical capacity to 2.3 million acres of county-owned lands. It also oversees the three state nurseries with their yearly production of 20 million seedlings, directs the Wild River programs, and acts as Service Forester for 180,000 private land owners.

Gerry and his wife, Patricia, now live in Sun Prairie, Wisconsin, where they are raising four children: Todd (24), Ann (22), Tim (19), and Nicholas (9).

Gerry remembers one incident at MCMT involving two of his instructors, Steinhibl and Hesterburg. It seems the three went hunting for deer on opening day, and the new gun law had just gone into effect. Unfortunately, only Gerry had his gun cased, and as they were leaving with their deer they were arrested by the game warden. Gene and Hammar paid Gerry's fine, but the Gazette account contained some drastic typographical errors, placing the other members of Gerry's hunting party ("Stein­burg and Hesterhilb"???) into eternal mystery.
1940 — Helmuth M. Steinhilb is living in Painesdale, "retired and enjoying it." 1941 — C. W. Rollman is retired in Green Bay. 1944 — Glen Weinberg now heads up the Royal Continental Box Company in Chicago. 1946 — Tom Loring is in Shawinigan Lake, BC, serving as manager for a local Action Centre for the Unemployed. 1947 — Bob Hous has been received of the recent death of Harold J. Graves of Wakefield, MI. 1949 — Bill Vesser is found back on the home front, working for MTU Forestry Department Research Centers and for graduate job acquisition… Willard St. Onge, who is back to his “hometown” of L’Anse, overlooking Keweenaw Bay, says “Ah! Retirement is grand.”

1950 — Ivan Kronberg lives in Birmingham, AL, and has retired as Manager of Timber Property after thirty-two years with US Steel. James Goodman (Ben) retired in May, 1950, after thirty-two years with Commonwealth Edison in Chicago as Staff Assistant to the Operating Manager. John Hornick is now a consultant with a timber management and biomass company. Name? "TREEFUELS!!"… Bill Aho retired in 1950 from the City of Pontiac. 1953 — Arthur M. Arndt retired in 1953 to “spend more time in the forest of this great country.”… Raymond Norkoll has recently been promoted to Regional Forester for the Michigan Department of Transportation. Frank Richards is still teaching industrial arts at the Michigan School for the Blind in Lansing, and is also working with multi-handicapped students. 1952 — Gordon Trombley is retiring from the Director of the Idaho Department of Lands, a position he has held for the past seventeen years. 1953 — Col. Stephen J. Danis retired from the U.S. Army after twenty-three years and is now serving as Senior Army Instructor in Bethel, NC. 1954 — Paul Matson retired from Washington State Forest early in 1954 and is now enjoying leisure hours fishing, hunting, and operating his 120 acre farm.

1955 — Keith Montambo is chairman of Keweenaw Land Association, Limited in Boston, MA. 1956 — Kenneth P. Robert heads the Agriculture Resource Management Division in WI. 1957 — Don Stevens is serving as Planning Administrator for Detroit’s Neighborhood Services Department, and “watching Dutch Elm Disease devour Detroit.” 1958 — Eugene P. Malkoff is an Environmental Engineer and Environmental Resource Manager in Enterprise, AL. 1960 — Gary Keppen graduated from Oregon State University in June, 1959, with a degree in Forest Engineering. He is now a logging specialist on the Lassen Nat’l Forest. Floyd J. Marita has been named Deputy Regional Forester for the Eastern Region of the US Forest Service in Milwaukee. 1961 — Robert Strej has been promoted. Pest Control in Midland. 1962 — Jack Boldt is the account executive for the C.A. Strand Company in Detroit. 1963 — Kenneth Lathrop works for the US Bureau of Indian Affairs as Supervising Forester in the Portland area. Tom Piehl is doing land acquisition for the NPS in Georgia as a vocation, and slow-pitch softball as a avocation. 1964 — We were saddened to learn of the death of Vendel E. Bosman of Mio, MI. He was District Manager of the Mio District, Huron Nat’l Forest, at the time of his death.

1966 — Max Norris is the Rehabilitation Specialist for Oil Field Activity on the McKenzie R.D., Wetfred City, ND. 1967 — David Wagner recently started his own company, Park and Recreation Productions, Inc. in WI. Mike Diehl is in Post Falls, Idaho, as a full-time father of 15 kids, 11 of whom are adopted. Ron and Kathy Quillian just finished building this log home in the Alaskan Woods. Ron works as Assistant Ranger for the Forest Service, with dog sledding for recreation.

1970 — John Maurer, who has headed up the UP Prime Forestlands Identification project for the Michigan DNR, was named coordinator of the Navy’s ELF submarine communication project in Marquette and Dickinson counties. 1971 — Glenn Lamberg is District Conservationist with the SCS in Fremont, MI. 1972 — Douglas Davies recently became partner in KDM Forestry Services, L.T.D, in Terrace, BC, as Silviculture Forester Consultant. … Terrance and Verna (Trippel) Reedy live in Grants Pass, Oregon, where Verna has been promoted to Nursery Supervisor, Rocky Mountains Operations of Champion International. 1973 — Ron Church is Sale Planning Forester on the Hume Lake R.D., Sequoia Nat’l Forest. 1974 — Jeff Adams is forester of the Fortune District, Kootenai Nat’l Forest, MT.

1975 — David Bergman was promoted to Acting Chief, Division of Forestry, Ohio DNR. Daniel Candron is city Arborist for Santa Barbara, CA. … Roy Gereau has joined the staff of the Missouri Botanical Gardens as Curatorial Assistant. 1976 — Bruce and Edie (Lichtler) Wait live in Oregon, where Bruce is Timber Planning Forester on the Diamond Lake R.D. … William L. Roberts is employed with Burns Forestry Consultants in Millen, WI, and also does house-logging and taxidermy. … Sherine Riley-Hall is secretary of the Mid-Atlantic chapter of the International Society of Arborists, in Fairfax Co., VA. … Jack Greenlee is Assistant Chief for the National Resources Branch in Ft. Benning GA. He is responsible for fire management, reforestation, and transportation programs. 1977 — Jim Hoxie is Logging Specialist at a new mill in Spearfish, SD. John Parry is a graduate student in Forest Management at SUNY-Syracuse. 1978 — Shelly Mitchell accepted the position of Education Coordinator in the Tyler Arboretum near Philadelphia. Sherie Gibson is employed as a Timber Sale Administrator for the USFS on the Shasta-Trinity Nat’l Forest, CA. … James Lornson is now working as a chairman in the Georgia Tree Farm Program for stimulating private landowners’ interest in both pines and hardwoods. … Kathleen Reedy is a graduate student in Paper Science and Engineering at Miami of Ohio. … John Bock is the Assistant Director of the Lodge Food Service at the U. of Montana, Missoula. … Kathleen White is an Assistant Resource Officer on the San Jacinto District of the San Bernardino Nat’l Forest.

1980 — Sharon Hoerauf is working in Environmental Education in Wolverine, MI. … Laura DeWald is working on her Ph.D. in Forestry at Michigan State University and State University. … Darlene Garrett is working for the forest service in Forks, Washington, on the Soleduck R.D. in small sales and salvage. She says "I’m out, traverse, profile, and cruise sales — summer camp in blowdown!" … Tim Webb is working for the Minnesota DNR as a state forester. 1981 — Tim Gahl has been employed as a Forest Technician, cruising and marking loblolly plantations on land surrounding the J. H. Kerr Reservoir in VA. … John Maloney is a survey party chief for an engineering-surveying firm in Columbia, SC. … Nicholas Bell is a Peace Corps volunteer in Liberia, West Africa, as a wildlife technician assigned to the Sapo Nat’l Park. … Robert Lindsay is living in Florida, flying helicopter gunships with the Air Force, and still involved with local forestry and wildlife. … Tom Potter is working on his master’s in Wildlife Science at New Mexico State. … Melinda Perry has been in the Philippines as a Peace Corps volunteer as a forester. … John Sullivan is a graduate student at Wilt Student in Molecular Genetics. 1983 — Peter Baker was a member of the PAYSON Hot Shots in the Tonto Nat’l Forest in Payson, AZ, for three months, and is now marking timber in the Ochiate Nat’l Forest in AZ. … Alice Therrien is working for the Connecticut Conservation Corps, doing a combination of Forestry and Park Management work. … Patrice Lancendorfer is an engineering aide for a civil engineering-land surveying firm near Detroit.
Microcomputers in Forestry

A new asset to the School of Forestry and Wood Products is microcomputers in the former 'calculator lab.' The primary objective of the computers is to serve as a teaching and student-use laboratory in the professional forestry undergraduate and graduate educational programs. They are also to provide a research problem-solving tool for students' projects, a resource for faculty development, and serve in continuing-education programs for mid-career professionals.

Jim Meteer proposed their purchase and used the following rationale in that proposal: "... in no other field can the microcomputer-based desk top systems be more important than in forest sciences, forest management, and forest business. The practicing professional has important needs for computerized record-keeping, computation and analysis. The professional natural resources manager and his planning staff normally reside in district or regional offices far-removed from central office computer and analytical and decision-support tools. Professional education must respond."

The department responded by allocating about $40,000 toward the lab. The result was a purchase of ten IBM PC's, three printers, and software, all delivered in early January. The lab was immediately put to use by several classes, two of which were taught by Jim: 'Introduction to Microcomputers in Forestry' and 'Microcomputer Applications in Forest Business.' Rolfe Leary's Forest Management classes and Dave Reed's Biometrics class also utilized the lab during winter quarter. Forest Mensuration classes in the spring quarter continued the lab's use.

The computers are extensively used by grad students for computational work and by many students for word processing. The IBM's are making short work of thesis and report writing. The ELF researchers and other faculty have also found the benefits of the microcomputer. In addition, microcomputers are being used by Irv Ziemer and the other summer camp instructors for class preparation and student projects.
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Located in the Michigan Tech Memorial Union
Ron Brown and Dr. Alex Diner discuss tissue culture for the feature article (Photo by Dumroese).
It has been said that Michigan's economy could be benefitted with increased utilization, productivity, and in turn, greater economic returns from its renewable resources. The Center for Intensive Forestry in Northern Regions was established at Michigan Technological University to optimize forest-site productivity and economic returns from forest stands in Michigan and in other comparable climatic areas. The latest forest technologies, including biotechnology, will be integrated to obtain an improved, more holistic approach of applying advanced silvicultural knowledge toward optimizing economic and human resource benefits.

The Center will be headquartered in the Department of Forestry here at Michigan Tech. The Forestry Department has been recruiting new staff, investigators who are leading in their field of expertise, in order to develop the Center's research capabilities more fully. Since it is difficult to have researchers well versed in all areas, it will be necessary for the director to enlist assistance from those agencies (industry, schools, and/or government laboratories) where this expertise is located.

Within the University, departments and research institutes have been identified which have the expertise needed to solve forestry related problems. Academic departments which have been identified include: Biological Sciences, Chemistry and Chemical Engineering, Civil Engineering, Geology and Geological Engineering, Mechanical Engineering and Engineering Mechanics, Business and Engineering Administration, and Social Sciences. The Institute of Wood Research is the primary research institute which will be involved in the Center.

Those units outside the University which may be called upon for assistance include: The North Central Forest Experiment Station branches located in Houghton, MI and Rhinelander, WI; the Institute of Paper Chemistry, Appleton, WI; Michigan State University (Forestry); University of Michigan (Forestry); and Michigan's Department of Natural Resources. Other sources of expertise will be involved in the Center.

Dr. David Karnoski, Director
Dr. David Karnosky has been named Center Director. He also serves as Director of the Forest Biotechnology Institute at Michigan Tech. He formerly was Director of the New York Botanical Garden Institute of Urban Horticulture. He also served as an adjunct professor in the College of Environmental Science and Forestry, SUNY, Syracuse and Marist College Poughkeepsie, New York. Dr. Karnosky received the B.S., M.S., and Ph.D. degrees in Forestry and Forest Genetics from the University of Wisconsin, Madison.

At the New York Botanical Garden, Dr. Karnosky’s research has involved the genetic improvement of trees. More specifically, this research includes:

1. developing disease resistant elms;
2. studying the use of tissue culture in tree improvement;
3. screening the air pollution tolerance of trees;
4. examining tree stresses in the urban environment.

In addition, he has established several tree improvement projects including progeny of elms, greenash, sweetgum, and white ash.

Six broad and overlapping research areas have been established for the Center, including Species Site Suitability Analysis, Site Conversion, Forest Biotechnology, Harvesting, Forest Products and Production Analysis.

Species site suitability analysis research will be concerned with the evaluation of site and the determination of raw wood product potentials. Terrain, soils, climatic conditions, tree species, harvesting and transportation components will be examined in the study. Topics will include tree species — site suitability, site modifications, and tree modifications.

Site conversion research will involve determining the best practice for site preparation and maintenance, as well as converting low quality forest sites to more productive forest type. Research topics include clearing, herbicides, planting, natural stand improvement, management strategies, and regeneration.

Forest products research will focus upon molded, composite, and engineered wood materials. Other areas of possible research include: wood preservative formulation and treatment, adhesive development and examination of wood by-products as potential energy and/or chemical sources.

Finally, production analysis research would deal with both site production and forest-derived products. Management and microeconomics of intensive forestry, including growth studies and modeling are potential research topics. Microeconomic impact studies will consider markets, jobs and environmental effects.

The role of Michigan Tech is to solve problems of industry and other agencies practicing intensive forestry. The Center for Intensive Forestry in Northern Regions is designed to fit this niche. Michigan Tech is a prime location for the Center as it is centrally located within the Lake States region, and extensive landholdings of several major forest products industries and of state and federal agencies are in close proximity to the Michigan Tech campus. The four thousand acres at the Ford Forestry Center, Alberta, Michigan are also very well suited for both short-term and long-term research studies.

Experienced staff are available to conduct research studies in a variety of areas. Probably most important is the fact that the University has a substantial or critical mass of researchers who can be called together to discuss and/or brainstorm a particular problem; also available are experts from industry and other governmental agencies and schools. These researchers can work together as a team to solve or approach a problem from a variety of avenues to reach a common solution.

The Center could operate with only University informational output and monies. However, this is not its intent. The Center can only carry out its mission if it has the full cooperation of industry and government agencies. Without their contributions concerning their short and long range problems and plans, the Center will be operating in a vacuum and will not be able to meet its primary objective of aiding the forest industry.

In order to make the Center even more responsive to the needs of these units, it is hoped that they will join with the University to support the research program. All of these units — the University, industry and government — would be a cooperative which would directly guide the Center in the formation of its research program. Members of the Cooperative would establish a membership fee and form a Center for Intensive Forestry Advisory Committee. The Committee would, through its technical subcommittees, determine which programs are in most need of being studied and through the use of cooperative funds, support those research studies.
Forestry Education and Research in Sweden

Bengt-Olof Danielsson
Research Forester
College of Forestry
Swedish University of Agricultural Sciences
Garpenberg, Sweden
now
Visiting Scientist
Forestry Sciences Laboratory
North Central Forest Experiment Station
Houghton, Michigan

INTRODUCTION

I am pleased to have this opportunity to describe forestry in my country, but in a short space it is difficult to describe the research and education organization in adequate detail. What follows is a short glimpse at the system in Sweden.

Forestry is of great importance to Sweden's economy. It contributes to some 6 percent of the employment and is our most important export industry. About half of the production is exported, accounting for 20 percent of the total export.

Characteristics of Swedish forestry are quite intensive management; long rotations, typically about 100 years; and a high degree of utilization both of growth and harvest. Trees down to 4 inches dbh are considered merchantable, and there is virtually no lower diameter limit for pulpwood. These features together with a general optimism about the future for forestry contribute to a strong emphasis on education and increasing research.
The program at the school for forest engineers is a more advanced education in forestry planning and management lasting 1 ½ years. Vocational experience and a degree in forest technology or a one-semester preparatory course are required for the 45 students admitted annually. It is intended as a continuing education for forest technicians, though it is possible to gain admission in other ways.

M.S. in Forestry

The College of Forestry, my alma mater, will receive some extra attention, not only because it is the highest forestry education and one of the most prestigious educational institutions in Sweden, but simply because I know more about it. Can you imagine the Michigan Tech Forestry Department being second only to Harvard and Yale in recognition? If you can, you have a good picture of the College of Forestry. Grade requirements for admission have been among the highest in the country for a long time.

The program takes about 4 ½ years including summer semesters and a 40-week school year. All 60 students have the same courses during the first 2 ½ years, but specialize in greater depth in the last 2 years. Students must specialize in one of three areas: biology, management or business, but otherwise the choice of subjects is flexible.

After a semester of mixed practical and theoretical studies outside the University, the first year is taken in residence at Garpenberg, formally a large, private estate. Diversions for the students are few, but with a pool table, 5000 acres of hunting grounds, and students' richness of ideas and initiative, there is no lack of spare time activities. Hunting is very popular during the fall, and some 20 moose annually are a welcome contribution to the pantry. The rest of the education is received at Umea, a university town in northern Sweden with the college located on the university campus. A couple of highlights are a 2 ½ month-long field trip through the whole country taken during the second summer and a study trip to some foreign country during the last year. This trip is financed mainly by the students, and fund raising starts from the beginning of the first year. The first goal is to raise enough money to finance the big money maker, selling of Christmas trees in Stockholm. If not literally a mega-buck business, enough has been raised to have taken the students all around the world.
Operational Efficiency

The separate projects are coordinated through the administration departments, but major projects such as the Forest Energy Project typically involve several departments and other research organizations outside the University, such as the Logging Research Foundation and consultants.

In general, most research is directed toward maximum utilization of the forests without negative consequences. Program 3, Wood Yield, is also by far the largest program but includes everything from basic soil science and tissue culture to stand treatments and growth models. Sub-programs by size are:

1. Site conditions: natural conditions, changes in fertility, and soil treatment.
2. Silviculture: regeneration and stand management.
3. Trees: provenances, selective breeding, and species.
4. Forest ecosystems and growth models.
5. Injury: insects, disease.

One example of an area with very high priority is the long-term effects on soil fertility of acid rain and various treatments such as scarification and whole-tree harvesting. Another area is planting, including nursery production, planting stock transportation, manual and mechanized planting, and how to reduce competition from hardwoods. The goals are cheaper and more reliable methods for all site conditions. Planting is already widespread; almost three-quarters of all clearcut areas are regenerated by planting.

My department, Operational Efficiency, has about 10 percent of the total research budget. The main programs are development of technical and economic knowledge and techniques for harvesting fuelwood (part of the Forest Energy Project). Other programs are silviculture technique, ergonomics, techniques for small private forest management, and planning; i.e., economic studies on a company and national level.

I have attempted to briefly illustrate the significance of forestry in Sweden and its importance to our whole society. Forestry is expected to continue to be an important factor in Sweden in the years to come, and thus our programs in education and research will continue to receive high priority.

Left: Thinning accounts for 20 to 30 percent of the wood supply, but mechanized felling is not yet common.

Below: Shortwood is the dominating harvesting method, and harvesters are rapidly gaining in use.
The Institute of Wood Research is a key element in the development of new products from the forest resource. In recent years several new products have been produced including molded flake products such as pallets, and structural materials made from aligned flakeboard such as crossarms, poles, and lighting standards.

Another area of expertise at the Institute is in the preservation of wood products. One major contract has been directed towards the development of environmentally desirable preservative systems for poles to replace those currently in use. The IWR has field sites for testing treated wood products in Houghton, Florida, Panama, and Hawaii. Also within the IWR building in Houghton is the only indoor facility in the U.S. for testing treated wood products in a ground contact situation that simulates tropical decay conditions year round.

Like the Forestry Department, the IWR is venturing into the application of biotechnology for the forest products industry. The initial central project in this area is the biotransformation of wood, especially local hardwood species, to give polymeric and monomeric materials suitable for further processing into useful products.

Those products include adhesives, plastics, reinforced plastics, and chemical feedstocks. The technology can also be applied to biological pulping processes, and it is expected that genetic manipulation of active organisms will enhance the viability of those developments.

The Institute is also broadening the scope of its wood products research, and has embarked on projects aimed at the development of reformable wood composite sheet materials, and to develop novel building components and assemblies through the application of various wood composite technologies.

The development of new wood product technology is dependent on a variety of science specialties and the IWR is using an interdisciplinary approach with all its current development projects. This has led to a much increased level of interaction between the Institute's scientists and those of other departments at MTU, and interchange between IWR and the Forestry Department, especially at the graduate level, has increased dramatically. Such exchange of ideas auger well for both organizations as the diversity of approaches allows for creativity and excellence in scientific development.
Charlie Becker and Tom Hill slaving in the soils lab (Photo by Stanfield).

After a hard day at summer camp (Photo by Stanfield).

Keith Eldred goes head over heels for dilutions (Photo by Stanfield).

Shannon Harig, a muscle man, and Chad Radka hoist up the roof of the Wildlife Club cabin (Photo by Carpenter).

I think the teeth are suppose to go up (Pat McGlew and Chad Radka by Eighmey).
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Photomicroscopy of tree tissues growing in petri dishes. (Photo by Dumroese).
The Forestry Club’s autumn activities started this year in the usual tradition, with the Otter River Camp Day. We spruced the place up a bit, took measurements for the new heat saving door, and filled up the woodshed. Afterwards, a wiener roast over an open fire provided the atmosphere for getting to know some new faces.

Another activity which kept us busy last fall was the firewood cutting fund raiser. Here was a chance for us to sharpen our logging skills (as well as our axes and chainsaws) and do some good hard work. It was great fun and a complete success, notwithstanding a few sore muscles and a broken trailer hitch.

Community Service Day found many dedicated Club members helping out local citizens by raking yards, trimming trees, and eating homemade cookies.

Individual excursions were the rule for winter quarter, with the cabin providing a home base for snow shoeing, hunting, and escaping from main campus. A hot sauna is still the best way to relax at day’s end. And yes, the mice as just as plentiful as ever!

Springtime was long in coming, but surely worth the wait. With cabin fever running high, it was time to hold our annual Booyaw. Also topping our agenda was an Arbor Day seedling sale at the mall, contracting firewood for next fall, and another Community Service Day.

The most important decision made by the Club this year was our agreement to merge with the Student Chapter of S.A.F. After our successful trial run last year of join operation with SAF, combining both organizations into one seemed inevitable. So, with the drafting of an acceptable agreement, the two groups became one on March 29, 1984, retaining the SAF identity. Joining the two groups into one larger organization should help to pull us together. It should also provide for a stronger professional society, which is better suited to meeting our needs than two separate groups.

I would like to thank Dr. Ros Miller for all his help and advice throughout the year. There are definitely times when there is just no substitute for experience. Thanks also go to my fellow officers: Ron Brown, whose enthusiasm and willingness to work saved me many times; Chad Radka, who probably has the first complete set of typed minutes in the history of the Club; and Dave Stanfield, who was somehow able to straighten out the bookkeeping mess he inherited in September.

And finally, hats off to all members, whose participation in Club activities made all the rest worthwhile.

Patrick J. McGlew
Chief Forester
OFFICERS — Chad Radka, Secretary; Pat McGlew, Chief Forester; Dave Stanfield, Treasurer; Ron Brown, Associate Forester; Ros Miller, Advisor.

Skiing in Carnival competition for the Foresters is Chad "I can’t ski and smile at the same time" Radka (Photo by Harig).

Goetz, McGlew, and Tooley keep busy at the fall work day (Photo by Eighmey).

Steve Anderson carries the efforts of the firewood cut (Photo by Harig).
The Michigan Technological University Student Chapter, Society of American Foresters, was established on April 23, 1979. It was the students' enthusiasm and support that made this possible. In 1980-81, the chapter's major emphasis was given to the problem of forestry graduate placement in professional employment. Over 40 student members greeted guest speakers and attended various SAF meetings.

Although the membership fell during the 1981-82 school year, the activities continued. There was a change in the Forestry Department as of January, 1982. The student chapter welcomed the new Head of the Forestry Department, Dr. Lindo J. Bartelli, as he offered encouragement to graduating seniors and pledged departmental support for future student activities.

Departmental support certainly came through in the 1982-83 school year as 35 members of the student chapter attended the 1982 SAF national convention in Cincinnati. Our faculty advisor, Mr. Irvin Ziemer, was honored at the convention with top SAF "Recruiter of the Year" award for 1981. Also, the student chapter and the Forestry Club together ventured fund raising activities and non-profit "Community Service Days." In the 1983-84 school year, all clubs were faced with a problem of fewer students and therefore, fewer members. Currently, the SAF student chapter and the Forestry Club are joining together into one organization, concentrating members and their enthusiasm. Again, with the help of the Department, members were given the chance to attend the state, regional and national meetings. Although membership was down, eight student and four faculty members attended the regional meeting in Duluth, Minn., and three members attended the national convention in Portland, Ore.

The Community Service Days as well as fund raising projects and guest speakers such as Mr. Jerry Rose of the Michigan DNR, Mr. Jim Mattson of the Forest Service Lab, Mr. David Olson of the MSU Extension Service, and Mr. Robert Gilreath as well as others continue to enhance the students' knowledge of forestry.

Officers for the 1983-84 school were: Chairman, Robert W Ziegler; Vice Chairman, Charles Becker; Secretary-Treasurer, Judy Buerckholtz, and Program Coordinator, John Zwier.

We thank the three retiring faculty members, Dr. Bartelli, Prof. Jim Meteer and Dr. Richard Crowther, for the help they have provided through past years.

Robert W. Ziegler
Chairman

OFFICERS — Irv Ziemer, Advisor; Bob Ziegler, Chairman; John Zwier, Activities Coordinator; Judy Buerckholtz, Secretary-Treasurer. Missing: Charlie Becker, Vice-Chairman.

S.A.F. — Our Job Is Growing

Members at the National Convention in Portland; Randy Wisner, Bob Gilreath, and Bob Ziegler (Photo by Gilreath).

Winter carnival broomball (Photo by Harig).

Chad Radka minding the S.A.F. table at the organizational fair (Photo by Crowther).
The end of a 48-year-old tradition in the Forestry Department occurred on March 29, 1984, when members of the Forestry Club and the members of the student chapter of the Society of American Foresters voted to merge the Club into the Chapter. The vote was no surprise as both organizations have been working towards the merger for the past few years. Reduced enrollment within the Department and essentially dual memberships in both organizations by most students are the reasons for the merger. The Student Chapter, though the newer of the two organizations, was chosen as the "surviving" organization because of its professional orientation.

The Forestry Club was organized on October 9, 1936, by the first group of students to begin studying forestry at Michigan Tech (then the Michigan College of Mining and Technology) under Prof. U. J. (Bert) Noblet. The student chapter of the SAF was chartered on April 23, 1979, at the height of the Department's undergraduate enrollment "boom". For the last two academic years, the two organizations have been holding joint meetings, conducting joint fund-raising activities, and participating in campus activities such as Winter Carnival as "The Foresters".

Two responsibilities, near and dear to the hearts of many forestry alumni and students, that were specifically mentioned in the agreement to merge, and that will be continued by the Student Chapter of the SAF, include the operation and maintenance of the Otter River camp, a cabin and ten acres of land donated to Michigan Tech by the Fisheries Division of the Michigan Department of Natural Resources, and support of the Forester, this annually published yearbook published on campus.

The merger streamlines the accounting for funds that has been necessary for the past two years, decreases the total number of student officers necessary, and reduces paperwork and other duplications of effort. All of the rights and privileges of both faculty and student alumni that were available to Forestry Club members will still be continued by the Student Chapter.

Thanks Ros

Dr. Roswell K. Miller has been involved with the Forestry Club since 1965, starting first as the conclave advisor. In 1974 he became the Club advisor, and in 1977 was presented with a lifetime honorary membership. Among the numerous projects and activities which he has initiated, Ros feels that the red pine pulp cut is one of the most notable. From the first fall cut in 1972 to the last spring cut in 1981, the cumulative yield totals approximately 700 cords. Over the years, sale of the pulp brought in over $15,000 which was distributed among all of the clubs in the Forestry Department.

Besides the conclave and pulp cuts, other Club activities which Ros traditionally participates in include: Otter River Camp Days (he has sacrificed at least one splitting maul handle annually), and the Booyaws, sharing the preparation and cooking responsibilities with Norm Sloan. And, he never missed club meetings either.

We appreciate the help and advice which Ros has given to us over the years, and would like to extend to him a warm "Thank You" for the same. Many of our projects and endeavors would never have been possible without the planning and direction of a dedicated advisor.

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My last year as Editor of the Michigan Tech Forester is complete. The time has surely flown by, and with it has flown many of the inefficient ways of producing a yearbook. This year we have contracted with a company specializing in yearbooks. The result is a fast, easy method of layout. Our photo work is being done at communications services on campus, providing us with quality photos with no backlog time. Finally, our computerized mailing list of potential advertisers is paying off, with this being our best advertising year in a very long time. Hopefully, next year the staff will be typing text off the IBM-PC’s without that awful, “it must be error-free,” typing.

I'm enjoying the way the Forester’s financial situation ended this year. Due to our increased advertising revenue and the wonderful support of our alumni, we recorded our first year without a deficit in as long as Dr. Crowther can remember. I hope the alumni realize how much we depend on them and appreciate them for keeping this forestry tradition in print.

I would like to thank everyone who has helped me through these past three years, and especially the following folks: Dr. Crowther for his advisorship, Dr. Bartelli for his enlightenment and the Department’s support, Tim Trombley for talking me into the editorship, Steve Albee for setting up the advertising mailing list, Charlie Eschbach for photo help, the staff for putting up with me, the alumni for supporting us, the Creator of challenges, and everyone in the School of Forestry and Wood Products for their help, patience, and concern.

To next year’s staff I wish the best of luck. I know you will continue the tradition of the FORESTER, Michigan Technological University’s only departmental yearbook, proudly published by the School of Forestry and Wood Products and sponsored by the Forestry Club and SAF.
Front Row, Left to Right: Irene Borak, layouts and writing; Sue Hart, Alumni Editor; Lori Carpenter, photographer and layouts; Kathy Teahan, Graduate Editor. Second Row: Jeff Steele, Chris Tooley, layouts; Judy Buerckholtz, Business Manager; Deb Glas, layouts; Mark Holden, Graphics. Back Row: Ron Brown, Feature Editor; Shannon Harig, photographer; Dave Stanfield, Chief Photographer; Kas Dumroese, Editor-in-chief; Mark Goetz, photographer and layouts; Dr. Crowther, Advisor.

Nice try Mark! One exposure would have been plenty!

Kathy workin’ on the graduates. (Photo by Dumroese).

Eating up the profits at Gino’s! (Photo by Crowther)

Michigan Tech’s only Departmental yearbook for 35 years!
Community Service Day

For the second year, the Forestry Club and the Student Chapter of the Society of American Foresters held a Community Service Day. The program was chiefly organized by three people: Kathy Teahan, Jim Crandall, and John Zweir.

Many of the foresters raked leaves, pruned trees, washed windows, and one group even went up to the Stillwaters Nursing Home in Calumet and planted 25 white cedar.

Most of the people who received help were contacted over the telephone and a few people from last year called the Forestry Department asking for help again this year.

Everyone who participated had a great time and the residents were all very appreciative. In fact, even the early November weather cooperated in making for a successful event. The only problem faced was too few workers for all the work, therefore the clubs also sponsored a Spring service day to volunteer even more help.

Joanne David and Chris Tooley plant cedar at the Stillwaters Home. (Photo by Dumroese).

Scott Torreano and Doug Gullekson rake Acer saccharum leaves. (Photo by Harig).
The Forest Products Research Society is an international organization that publishes a monthly journal containing FPRS events (past, present and future) as well as technical articles of current experiments and studies done in the wood technology field. It also holds annual meetings, section meetings and many seminars throughout the year.

The lifeblood of FPRS is the student chapters. Michigan Tech's FPRS is in the Upper Mississippi Valley Section and, although a small organization, has been very active in the FPRS this year by attending section and annual meetings regularly. Along with various fund raising and social activities, the FPRS tries to keep in touch with the Institute of Wood Research and the USFS North Central Forest Experiment Station to exchange facilities and information.

The FPRS also holds several seminars of its own throughout the school year. Membership is open to anyone interested in the forest products industry. The club is deeply indebted to Dr. Bernard Sun and advisor Daniel Miller for their guidance and invaluable assistance. We would like to wish Mr. Miller good luck in the future as he is leaving us this year.

Ken Marshall
Vice-President

FPRS OFFICERS — Left to Right: Dan Miller, Advisor; Steve Kunard, President; Bob Weisenberger, Treasurer; Ken Marshall, Vice-President; Dr. Otto Suchsland, guest speaker from Michigan State; Peggy Pax, Membership; Dr. Sun.
When I returned to Houghton in the fall of 1983 it seemed like I, and the rest of the Forest Technicians, had hardly left school at all. Summer quarter seemed like something we had just finished yesterday, not over a month ago. And yet we were anticipating our final year in a totally different manner, in comparison to our freshman year. We all knew each other now and were happy to hear what each had done on his month off.

The technician program is field oriented and it wasn't long before we were back in the woods "cruising" and mapping once again. Hoofing through wet elderberry may be trying at times but we knew that all the practical field work makes us all the more prepared for the "real thing."

Looking back we all have our favorite "remember when . . . " stories. They are the memories that later in life will remind us of good times and good friends.

In May we go our separate ways; some of us have plans, others don't. But we all feel we are prepared to do the job of conserving one of the most important natural resources we have: our forest lands.

Joel Petroelje
Some of Our Notable Guests...

... Gerry Rose, Forest Management Division of the Michigan DNR speaks with Jim Meteer. He also spoke to the SAF/Forestry Club members...

... Dr. Sylvia Taylor (right), Coordinator of the Michigan DNR Endangered Species Program, spoke with the Wildlife Club...

... Don Brown (left), Isle Royale Park Superintendent, discussed the Park with Mark Goetz, Paul Rentschler, and a joint meeting of members of the Wildlife/SAF/Forestry Club...

... Dave Anderson (right), Field Representative for the Michigan Association of Timbermen, spoke on forestry employment alternatives to the SAF/Forestry Club...

... Gerry Vande Hei, Chief of Forest Management Section, Wisconsin DNR, presented a seminar on the WDNR and later chatted with Bob Ziegler and Pat McGlew.
Can you imagine . . .

... getting lost during the compassing and pacing field test, with the most important things on your mind being bears and getting back in time for lunch.

... having to survey and draw your very own map of Alberta — when you would really rather forget what it looks like?

... getting to know your cruise partner and deciding that you would probably be better off without one?

... spending days that seemed like years with American Can employees who thought we were interested in seeing every single logging operation in the U.P.?

... how much harder it is to identify the species of a log than it is a whole tree?

... having so many black flies swarming around your head that it seems like you have been caught in a "black blizzard"?

... writing executive summaries until your hand felt like it was going to fall off?

... wearing out the grass in front of the dorm playing hacky-sac?

... spending three-fourths of your summer in Alberta (a clearing on the side of US 41 that doesn't even deserve to have a name like normal towns do)?

The transformation is complete; 1983 Summer Camp students lived through 10 weeks at Alberta, learning forestry skills in the Ford Forest. Looking back, the experience was not particular painful, but attitudes during certain parts of the summer were not always what might be considered positive. But, experiencing and adjusting to adverse conditions is what learning is all about; and we did a lot of that this summer.

Important hands-on skills such as compassing and pacing, forest industry methods and log grading were all drummed into our heads by a very competent staff headed by Irv Ziemer. Other experiences also added to our knowledge of forestry. These included touring sawmills, visiting the Toumey Nursery, and learning to identify plant species and habitat typing an area.

We also learned social skills like having patience with a overly difficult partner, the ever important rules of hacky-sac (and the consequence of breaking one of them), and how to get in the dinner line late enough so that you don't look like a glutton, but soon enough so that you don't pass out before you are served.

And, we learned a lot about ourselves and our own personal feelings towards the land and this chosen profession of ours. Along with learning how to cruise timber and how to survey and grade logs, we also experienced the serenity of Canyon Falls in the twilight, and the sense of peace that comes from watching beavers at work and sky full of stars.
Mary Binns: Hacky Sac Queen! (Photo by Stanfield).

"Cull" Foresters in this woodpile. (Photo by Stanfield)

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Douglass Houghton Student Chapter
American Congress on Surveying and Mapping

Faced with severe financial cutbacks and the threat of the land surveying program being dropped, the outlook looked bleak at the beginning of the 1983-84 school year for the Douglass Houghton Student Chapter of the American Congress on Surveying and Mapping. However, with the high hopes of our members and an encouraging national economy, the chapter set out with the intention of pursuing a productive year.

The major goal this year was to improve graduate placement through the university. With the financial help of the placement office, the Chapter sent letters describing the land surveying program along with questionnaires to over 400 firms across the United States. Returned questionnaires revealed a very positive interest in Tech's surveying program and a desire to employ students during the summer as well as on a full time basis.

On November 30, President Reagan signed a proclamation declaring the week of March 11-17 as NATIONAL SURVEYORS WEEK. The Chapter promoted this by exhibiting surveying equipment in downtown Houghton.

The continuing desire to remain up to date with the everchanging topics in the field of surveying led the Chapter to invite speakers from various speciality fields to give presentations ranging from "The Deep Tunnels of Chicago" to "Surveyors and the Law." The highlight of the year was when National ACSM President Walter Robillard attended and spoke at our meeting of April 1. Mr. Robillard was extremely well received by everyone the large turnout.

The land surveying program finished the year on a very positive note. Our future now seems very bright at MT Expansion of our ideals continues to play an important role in the existence of the Douglass Houghton Student Chapter of the ACSM.

George Platz
President
Michigan Tech Student Chapter
Soil Conservation Society of America

Student involvement in the MTU Soils Club was low this year, due to the loss of nine active members through graduation, and the loss of identity associated with the elimination of the Forest Soils option. Our challenge this year has been to recruit new members and to educate the student body about the activities of the Soils Club. Members have been primarily interested in soil science. It should be pointed out, however, that the Soils Club is not only for soil scientists. In addition to being the Soils Club, the organization is also the Michigan Tech Student Chapter of the Soil Conservation Society of America (SCSA). The SCSA is a professional organization dedicated to the wise use of all our natural resources. As foresters we significantly influence the quality of soil and water through management practices. Productivity of forest lands will depend upon how well we can protect the soil from erosion. In addition, many communities rely upon fresh water supplies from forested watersheds. Improper management of these lands may have devastating effects upon thousands of people. It is true that the SCSA is highly agriculture oriented. The milestones made in agriculture, however, can serve as a base for research in forest soils and provide inspiration to professionals dedicated to forest soil science, forest management, and forest hydrology.

The past year does hold one event to be proud of. The School of Forestry and Wood Products has been chosen to host the 1984 Region III Collegiate Soil Judging Contest scheduled for October 12 and 13. Michigan Tech's involvement in past contests led to this choice, unanimously agreed upon by the universities involved. The schools which will participate are: Michigan State, Ohio State, Purdue, the University of Illinois, Illinois State, and the University of Wisconsin campuses at Madison, Platteville, River Falls, and Stevens Point. This event is an excellent opportunity to demonstrate the quality of the Department and the University. The organization of this event is a difficult task, however, and we will need all the assistance available to make the contest a success. I am confident that with the quality of people available this will become a reality.

Brian G. Wilczynski
President
1983-84 was, again, an active year for Xi Sigma Pi and, with the induction of nine new members in the fall and five more in the spring, we can be assured of continuing our work next year. This year's annual symposium, the fourteenth, was titled "Frontiers in Intensive Forest Management" and gave insights into ongoing research involving management and utilization technologies aimed at improving product yield from our forest lands.

We regret that Dr. Johann Bruhn will be resigning his position as faculty advisor, however, we look forward to the leadership of Beth Reed, who will be succeeding him. We would like to thank Johann for his six years as our advisor and for the hard work he put forth in helping us promote high standards of scholarship in forestry here at Michigan Tech.

I would like to take this chance to thank the other officers of the society, Pat McGlew, John Zwier, Jim Cran dall and Kieth Eldred as well as Judy Burckholtz and Will Simmons for their hard work in making things happen this year. Also, special thanks to department secretary Carol Isola for her special efforts in assisting us.

Dave Fehringer
Forester

Dr. Johann Bruhn, Xi Sigma Pi Advisor, provided outstanding leadership for six years. (Photo by Crowther)
XI SIGMA PI MEMBERS — Left to Right, Back Row: Brenda Brieske, Kas Dumroese, Jim Crandall (Ranger); Front Row: Bob Hoffmann, Dave Fehringer (Forester), Judy Buerckholtz, Ed Steiner. (Photo by Crowther)

SPRING INITIATES — Left to Right: Dave Wilson, Kurt Hennig, Sue Hart, Deb Glas, Cindy Bredeson. (Photo by Crowther)

XI SIGMA PI MEMBERS — Left to Right, Back Row: Kurt Hennig, Kas Dumroese, Dr. Johann Bruhn (Advisor), Dr. Roswell Miller, Mark Anderson. Middle Row: Scott Gabriel, Deb Glas, Sue Hart, Cindy Bredeson, Brian Wilczynski, Dr. Lindo Bartelli, Julia Kucab. Front Row: Keith Eldred, Doug Gullekson, John Zwier (Secretary — Fiscal Agent), Pat McGlew (Associate Forester), Beth Reed (Advisor), Dr. Gary Lyon. (Photo by Crowther)
The 1984 Xi Sigma Pi symposium, the fourteenth annual, was held on April 19 and was entitled "Frontiers in Intensive Forest Management." The symposium addressed current research into applications of developing technologies in forest management.

The event was chaired by chapter president, Dave Fehringer, and Pat McGlew, chapter vice president, acted as emcee. University president, Dr. Dale Stein gave the welcome remarks to the 125 in attendance. Dr. Stein remarked on the new emphasis on forestry in the state's economic plan and the role of Michigan Tech in improving the state's forest industries. Dr. Lindo Bartelli, Forestry Department Head, addressed the 60 people at the luncheon and spoke on prospects of intensive management of forest lands in the upper great lakes region.

Those presenting papers included Dr. John Kotar, Assistant Professor of Forestry, MTU; Dr. Glen Mroz, Assistant Professor of Forestry, MTU; Dr. David Karnosky, director, Center for Intensive Forestry in Northern Regions, MTU; Dr. Alex Diner, Research Scientist, Biosource, MTU; Dr. Johann Bruhn, Assistant Research Scientist, Ford Forestry Center, MTU; Carl Trettin, Assistant Research Scientist, Ford Forestry Center, MTU; Mr. Michael Thompson, Research Engineer, Forestry Sciences Laboratory, North Central Forest Experiment Station, US Forest Service; Mr. Bruce Haataja, Senior Research Scientist, Institute of Wood Research, MTU. Dr. Gary Simmons, Professor, Department of Entomology, Michigan State University, was unable to attend and present his paper.

The collection of papers indicated developing research at every stage of forest management, from propagation through harvest and product fabrication. The discussion emphasized a need for innovative, yet prudent, use of the scientific knowledge and techniques in the management of our forests.

Dave Fehringer
Forester

Left to Right: Alex Diner, Bruce Haataja, John Kotar, Glenn Mroz, Michael Thompson, Johann Bruhn, Dave Karnosky, Carl Trettin.

(Photo by Crowther)
The Wildlife Society received renewed interest during the 1983-84 school year. We were happy to see a number of people from the Biology Department as well as foresters attending our meetings.

Speakers from areas other than the Copper Country seemed reluctant to brave our winter weather, but we heard from a number of interesting local resource managers. Talks at our monthly meetings ranged in content from the plight of the lake herring fishery in Lake Superior to impact mitigation at Isle Royale National Park to check off donation for non-game and endangered species which appeared on the Michigan State income tax forms for the first time this year.

Other club activities included banding songbirds at our advisor, Dr. Norman Sloan’s property near Chassell, and the initiation of a Houghton County northern barred owl census. We had great success in locating owl pairs and will continue the study to encompass the county.

The end of March brought the annual Midwestern Student Wildlife Conclave. Michigan Tech sent six students to join over 200 other wildlife and fisheries students from eight states at Ames, Iowa. We gathered for a weekend of talks and workshops. Our quiz bowl team fought valiantly but lost to the overall champion M.S.U. team. The most exciting aspect of the conclave was the betterment of communications between the three forestry and wildlife schools here in Michigan; U. of M., M.S.U., and Michigan Tech, and talk of a 1986 Michigan conclave hosted by all three schools. The Michigan State group joined us a few weeks later to sample our Copper Country smelt dipping.

The Wildlife Society brought the year to a close with the election of a fine group of new officers. They’re dedicated and enthusiastic, and I’m sure they will do very well.

Paul Rentschler
President
Intramural Sports
Softball and Volleyball

Alberta Foresters


The Dinks

Front Row, Left to Right: Kathy Teahan, Janet Paces, Sue Wandersee, Sue Byrnes. Back Row: Sue Weber, Judy Buerckholtz, Brenda Sileff, Peg McKaig. Missing: Tammy Thompson, Debbie Page, Carrie Richards, Nancy Rolfe, Beth Reed (Photo by Harig).

Kathy Teahan doesn't dink around (Photo by Harig).
Team Forestry

Kneeling, Left to Right: Mike Thompson, Glenn Mroz, Tim Bottenfield, Marty Jurgensen, Dave Reed. Standing: Carrie Richards, Beth Reed, Kathy Teahan, Sue Weber. Missing: Gail Mroz, Debbie Page, Tammy Thompson, Hal Liechey. (Photo by Harig).

Dave's Team

Jim Crandall hands Gary Branz a pole-pruner as they trim campus trees (Photo by Crowther).

Shannon Harig, the happy sawyer (Photo by Carpenter).

Steve Borkowski works on his aerial project and eye strain (Photo by Carpenter).

Hold still you little critter! (Dr. Diner by Dumroese).

Looook! Deb Page in the lab (Photo by Stanfield).
Splitting firewood to sell to the Residence Halls (Photo by Harig).

Skid queen Irene! (Photo by Stanfield).

Liz VanMeerbeck workin' hard in lab (Photo by Stanfield).

Yuck yuck yo! (Crowther by Eighmey).
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