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Again with this issue of the Michigan Tech Forester, we chronicle the developments and activities of the Department of Forestry and its student body as they evolved throughout the past year. This task becomes increasingly complex, year by year, as the number of organizations and their activities within the Department continue to grow. While, a few years ago, all departmental student activities were centered around the Forestry Club, recently several new organizations have come into existence. Each of these has its own schedule of activities, its membership group and its officers.

In addition, the size of the faculty has grown rapidly. These new members have brought with them a wide range of interests and resultant activities, many of which involve both graduate and undergraduate students. The Forester staff has endeavored to keep abreast of these ongoing developments in order to bring to you an idea of the action and progress that has marked the 1977-78 academic year.

Our theme this year is the Sturgeon River Gorge, an area frequently in the news since its designation as a wilderness study area by Act of Congress in 1975. This scenic area well deserves the attention it has been receiving during these recent years. We thank the personnel of the U.S. Forest Service, and especially Mr. Terry Hoffman, District Ranger of the Kenton Ranger District, Ottawa National Forest, for cooperation and assistance in compiling photographs and information utilized in connection with this issue's theme. Many of the photographs which form section divider pages, and which appear on pages 42 to 45, are courtesy of the U.S. Forest Service.
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Nanking, Taipei, Vancouver, Houghton—these are the cities that have been most prominent in the life of Dr. Bernard Sun, Associate Professor, who receives this year's Forester Salute.

Dr. Sun was born in Nanking, China, where he spent his childhood except for three years during World War II, when he moved with his family to Chungking.

In 1948, as the Communists overran China, the Sun family escaped to Taiwan, where they settled in the capital city of Taipei. There, Bernie completed his elementary and high school education, and enrolled in the National Taiwan University at Taipei. He received his B.S. Degree in Forestry from that university in 1960.

Following his graduation, Bernie served for sixteen months in the army, then joined the staff of the National Taiwan Experimental Forest.

In 1963, he became a teaching assistant in the Forestry Department at the National University, and later that year he traveled to Canada to begin graduate study at the University of British Columbia, at Vancouver.

Dr. Sun spent the next five years at U.B.C., receiving his M.S. Degree and, in 1970, his Ph.D. Degree in Wood Science. He then moved to Houghton and joined the faculty of the Department of Forestry at Michigan Tech.
Dr. Sun's first responsibilities were the instruction of wood technology and other wood utilization courses. Soon, however, he was involved in planning the newly emerging Wood and Fiber Utilization curriculum. He has played a major role in developing this program which now is in its third year of operation.

In 1964, Bernie and Esther Wang were married at Vancouver. They had been friends since early childhood in Nanking, and also in Taiwan. They have two daughters, Vivian, 10, and Grace, 4. The family resides in Houghton.

In addition to his teaching duties, Dr. Sun is active in research. One of his major interests has been research in the development of a new method of wood pulping. This method, given the name “Michtec Process”, has attracted widespread interest from the pulp and paper industry.

Hobbies also keep Dr. Sun busy during his spare time. These include wood working, gardening, house improvement and fishing. Time never hangs heavy for Dr. Sun! He also lends expert assistance to his wife in the preparation of unexcelled Chinese cuisine, delightful to the most discriminating gourmet's taste.

The Forestry Department is enriched in many ways by the presence of this talented, enthusiastic and cheerful teacher and wood scientist, who has become a mainstay of the faculty during the past eight years of his association with Forestry at Michigan Tech.
As everyone knows, forestry enrollment has suffered in large part because of the articles in the news media concerning employment. Presumably this is the reason enrollment in the Department of Forestry dropped last fall to 660 students.

However, there was no lack of jobs for Tech forestry graduates. Of the 75 men and women who graduated in the Spring of 1978, 67 of them, or 89 percent, were placed before graduation, including four who went on to graduate school. Three accepted non-forestry related jobs. The remaining eight may have found work, but we have no information on them. Placement of Michigan Tech forestry graduates has always been good. Since we first began keeping records on initial employment five years ago, over 80 percent of our forestry graduates had jobs prior to graduation.

Overcrowding is still a fact of life in the Forestry-I.W.R. Building, however. The need for faculty offices and graduate student office space has been temporarily eased by subdividing one small classroom and partitioning the back quarter of another. In addition, a receptionist's office has been added to the foyer.

Two new faculty members - Drs. Allan Drew and Robin McIntyre - joined the staff last fall. Three others will start work in the Fall of 1978, two of them being the Department's first women teachers. A woman, Kathleen Slattery, also fills a new position of Laboratory Associate in forest soils.

Funded research in the Department of Forestry has accelerated tremendously during the past year. An idea of the variety of research can be gained from some of the project titles: Raptor Survey of the Huron Mountains, Re-introduction of the Peregrine Falcon, Re-introduction of the Pine Marten, Fire and Logging History and Ecological Succession in the Voyageurs National Park, Role of Heavy Metals in Plants, Impact on Soil of Conventional and Whole Tree Harvest in Aspen Stands, Impact of Whole Tree Harvest on Pole Stands of Northern Hardwoods, Application of Sugar Maple and Black Locust to the Biomass/Energy Concept, and others. The total backlog of research in the Department, including 2 to 3 year contracts, is now $860,000. Of further interest is the fact that Dr. Michael Coffman has been named research advisor on forest classification for Region 9 of the U.S. Forest Service.

Research and education have made strides at the Ford Forestry Center also. Educational facilities were given a big boost by Board of Control approval last fall of a new 60-bed dormitory, which will be completed by September, 1978. One wing of this fully modern dormitory is designed to house women.

The CROFS (Cooperative Research on Forest Soils) organization is off to a good start. Two major research programs recommended by both the Technical Committee and Advisory Council are Herbicide Treatment for Site Conversion and Site Evaluation and Habitat Classification on Industrial Forests. Both studies are now underway.

Important forest soils research in Michigan was authorized by Public Law 268 (1977), which is intended to accelerate soil survey in the state. A major provision of the law specifies that surveys of forested counties be interpreted for forest management purposes and that the Ford Forestry Center provide the technical back-up for such surveys in forested areas. The necessary staff has been engaged and a specialized research laboratory developed in conjunction with the Soil Conservation Service National Soil Survey Laboratory in Lincoln, Nebraska to accomplish this mission.

Another unique area of research concerns a contract with the Michigan Department of State Highways to survey and prepare forest type maps for highway roadside strips, make recommendations for their management, and establish demonstration cuttings to which the attention of the travelling public will be drawn. Although some commercial harvest of roadside stands had been done in the past, and winter
maintenance by removal of hazardous trees was accepted practice, the current work represents the first organized forest management of highway strip timber.

In the energy field, a contract with the U.S. Department of Energy provides for biomass evaluation of coppice management of hardwood stands. Continuing work on tailings and waste deposits for both the iron mines of the Upper Peninsula and the cement plants is still concerned with revegetation and habitat management.

The thrust of research at the Institute of Wood Research continues to accent the development of "composite wood products." The third version of the continuous press is nearly completed. Work is on schedule for the development of utility poles and cross arms from aligned wood flakes. A new project concerns the establishment of specifications for mobile home construction under contract with the U.S. Department of Housing and Urban Development.

Construction of a plant to produce pallets by the I.W.R. developed PALLETECH process is nearing completion. It is expected that the first pallets will be produced before summer's end.

All in all, it has been another busy year; and by the looks of it, 1978-79 will be no different.

GENE'S
"TOP LOG
IN THE
DECK"

Change is one of the most valuable characteristics of our everyday lives. We all enjoy the benefits of change - differing seasons - the marvels of the fresh, cool spring days, the warmth of summer, of Indian summers in colorful splendor - even the white of winter adds to memories of each year. But change improves many elements in our lives providing a refreshing view and offering stimulation to improve, to seek more change, to see what's on the other side of the mountain.

We now live in one of the most fascinating times in man's history. Exciting largely because of unceasing and rapid change. Some of us old timers have moved through several phases of change. The earlier period of "horse energy" that I once knew gave way to "mechanical" forces and now we are deep in a new era of "technological" power. And with each of these phases we have witnessed a remarkable series of exciting new discoveries.

Foresters are masters at understanding "change." After all, ecology is largely the science of change. Wherever there is change one finds inevitable problems. Conversely, opportunities invariably are associated with change and this is where the distinct benefit lies. We are cautioned to always be conscious of "problem awareness". Yes, perhaps the most significant feature is to identify the problem. But beyond the limits of problem awareness, one should seek out the opportunities presented by change. For when we understand the results of transformation, we can begin to design benefits from the new conditions.

The idea of environmental change is not really new. Man has, for centuries, caused major changes in his environment. Nomadic herders made conditions so intolerable they moved on. But now we must think on the "equilibrium of change". We must look forward to change, but no longer to the dramatic change of a past era. We must look to change as an event that will permit a sound, continuing environment suitable to the benefit of a growing society. For, as Wendell Hess put it - "We are not only scientists; we are citizens". If we can monitor change and control the tempo of its pendulum, we can share in the opportunities which accompany change in our daily lives and in the world about us.
FACULTY and STAFF

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Ph.D. Univ. of Michigan

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M.S. Iowa State  
Ph.D. Univ. of Michigan

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M.S. Michigan State Univ.  
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Research Forester  
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M.S. Michigan Tech University

Eva Miron  
Secretary  
M.S. Michigan Tech University

Helen Maki  
Clerk  
M.S. Michigan Tech University
Institute of Wood Research

Darrel Nicholas
Senior Wood Scientist

Dr. Anders Lund
Director

Gordon Krueger
Research Engineer

Tauno Kilpela
Research Engineer

Egon Teodorson
Assistant Wood Scientist
This has been another landmark year for the Forestry Department. A third major curriculum, Land Surveying, received approval and will be offered beginning in the Fall of 1978. This program will provide qualified graduates who will be eligible to apply for certification as registered land surveyors under new, more stringent requirements invoked by the State of Michigan and some other states.

Changes made in the Forest Soils Option will qualify graduates as soil scientists or soil conservationists, under recently revised standards established for these professions.

The Industrial Forestry Option got under way with the addition of new courses and specialized requirements. This new program was developed at the request of the American Pulpwood Association.

For the first time in many years, total enrollment in the Department declined. The number of students at the beginning of the 1977-78 school year was about 50 less than the record 722 enrolled at the beginning of the previous school year. It appears that the Department has hit an enrollment plateau which may remain reasonably level for some years to come. This development had been expected two or more years earlier, but to everyone's surprise did not materialize until last year.

The past year has been one of exceptionally rapid growth in the faculty of the Forestry Department, as our staff roster begins to catch up with the rapid growth in student enrollment which the Department has experienced.

Five new faculty members became affiliated with the Forestry Department within the past 18 months, and two more will arrive in the Fall of 1978.

Dr. Lindo J. Bartelli joined the faculty in March, 1977. Dr. Bartelli is an internationally recognized soil scientist, recently retired as Director of the Soil Survey Interpretations Division, Federal Soil Conservation Service, Washington, D.C. He holds a joint appointment as adjunct professor with the Department and the Ford Forestry Center. Earlier in his career, Dr. Bartelli served as a soil scientist in Michigan, Tennessee and Kentucky, as State Soil Scientist in Illinois, and as Director of Soil Survey activities in the Southern Region of the U.S. He holds B.S. and M.S. degrees from Michigan State University and the Ph.D. degree from the University of Illinois.

Dr. Robert E. Dohrenwend, who joined the Ford Forestry Center staff in 1976, also has undertaken instructional work in the Forestry Department. Dr. Dohrenwend holds degrees from Dartmouth and Syracuse Universities. He was employed as a research forester at the Cary Arboretum in New York and as a visiting assistant professor and research scientist at the University of Florida, before joining Michigan Tech. Bob's interest is hydrology and forest soils.

Dr. Allan P. Drew and Dr. T. Robin McIntyre joined the Departmental faculty in the Fall of 1977, as assistant professors. Dr. Drew received his B.S. degree in forestry from the University of Illinois, the M.S. degree from Arizona University in watershed management, and the Ph.D. degree from Oregon State University in forest management, with major in tree physiology and minor in botany. He served two years with the Peace Corps in Malawi, Central Africa, and later held post-doctoral positions at Yale University and the University of Illinois, before joining the Tech faculty.

Dr. McIntyre holds B.S., M.S., and Ph.D. degrees in forestry and forest economics from Auburn University. He also has been employed as an extension agent and as a farm manager.

During the winter of 1978, Gerald M. Allan became an Instructor in the Forestry Department, and will teach in the newly activated Land Surveying program. He holds a B.S. degree in engineering and forest engineering and the M.S. degree in civil engineering from Michigan Tech. He also has been engaged as a teaching assistant in the Forestry and Civil Engineering Departments while completing his academic work.

Dr. Johann Bruhn joined our faculty this summer. He is a forest pathologist, and is a graduate of Utah State University. Dr. Bruhn received the M.S. degree from the University of Michigan and the Ph.D. degree from the University of California.

Margaret Herman also became a member of our faculty during the past summer. She is a specialist in wildlife management, and graduated from Colorado College. Mrs. Herman holds the M.S. degree from Washington State University and is nearing comple-
DEAN'S AWARD WINNERS

The Dean's Award winners for 1977-78 are Barbara J. Bennett and Warren H. Mandrell. Both are graduates in Forestry who achieved outstanding records in academics and in citizenship and activities during their undergraduate years.

Barbara, whose grade-point average was 3.75, was active both in Forestry Club and in Xi Sigma Pi, for which she served as secretary-fiscal agent. She also was coordinator of the 1978 Xi Sigma Pi Symposium. She was active in intramural sports and was employed as a teaching assistant in the Soils Laboratory.

Warren attained a grade point of 3.76, was a member of Blue Key Society, Xi Sigma Pi, and was an outstanding member of the ROTC Cadet Corps. He was a top long-distance runner for the Tech cross country team, holds the school record for the steeple chase and was captain of the national championship ROTC orienteering team. He was Deputy Commander of the ROTC Cadet Corps, was named Distinguished Military Graduate, and received several other honors for his ROTC accomplishments.

Warren was co-captain of the Tech cross country team, was named most valuable runner in 1975, and also was a member of the Tech cross-country ski team. He is listed in Who's Who in American Universities and Colleges. He received the Department of Defense "Run for Your Life" Award for running 3,200 miles.

Congratulations to both of these fine people for their accomplishments.

1976-77 AWARD WINNERS

Joseph Anderson

Carl Varak
CLASS OF 1978 — Major in Forestry

GREGORY J. AHO
Urban Forestry Option
Ironwood, Michigan

LAWRENCE W. ALBAUGH
Land Surveying Option
Edmore, Michigan

CLIFFORD P. ANDERSON
Recreation Resource Management Option
Pompton Lakes, New Jersey

STEVEN R. ANDERSON
Forest Management Option
Skokie, Illinois

JEFFREY K. AUTENRIETH
Land Surveying Option
Lansing, Michigan

MICHAEL J. BARGER
Land Surveying Option
Royal Oak, Michigan

DOUGLAS R. BENGE LDORF
Forest Management Option
Dundee, Michigan

BARBARA J. BENNETT
Urban Forestry Option
Kingsford, Michigan

JOHN W. BOCK
Land Surveying Option
St. Joseph, Michigan
STEPHEN P. BRIGGS
Forest Entomology Option
Tecumseh, Michigan

KARIN J. BUCKLAND
Forest Management Option
Portage, Michigan

MATTHEW J. CAPALDI
Forest Management Option
St. Clair Shores, Michigan

JOHN B. CATLIN III
Land Surveying Option
Worthington, Ohio

THOMAS A. CRITES
Forest Soils Option
Ishpeming, Michigan

LARRY D. CURRISTON
Forest Hydrology Option
Twining, Michigan

DOUGLAS K. CURRY
Forest Management Option
Houghton, Michigan

LAWRENCE R. DAVIS
Forest Ecology Option
Redford, Michigan
CHARLES R. DECKER
Wildlife Ecology Option
Traverse City, Michigan

LEE S. DOUGLAS
Forest Ecology Option
Vestal, New York

JAMES M. ELLIOTT
Recreation Resource Management,
Forest Management Options
Grand Marais, Michigan

ROBERT E. EVON
Forest Soils Option
Detroit, Michigan

JAMES E. FERRIS
Forest Ecology Option
Boyne City, Michigan

KURT D. FRIESTH
Recreation Resource
Management Option
Coal Valley, Illinois

DAVID C. HAMLIN
Forest Management Option
Bradenton, Florida

MICHAEL G. HANSEN
Urban Forestry Option
Bay City, Michigan

TIMOTHY J. HART
Forest Management, Land
Surveying Options
Warren, Michigan
SCOTT S. HARTSIG
Wildlife Ecology Option
Fraser, Michigan

MICHAEL C. HAYES
Land Surveying, Recreation
Resource Management Options
Hemlock, Michigan

MARK P. HENDERSHOT
Recreation Resource
Management Option
Birmingham, Michigan

MATTHEW W. HUNTER
Land Surveying Option
Birmingham, Michigan

DANIEL M. IVerson
Forest Management Option
Grass Lake, Michigan

RANDALL M. JACOBS
Forest Ecology Option
Ortonville, Michigan

RICHARD D. JENNINGS
Recreation Resource
Management Option
Southgate, Michigan

ANTHONY J. JODOCY
Land Surveying Option
Rock, Michigan

LARRY S. JOKINEN
Recreation Resource
Management Option
Lennon, Michigan
ANDREW D. POTTER
Forest Management Option
Palisades Park, New Jersey

JOSEPH C. RADEMACHER
Forest Management Option
Chelsea, Michigan

WAYNE M. RADO
Land Surveying Option
Northfield, Minnesota

CHRISTINE C. ROWLAND
Recreation Resource Management Option
Plymouth, Michigan

KAY A. SASSO
Land Surveying Option
Louisville, Ohio

JAMES M. SAUR
Forest Management Option
E. Grand Rapids, Michigan

DAVID A. SCHROCK
Urban Forestry Option
Dearborn, Michigan

PEGGY A. SORVALA
Urban Forestry Option
Detroit, Michigan

DALE A. STEWART
Forest Genetics Option
Livonia, Michigan
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<td>Recreation Resource Management</td>
<td>East Lansing, Michigan</td>
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<td>ROBERT W. STOLL</td>
<td>Forest Soils Option</td>
<td>Bellefontaine, Ohio</td>
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<tr>
<td>MARK A. STRICKFADEN</td>
<td>Forest Management Option</td>
<td>Grandville, Michigan</td>
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<td>GARY H. VOLLRATH</td>
<td>Forest Management Option</td>
<td>Marysville, Ohio</td>
</tr>
<tr>
<td>KATHLEEN A. WHITE</td>
<td>Forest Soils Option</td>
<td>Three Rivers, Michigan</td>
</tr>
<tr>
<td>DAVID W. WILSON</td>
<td>Forest Management Option</td>
<td>Hartland, Michigan</td>
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<tr>
<td>BARRY J. WYNSMA</td>
<td>Wildlife Ecology Option</td>
<td>Eagle, Michigan</td>
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WOOD AND FIBER UTILIZATION MAJOR

ALLAN J. HOHEISEL
Forest Products Option
Worthington, Ohio

WAYNE H. SCHWERIN
Wood Science Option
Pinconning, Michigan

THOMAS K. TOOTHMAN
Pulp and Paper Science Option
Cocoa Beach, Florida

Graduates — Not Pictured

ROBERT G. ALLEN
DALE A. ANDERSON
MARC. A. ANGELL
MARK D’AGOSTINO
GERALD L. BAILEY
E. MERRITT BROWN
CHARLES W. P. DOUGLAS
DAVID J. ELZINGA
MARK S. EVANS
THOMAS L. FABIS
WILLIAM J. FOLEY
DAVID E. FREEMAN
DIANE K. GOSLER
ROBERT J. GRAY
WAYNE R. GRIFFIN
RONALD B. HANSEN

JAYE B. HAYES
STEVEN N. HOAG
ROBERT R. JOHNS
MARK KERR
DAVID D. KOHTALA
JAMES C. KIBBY
GARY R. KUUSISTO
JOHN A. LAJZA
BARRY G. LEMPE
MICHAEL K. LORENCE
CHARLES J. OSLUND
MICHELE E. PEGAN
DONALD R. PETERSON
KATHLEEN A. PETTS
STEPHEN F. RACINE
DENNIS P. REGAN
DENNIS P. ROBINSON

LARRY R. ROGERS
ROBERT J. ROSS
WAYNE E. SCHALK
STEVEN B. SHIDELER
KAREN M. SHILLITO
MICHAEL T. SKARBEK
DENNIS A. STRONG
ROBERT S. THAYER
PATRICIA A. TIMONEN
JEFFREY P. TUPALA
CHARLES M. WALSH
MATTHEW J. WILKIN
SUSAN L. YOCUM
JAMES A. YOVIN
MARK A. ZAMBO
MICHAEL A. ZIELINSKI
MASTER OF SCIENCE IN FORESTRY

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Wildlife Management
Armada, Michigan

GARY R. LINGLE
Wildlife Management
Howell, Michigan

WILLIAM E. PERKIS
Forest Soils
Chicago, Illinois

SCOTT D. SPANO
Forest Soils
Allen Park, Michigan

GEORGE E. TEACHMAN
Forest Pathology
Grand Rapids, Michigan

CARL C. TRETIN
Forest Soils
L'Anse, Michigan

Not Pictured
THOMAS A. ALLEN
THOMAS A. SCHUPBACH
THE FOREST TECHNICIANS OF 1978

FRESHMEN. 1st row: Dan Denbrock, Steve Teuscher, Mark Kossonek, Carl Schaffner, Roy Molsor, Kevin Hausstein, Tim O'Malley. 2nd row: Jeff Coney, Stan Pudgasek, Woody Handy, Rick Walter, James Flones, Steve Ryder, Pat Thulis. 3rd row: Rick Jeffers, Gayle Schuster, Brian Posner, Randy Konthas, Barb Peto, Sue Stewart, Sherry Hahn, Julie Busakowski, Ralph Strasdin. 4th row: Paul Branch, Ed Berger, Mark Herman, Mickey Lasco, Eric Laird, Phil Ketola, Matt Lohela, Randy Cholette, Mike Egan, Ron Basso.

News of the Department (Continued from page 20)

tion of her doctorate at the University of Montana.

On the minus side, the Department much regrets the loss of Dr. Douglas Frederick, who left Michigan Tech in the Fall of 1977 to take a teaching and research position at North Carolina State University. We will have an opportunity to see Doug occasionally, however, as he continues to cooperate with some of our faculty members in research projects.

We also greatly regret the departure of Dr. Fred Stormer, who joined the U.S. Forest Service in June, 1978. He was appointed project leader of a wildlife research unit located at Texas Tech University, Lubbock. Also, William Hensel, a teaching assistant in 1977, resigned to take a position with the Consolidated Paper Company, Wisconsin Rapids, Wisconsin. We were sorry to lose these men as valuable members of our faculty.

David Andersen, research aide, was appointed to fill Mr. Hensel's position.

Faculty activity in research and professional affairs continued at a high level. Dr. R. K. Miller participated in the national meeting of the Society of American Foresters, reporting on a survey of Fire Working Group members regarding nomenclature of fire-related terminology. He wrote a fire prescription for Isle Royale National Park for management of natural and man-caused fires. Dr. Miller conducted a two-day training seminar for U.S. Forest Service personnel in the Chippewa National Forest on road location, design and construction. He also presented a paper at the Fifth National Conference on Fire and Forest Meteorology.

Professor H.M. Steinhilb co-authored a paper, "Mechanized Thinning of Northern Hardwood Pole Stands: Methods and Economics", published as Research Paper NC-137, by the North Central Forest Experiment Station. "Hammer" cooperates with the Forest Engineering Laboratory staff in the conduct of their research program.

Dr. Michael Coffman is engaged in research in soil classification using soil and vegetation correlations. He also is studying the fire and logging history of Voyageurs National Park in cooperation with Dr. Lawrence Rakestraw. His publications are a report on the use of indicator species to classify hardwood-hemlock forest, in Forest Ecology and Management, and an article in the Journal of Forestry, comparing the biomass productivity of red pine and hardwood forest.


Dr. Drew has been engaged in a study of the physio-


Dr. McIntyre presented a paper, "Red Pine on a Hardwood Site", to the Upper Peninsula Chapter, S.A.F. He is directing a project on evaluation of Michigan's worker's compensation for the Great Lakes logging industry.

James Armstrong is engaged in research on fracture mechanics and morphology of wood-adhesive composites. He attended the Section Meeting of the Forest Products Research Society at Duluth, and is co-author of a publication, "S2 Fibril Angle-Elastic Modulus Relationship of TMP Scotch Pine Fibers", which appeared in Wood Science.

Dr. Lawrence Rakestraw is engaged with Dr. Coffman in the study of fire and logging history of Voyageurs National Park. He was named to the Editorial Board of the Journal of Forest History, and to the Committee on Libraries and Special Collections, Forest History Society.

Dr. C. R. Crowther participated in the National Symposium on Parks, Recreation and the Environment. He is a member of the Forestry Slide Set Committee of the Upper Peninsula Chapter, S.A.F. and continues as chairman of the Recreation Working Group of the Wisconsin-Michigan Section, S.A.F.

Dr. Norman Sloan attended the national meeting of the Inland Bird Banders Association, and continues as editor of the association's Journal. He also participated in the Midwest Wildlife Conference.

Craig Mullenbrook, a senior in forestry at Michigan Tech, has the distinction of having a book published, of which he is the author. Craig is working on a second bachelor's degree, in forestry, after having completed a B.S. degree in natural resources at Northland College, Ashland, Wisconsin.

While a student at Northland, Craig worked on a historic research project concerning the Indians of the Lake Superior area. The resulting report became the basis for his book, "Life and Culture of the Lake Superior Ojibwe." The book is intended for class use in the higher grade school levels and junior high schools.
Sometime during your four-year struggle to become the President of Louisiana-Pacific or the head of the U.S. Forest Service, you encounter a traumatic experience known as FR 216 and FR 251 (Summer camp). The following is a time table which will round out one's average day as a neophyte forester going through Summer camp.

6:45 a.m. - Awaking to Jan Tucker's recipe of "Stamp Sand Stew".

7:30-9:30 a.m. - Your two hour morning lecture. Which includes: learning the correct pronunciation of Toivola from Irv, the art of girdling trees with your D-tape, and how to become an A-1 cruiser by learning to guess well.

9:30-10:00 a.m. - The bus trip in which you learn that kidneys "can" become dislodged if you shake them hard enough.

10:00-12:00 a.m. - This time period is left up to the whims of your instructors. You may be on the log deck trying to revive three girls after Hammer takes off his shirt. Or you could be practicing your type-mapping of a tagalder swamp. Or even learning new hand signals in relaying messages from the transit-man to the rod-man that you didn't see in the book.
12:01-12:02 p.m. - Your lunch hour.
12:03-1:30 p.m. - Finding out that your transit's telescope is useful in looking at alot more exciting things then a Philadelphia rod.
1:30-3:00 p.m. - Doing sunshots in which you find out that the sun moves alot faster than you think and that clouds are not always your best friends and go blind in the process.
3:00-4:30 p.m. - Trying to explain to your instructor that your Test-40 "really" was clear-cut since last year.
4:30-+ p.m. - Head for home and hoping that the smell of Cutters won't hurt your chances in getting a date for the evening or finding out that pitchers of Beer feel alot heavier than they did during the winter.

After ten weeks of these types of days, you finally head for home where your folks will say to you, "Well you've already had your summer vacation, now go out and find a job." $$$

—Gregg Glaus
Visiting Speakers Broaden Forestry Students'

Enzo Becia, a 1968 Michigan Tech forestry graduate, second from the left, chats with Randy Melvin, Ralph Grissard and Stan Kass, left to right, after speaking to forestry students on land use planning for Alaska. Becia is a natural and physical science planner for the Federal-State Land Use Planning Commission for Alaska. He presented a slide talk in May and later met informally with forestry students.

James Armstrong, Dr. H. Michael Barnes, a forestry student and Dr. Bernard Sun chat during Dr. Barnes' visit to the Forestry Department last fall. Dr. Barnes is a wood scientist who is employed as a research specialist at Mississippi State University.

James Jordan, right, soil scientist with the U.S. Forest Service, discusses soil mapping and classification during a talk last winter. Assisting in the presentation to forestry students are Dr. Linda Bartelli and Dr. Stephen Shetron. Jordan is a member of the forest supervisor's staff on the Ottawa National Forest, and is stationed at Ironwood.

Ed White, left, and Dr. Martin Jurgensen discuss matters of interest during Mr. White's visit to Michigan Tech last year. He spoke to forestry students in soils while visiting the Department. White is a research scientist with the University of Minnesota Forest Experiment Station, at Cloquet.
Dr. Michael Coffman and Dr. Robin McIntyre visit with Dr. Eric Bolen, right, during Dr. Bolen's visit to Michigan Tech in April. During his visit, Dr. Bolen spoke and showed slides depicting the Welder Wildlife Foundation and its research station in Texas. He has served as assistant director of the station for several years.

Leslie L. Toth, Superintendent of Forestry and Landscaping for the City of Detroit, discusses municipal forestry in a special meeting with forestry students. A frequent guest speaker in the Department, Mr. Toth meets with students in recreation resource management as well as urban forestry students during his visit to Michigan Tech.

Dr. Sylvia Taylor, Coordinator of the Endangered Species program of the Michigan Department of Natural Resources, tells of problems she encounters in trying to save and increase the populations of rare and endangered plants and animals in Michigan.

Dr. Taylor enjoys the bracing weather of a Copper Country winter as she visits with Dr. Richard Crowther. She also took a snowmobile and snowshoe trip into the Keweenaw Peninsula during her stay in this area, in February.
That
Foresters Active in Varsity Sports

Left to right: Gail Simonds, women’s basketball; John Bock, wrestling; Warren Mandrell, cross country, track, cross-country skiing; Ken McLellan, wrestling, and Barbara Bonefeld, women’s basketball.

Left to right: Sandy Green, volleyball; Mike Trigg, football, and Jerome Perez, wrestling.

Cathy Bowers, skiing.
A deep, wooded gash in the central highland of Michigan's Upper Peninsula. This is the Sturgeon River Gorge, a scenic attraction created by the Sturgeon River as it carved its way through the bedrock and glacial overburden of the surrounding plateau.

The steep slopes and swift flowing river, with its appealing waterfall, have been both a barrier to man's activities and to development of the area, and an attraction to many who wish to enjoy its rugged beauty.

Attention has become focused on the Sturgeon River Gorge since its designation in 1975 as a Wilderness Study Area through the passage of Public Law 93-622. This Act of Congress, commonly known as the Wilderness East Act, directs the U.S. Forest Service to study the gorge area for possible inclusion in the federal Wilderness System. It is among 17 such study areas which were identified in the Act.

As of July 1977, there were 162 wilderness areas in the U.S., totaling 14.5 million acres. Michigan has 5 wilderness areas totaling 201,555 acres.

The study is now underway and the Act requires that the results of the study be completed by the U.S. Dept. of Agriculture and reported to the President by January 1, 1980. The president will then make his recommendations to the Congress. The Act not only requires that the 13,208 acres within the Sturgeon River Gorge be studied, but also any lands of similar quality be considered. As a result of this, a tract known as the Little Silver Area (6,136 acres) was also included in the study.

Forest Service personnel, with the help of others, are studying the resources as well as the features of the 13,208 acres within the Sturgeon River Gorge Area and the 6,136 acre Little Silver Area located in Houghton and Baraga Counties of Michigan, in the Kenton Ranger District of the Ottawa National Forest.

In the Wilderness Act of 1964, forerunner of the Wilderness East Act, wilderness is defined to be "an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic or historical value."

However, the 1975 Act liberalized the characteristics of areas in the eastern United States, to qualify for wilderness designation, requiring only that they be returning to a substantially natural condition even though they had been developed, used or modified by man at an earlier time.

The major objective of wilderness is to provide an opportunity for solitude. To preserve this opportunity, permits may be issued to control the number of people entering a wilderness area and restrict the activities thereof. Here man is only a visitor. The convenience and comfort of man are totally ignored in the management plans for a wilderness area. Improvements are made to protect the resources and not for economic gain. Timber harvesting, motorized vehicle use, and roads are strictly prohibited.

The dominant feature of this area is the Sturgeon River Gorge itself which is over 300 feet deep and varies in width from 1-3 miles. Scenic overlooks on the east rim offer excellent panoramic views of the gorge. The Sturgeon River meanders for about 13 miles...
through the valley. A volcanic rock outcrop forms the 20 foot high Sturgeon River Falls. Numerous tributaries join the Sturgeon River from deeply dissected valleys. Rising 500 feet from the valley floor of the little Silver River is Silver Mountain - a site of early prospecting efforts by both Indians and white explorers. Visible from the summit are the ridges and valleys of the Little Silver watershed, the Sturgeon River Gorge, and the distant Keweenaw Bay of Lake Superior.

Following is the preliminary information on the resources and facilities of the study area to help acquaint you with the attractions of the area.

From a geological standpoint the major bedrock type found in both areas is Jacobsville Sandstone, an unfossilized reddish sandstone and silt stone. A gray sandstone-like formation called "graywacke" lies beneath the south-east portion of the Sturgeon River Area. The Sturgeon Falls and Silver Mountain are outcrops of the South Range lava flow.

Before 1850, silver and copper were mined at Silver Mountain. Evidence of mining still exists today. A full report on the mineral resources is currently being prepared by the U.S. Geological Survey and The Bureau of Mines. Most of the major mineral rights to the area are held by private parties.

Together with 13 miles of Sturgeon River there are 45 miles of permanent streams in the area. The water quality of the Sturgeon River and its tributaries exceeds the new national water quality standards, except, of course, when snow melts and heavy runoff occurs and muddies the water. Ground water exceeds the quality statutes with the exception of high iron and manganese contents.

These waters are not highly productive with respect to varieties and quantities of fishes. The small tributaries are primarily trout feeder streams which serve as nurseries for the Sturgeon River. Fishing pressures within this area have been light due to limited accessability. Some species present are sturgeon, brook trout, white sucker, northern pike and the small and large mouth bass.

The wildlife is found to be typical of the northern hardwood and coniferous forests. Ruffed grouse, mink, woodcock, snowshoe hare, muskrat, weasel, skunk, bobcat and black bear are also present. The area also supports a very good deer herd. Although none of the above species are on the endangered list, the area is within the range of such endangered animals as the eastern timber wolf. Studies are still being conducted in this area to provide more detailed information.

The majority of the timber has been cut over in the last 80 years. The forest type is now maturing primarily to a northern hardwood forest consisting of sugar maple, red maple, yellow and white birch, bass wood, bigtooth aspen, red oak, ash, black cherry and ironwood. Communities of spruce, hemlock, red and
Spectacular Sturgeon Falls forms a focal point of beauty and interest as the river plunges 20 feet in a cascade of foam and swirling water. The falls is located in the midst of the Sturgeon River Gorge and has attracted visitors for generations. A woods road, providing convenient access to the falls, would be closed permanently if the area becomes a wilderness.

Forest roads such as this form much of the boundary of the proposed Sturgeon Gorge Wilderness. Such roads provide access reasonably close to the river and its adjoining bluffs and hills. One Forest Service campground is located within the proposed wilderness area.

The Sturgeon River, here appearing deceptively placid in an early winter scene, winds through a chasm of its own creation among hills covered with maple, birch, aspen, spruce, pine and other northern forest species.

White pine, balsam fir, and white cedar are found, and jack pine prevails on the more sandy sites. Timber volume at this time on the Sturgeon River area is 14,834,000 board feet of sawtimber plus 84,852 cords of pulpwood. There is an estimated 2,433,000 board feet of sawtimber on the Little Silver area plus 26,835 cords of pulpwood.

Generally, recreation can be described as light, with the majority of activity taking place at such key attractions as Silver Mountain, the Sturgeon River and Sturgeon Falls, or during special times of the year such as the hunting season. Most activities are fishing, hiking, hunting, picnicking, snowmobiling, 4 wheel driving and motor bike riding.

Manmade facilities include 13 miles of unsurfaced, old logging roads located primarily on the plain above the Gorge. All roads leading down into the Gorge are impassable due to the rugged terrain. However, a redwood stairway was constructed at Silver Mountain in 1962 to provide access to the summit and is still useable.

Within the 13,208 acre study area there are 2,502 acres of private land. Over 2/3 of this is held by the Wisconsin-Michigan Power Company as a possible hydro-electric plant site, although this plan has now been abandoned. Most of these private lands are located in the northwest corner of the west side of the
Isolated hills such as this rise within the gorge and Little Silver study areas, dominating the landscape above the slopes and ridges within the canyon formed by the Sturgeon and tributary rivers.

area. Within the 6,136 acres of study area in the Little Silver area, 759 acres are private, and are located in the Northwest corner of this area.

Most of the area was logged between 1880 and 1900. Pine logging began in 1880, and occurred mostly from 1890 to 1900. Over 500 million board feet were driven down the Sturgeon River in a 15 year period. Many old logging roads still can be seen. Also logging artifacts were reported to have been found. The entire area was once burned quite heavily and between the logging and this fire, there are only scant remnants of the original forest. There is one stand of virgin hemlock located near the mouth of Festuca Creek.

Without question, this area and the views seen from it produce some of the most fascinating and inspired feelings that one could experience within this great state of Michigan. This beautiful tract of land and its natural values certainly deserve protection from man's desecration, whether or not it is made a part of the national Wilderness System.

Many small tributary streams rush down the side channels which feed into the Sturgeon River throughout the gorge area.

Driftwood and the debris of old logging operations and log drives on the Sturgeon River still litter its banks, deposited along the shoreline during high water of the spring runoff.

Scenes and vistas such as those below and to the right may be found in many places along the rim of the gorge or from nearby hills such as Silver Mountain.
Hammer Speaks
by Daniel O'Brien

Within the different departments and schools at Michigan Tech, one can find a wide variety of personalities and characters. The School of Forestry and Wood Products is no different and one of the best loved and most appreciated professors is Helmuth M. Steinhibl. Commonly known by the nickname “Hammer”, he is famous for lighthearted presentations and down-home, practical examples.

He grew up in the Trimountain-Painesdale area and earned his baccalaureate degree in forestry from the Michigan Tech. His class, that of 1940, was the first group of Tech Foresters to graduate. Later he earned his Master's degree at Michigan State.

For the most part, Hammer speaks from experience. In his sixty years he has done more than most of us even think about. Amazingly enough, his experiences are relatively simple. He doesn't talk of trips to Europe or other extravagant adventures. Instead, Hammer tells of simple things. He'd be much more likely to tell of hurrying home from a date out on an old logging road in his Model A and having his back wheels break through a bridge. If it was a planned maneuver to get the gal home late, it worked. He ended up marrying her and he was only twenty minutes late getting her home.

His humor is down to earth and his ability as a storyteller is unbeatable. If someone had time and could pull Hammer away from his teachings, Hammer could tell enough stories to fill a book. The following is one story Hammer has related in the last few years.

Hammer speaks:
Back when we started the Forestry Club, we didn't have the problems you've got getting people to do things. It was easier to do things as a group 'cause everyone else was an engineer and they'd say, y'know, “if you can't make it in engineering, y' can always be a forester.”

Judd Bentley, he was a good guy. He was our president and nuts, we didn't have these dinky little patches. We'd have a big old patch that covered the whole back of the jacket. Y'know how it is when you're a minority - y' stick t'gether.

We used to make bigger an' better snow statues back then. Heck, there were only 25 or so of us foresters an' if y' didn't show up t'work, people would give y'hell in class. I used t' come in from Painesdale - that's 10 miles. Y' didn't have much choice.

One year, when Judd was president, we made a moose and flooded it around him like he was up to his knees in a lake with his head tossed back like this - you know how they do it. It was real good - we won 2nd place. They didn't know it, but we had a set of antlers that we painted white and stuck on his head. Dam' if we could make those without anything in there.

Anyway, this big lawyer downtown - what was his name? Aw, hell, my wife knew his wife - she just died last year - around 90 years old. Well, this guy went hunting moose in Canada every year. He called Bert Noblet, the head of the department then, and said the antlers were on wrong. Bert called Judd and told him, and Judd called me and the vice president. I was secretary-treasurer. We went out and looked and sure enough, the darn things were on wrong. They stuck out kind of flat instead of up. Y'know what I mean. The moose couldn't eat with'em down the way they were.

We didn't know what to do. That guy downtown was a blabbermouth and he'd be spreading the word all over town. Then Judd told us to go down and buy a real nice hunting knife and bring it over to the lawyer and make a presentation from the club. “Tell him he won 1st prize for being the first to notice the antlers were on wrong.” That shut the sucker up - he thought it was planned.

Hammer's story, which by itself seems best classified as a local legend, tells of life in an era-gone-by. It describes antics and methods of people-management that seem to be lost in bureaucratic red tape. It also points out a concern for detail that doesn't seem to exist today in Winter Carnivals. While statue builders today pay attention to minute details before judging, no one would really get worked up over some criticism after judging.

Perhaps the most significant aspect of this legend is not the story itself. Rather, the teller and his whole personality evolve to form a legend in their own right. While some professors are remembered and feared for their reputations as tyrants, Hammer is known far and wide as teacher, researcher, citizen, and humorist.
WOOD FOR
ENERGY:
A Hot Issue

By Egon Teodorson,
Assistant Wood Scientist
Institute of Wood Research

Wood, when burned gives off energy in the
form of heat. It is this simple concept and great
abundance of wood that has caused us to take a
closer look at wood material as a viable energy
source in this day of increasing costs and de­
creasing availability of petroleum and natural gas. Pro­
ducing energy from wood can be accomplished through
several means, direct combustion for process steam or
electrical power generation, chemical reduction and
pyrolysis, and bioconversion via anaerobic bacteria.
The wood products industry is a leader in the use of
wood for energy production mainly through direct
combustion processes. Many plants fulfill the majority
of their energy requirements through conversion of mill
residues into a useable form of energy (heat). With new
processes for converting wood residues and plant
material into a solid, high-density, uniform industrial
fuel as pellets, we should see expansion of wood energy
systems into other areas of industry and consumer
markets in the future. Pelletized fuel can be used alone
or to supplement existing energy systems, particularly
coal burning units where little modification would be
necessary. A feasibility study has recommended
utilizing wood material as an energy source for power
generation at Michigan Tech and this possibility is
currently under investigation by a professional organi­
zation.

Pyrolysis, a chemical change brought about by the
action of heat in the absence of oxygen or other oxidents
has been in use for years. This process has been applied
to wood to yield products such as methanol, acetic acid,
and turpentine plus recovery of residual charcoal. Py­
rolysis reduces wood material into simple organic mole­
cules which can be used possibly as building blocks for
the synthesis of polymers or other petrochemical
products. Further research is necessary to add to exist­
ing technology before pyrolysis can be used for efficient
utilization of wood materials.

Bioconversion is a process using anaerobic bacteria to
digest organic materials and produce methane. Bioconversion is being developed mainly for use on
animal manure and municipal waste, but could be used
for disposal of cellulosic materials as well. However,
many problems concerning bioconversion must be
solved before this process can operate feasibly.

Technology exists today for the efficient utilization of
forest litter and mill residues in direct combustion
processes. The greatest potential for using this technol­
ogy lies within the forest products industry. New ideas
such as growing plant material on a large scale for its
fuel value and further research efforts in the pyrolysis
process and bioconversion may open up new pathways
for utilizing wood material as an energy source. At the
Institute of Wood Research, a study to determine the
feasibility of fueling forest vehicles with wood residue is
currently under way to study existing technology and
determine suitable directions for research efforts in this
area.

No single problem will touch so many people and
affect the future economic structure of the world like
the energy problem. Wood as an energy source is a
viable alternative to fossil fuels but it is not a means by
which the world can solve all its energy problems. How­
ever, using wood for energy purposes will play an
important role in meeting present and future energy
needs world wide.
The Ford Forestry Center is involved in a diversified research program, encompassing computer applications in forest measurement and management; development of standardized computer programs for Continuous Forest Inventory (CFI); long range studies of forest growth from CFI; revegetation of mine waste areas; forest inventory and growth procedures; log and tree quality and value studies; forest soils-productivity level studies; soil erosion studies; forest influence studies; and the fertilization of forest soils. During the past year these research activities have achieved considerable progress.

The Continuous Forest Inventory-Soils project, under the direction of Dr. Stephen G. Shetron, entails a study of forest productivity on the major soil taxa, in the Upper Peninsula. The project includes the testing of field observed soil properties, classifying soils with forest productivity, the study of the influences of the chemical and physical soil properties on forest growth, and the effects of management on the productivity of the major forest types in the Upper Peninsula. Dr. Shetron is also conducting a study concerning the practicality of fertilization of northern hardwoods. This study is being sponsored by the Michigan Department of Natural Resources (DNR). Initial results of this study show a 33 percent increase in volume growth on fertilized trees. The potential results of these studies will give the forest manager an understanding of site and forest productivity relationships; as well as intensive management alternatives.

Dr. Shetron, and others, have maintained a comprehensive program for mine waste stabilization and reclamation, of both metallic and non-metallic materials. These studies are being sponsored by the Michigan DNR and the mining industries. In the area of metallic spoil reclamation, Dr. Shetron has expanded the species adaptability studies to include various fertilizer applications and exotic grass species. A chemical and fiber mulching program has been initiated to reduce wind erosion on iron tailings basins, and to stabilize steep stripping dumps. Reclamation of non-metallic wastes has concentrated on a study of the utilization of paper mill liquor as an amendment to cement dust dumps. The results of this study may alleviate the waste disposal problem of two industries.

In the area of forest influences, Dr. Robert E. Dohrenwend has initiated a series of studies dealing with interrelated aspects of the physical environment. The National Science Foundation (NSF) is currently supporting his study of air mass movement effects on snow chemistry. This study has considerable potential for expansion, to cover acid precipitation effects on forest productivity. A study of turbulence properties of the atmosphere in and above the forest canopy has been initiated, under the leadership of Dr. Donald G. Yerg. Work has begun on the development of equipment for the investigation of erosion processes on forest soils. This study is being guided by Dr. Dohrenwend and Dr. Lindo Bartelli with the help of Dennis Robinson. In cooperation with the Soil Conservation Service they are also designing an investigation of water behavior in forest soils.
ACTIVITIES
The Forester Staff, sans our alumni editor who is lost in the woods, in one of our lighter moments.

Three quarters of hardcore layout crew at work.

Our prima donna in all his seriousness.
STILL THE "FORESTER" STAFF

More contact prints! Oh boy!

Almost a prima donna (prima barbara?)

The editor - behind bars.

One of our dedicated photogs.
FORESTRY CLUB COMPLETES ANOTHER ACTIVE YEAR

by Doug Curry, Chief Forester

Another year has come and gone and the Forestry Club progresses. This was a good year. The fall and spring pulp cuts continue to grow in production and consumption. The conclave team put in another fine effort, both in transit and in the events.

The Otter River Camp has undergone some major changes. The new bridge is in, and the building now boasts a wood heater, among other much needed improvements. Thank you, camp committee.

Winter Carnival was a success for the Forestry Club. The club came through in several events and scored more points than in the past few years.

The club’s constitution underwent a revamping. Although the vote was touch-and-go the needed margin was obtained and the new constitution took effect. Hopefully some confusion has been removed.

Booyaw, thanks to Norm and his assistants, was again a large success - good food, good times, good deal. I would encourage all club members and non-members to attend this event next year and in the years to come.

I would like to thank the officers, all the committee chairmen, all those who helped me this year, and all those who participated and made all our events worthwhile.

Craig Mullenbrook (center) relaxes with Forestry Club officers Bob Mayer, left, and Doug Curry, after presenting a talk to the club. Craig spoke and showed slides relating to his experience as a Youth Conservation Corps leader.

Forestry Club and faculty members participated in the annual bowling party at the Copper Bowl lanes at Ripley, in April. The Saturday afternoon party, featuring competition between classes and faculty, ended with the faculty victorious.
Members of the Forestry Club, 1977-78. This happy group is pictured at the conclusion of the annual Venison Booyaw, held in April at the Houghton Episcopal Church.

Marty Jurgensen and Bill Perks, below, compare notes between frames during the Forestry Club’s bowling party. Marty led the faculty team to victory, while Bill was the only bowler representing the graduate students. Doug Curry, right, wears a satisfied look after completing his turn on the alley.
The Michigan Tech Student Chapter of The Wildlife Society is now in its fifth year. The faculty advisors of the chapter are Dr. Norman F. Sloan and Dr. Fred A. Stormer. The Wildlife Society is a professional organization, working to promote professional spirit while increasing our knowledge of wildlife through social cooperation.

Since receiving its charter in 1974, the chapter has been involved in a variety of projects. In October, the members held their third annual pulp cult. Unfortunately, it rained all day, which resulted in a lower production than in previous years. Money earned from this activity was used toward the expenses of those participating in the North Central Wildlife Conclave held at the University of Wisconsin/Stevens Point in April. The trip was a stimulating experience since the participants had the opportunity to hear papers on a variety of wildlife topics. The highlight of the conclave was the quiz bowl, in which four members from each University competed on the basis of their knowledge of wildlife biology.

Norm Sloan is an excellent cook, and displays his skills by cooking for our annual smorgasboard every spring. The menu features bear, vension, beaver, grouse, trout, and hare. The money earned from the smorgasboard provides funds for guest speakers at our monthly meetings.

In the fall term, our guest speakers included Dr. Ronald Rusch, leader of the Wisconsin Cooperative Wildlife Research Unit, who spoke on the Wildlife Society’s new program to certify wildlife biologists. Jack Barclay, a wildlife graduate student in the Department of Forestry, reported on the Peregrine Falcon Recovery Program.

During the winter term, Dr. Robert Krear of the MTU Department of Biological Sciences, gave a talk and slide presentation on the Pribilof Islands of Alaska. Sylvia Taylor, Endangered Species Coordinator for the Michigan Department of Natural Resources, spoke on Michigan Endangered Species.

In the spring term, Dr. Lloyd Kieth, Professor of Wildlife Ecology at the University of Wisconsin presented, “The Theories of the Ten Year Cycle.” Dr. Lloyd is a recognized authority and author in this area. Our last guest speaker, Joeseeph Schiedler, a graduate student of the Department of Biological Sciences, gave a presentation of his study of the wolf-moose relationships on Isle Royale.

I would like to thank all the members, officers, and advisors for making this year a great success.

Doug Jones - President

Wildlife Society officers are, left to right: Doug Jones, president; Charlie Decker, vice president; Randy Riha, secretary-treasurer; and Randy Jacobs and Stacey Ault, members of the board of officers.
This year, the Wildlife Society sent seven members to the North Central Section Student Wildlife Conclave. It was held at the University of Wisconsin-Stevens Point. Participating members were Stacey Ault, Terry DeBlaay, Charlie Decker, Randy Jacobs, Doug Jones, Steve Merchant, and Karl Sipple.

Saturday morning activities involved field trips to local areas. Field trips included Mead Wildlife Area, Prairie Chicken “booming grounds”, Stream Improvement on the Little Plover River, and the International Crane Foundation field trip. Technical papers on wildlife and fisheries topics were presented in the afternoon. Some of the better papers presented were “Role of Diseases in Wildlife Population”, by Dr. Daniel O. Trainer, “Hawks, Owls and Eagles - Techniques in Rapter Research” by Dr. Francis Hamerstrom, “Brook Trout Habitat Manipulation” by Robert Hunt of the Wisconsin D.N.R. and “Prairie Chicken History and Distribution” by Dr. Frederick Hamerstrom.

All of the schools participating competed in the “wildlife quiz bowl” and the “wildlife techniques contest”. The techniques contest consisted of identification of various duck wings, study skins, skulls, and mounted tree leaves. The Michigan Tech team won first place in this event, handily defeating all other school teams.

In the evening, the awards banquet took place where we received a blue ribbon for first place in the techniques contest. We were then served a fabulous meal of wild game. Afterwards, a band played and free beer was put on tap.

In all, the conclave was a valuable learning experience that I’ll always remember.

Doug Jones
The Michigan Tech FPRS Student Chapter was organized during the spring quarter of 1977 and officially recognized at the FPRS Upper Mississippi Valley sectional meeting at Duluth in October 1977. Dr. Bernard Sun and James Armstrong are the faculty advisors. Membership has grown to over 20 wood & fiber and forestry students. The MTU FPRS chapter is one of fifteen student chapters in the U.S. and Canada.

The aim of the student chapter is to increase student awareness of the forest products related industries. This is being accomplished by attending FPRS meetings around the country, by attending seminars on campus, and by arranging for speakers to address the chapter.

During a field trip to the Forest Products Lab in Madison, Wisconsin, five student members and Dr. Sun stopped at the FPRS headquarters which is also in Madison. After a tour of the building, the group visited shortly with Art Brauner, business manager and advertising director of the "Forest Products Journal". All FPRS members receive monthly issues of the "Forest Products Journal" as well as quarterly publications of "Wood Science".

In October, Walt Papenfus, senior field services representative for the American Plywood Association, spoke to the chapter and included a slide presentation on some of the current and future uses of plywood. The presentation was followed by a stimulating question and answer period.


In January, H. Michael Barnes from Mississippi State spoke on "Stabilizing Treatments for Wood". Also during January, Glen Stinson and Jim Finnessy of Weyerhaeuser Company spoke to the FPRS chapter about the organizational structure of Weyerhaeuser and employment possibilities within the company at various levels.

Progress has been made in establishing the FPRS chapter at Tech. This trend will be continued as long as students are concerned with preparing for the jobs that a college degree opens up for them.

Allan Hoheisel
The Chapter, in only its second year of existence, conducted a number of projects and sponsored several speakers. The year was kicked off with the traditional fund raiser, the “pulp cut”. Refreshments followed at Mike's and almost everyone had a good time. The treasurer showed that he was a real cut up.

Homecoming was next with the Soils Club being represented by an unusually motley looking hobo parade crew riding in good old Jake. Instead of candy, Ontonagon clay was tossed to kids along the parade route, demonstrating what “dirt” people are really like.

At Winter Carnival, the Soils people decided to build their first snow statue. A lot of hard work, in -10 degrees F temperatures, produced the second place one-nighter. Its location, beneath the Forestry Building overpass, was especially visible to twigs.

The final project of the year involved planting trees for the Quincy Mining Company on top of Quincy Hill. This undertaking was shared with the Forest Products Research Society Chapter. Fifteen thousand red pine were the stock and forty acres of plowed field was the site.

During the year four speakers presented talks on various topics. Our own Professor Bartelli (Bart) spoke to the membership concerning his world-wide adventures as a Soil Scientist. He discussed the need for more reliance on soil factors when considering land use. Examples in the Soviet Union and India were shown during the slide presentation.

Ed White, of the University of Minnesota, gave a very good talk on forest fertilization and the potentials for growth increases. The question and answer period was also very interesting and informative.

Tom Crow, of the North Central Forest Experiment Station, presented a slide show and discussion on the moist tropical rain forest of Puerto Rico. This fascinating, but quickly disappearing, forest ecosystem supplied a very interesting topic.

Fred Kekko, of the Soil Conservation Service office in Hancock, was the final speaker of the year. His presentation dealt with the role of the Soil Conservation Service in local soil conservation programs.

Our thanks to all of the speakers for these excellent opportunities to broaden our members backgrounds in soil science.
Midwest Forestry Conclave - 1977

Held at Purdue University

Not a victory, but a good showing by Tech's Foresters
Winter Carnival

Forestry Club's snow statue entry in Winter Carnival expressed a Tech student's distaste for two aspects of college life, portraying a Toot with a shelf full of textbooks, with the title: "Dorm food isn't the only thing that turns my stomach."

The Soil Conservation Society unearthed this clever snow statue, titled "This is a soil pit?" which won second place in the "one-nighter" statue competition.
INTRAMURAL SPORTS

Forestry students as always engaged in a variety of intramural athletic activities this year. Unfortunately, most of the students represented organizations other than Forestry Club. However, the club did organize a volleyball team, shown in action here.

Lacking a report from the club's intramural sports chairman (if any), we cannot report on the team's success, or of any other sports in which Forestry Club teams may have engaged this year. We hope to do better next year!
Cutting pulpwood has become one of the major activities for the Forestry Club during recent years, and has proved to be a popular event for many members. With an assist from some of the faculty, the students enjoy the opportunity to cut, buck and pile the red pine, gaining experience in using power saws and other equipment, as well as their muscles.

Cutting pulp also is a great money maker for the club, providing much of the needed funding for the annual trip to the Forestry Conclave and for other club activities.

Adding to the popularity of the event is the usual party which follows a hard day's work. As in most years, the Halfway was the scene of the festivities this year, and featured hot dogs, potato chips and a choice of beverages.

The club's success in cutting pulpwood has been so great that other organizations of forestry students have adopted the same activity as a money-making, as well as an enjoyable project.
In the Woods, then at the Party
THE OTTER RIVER CAMP

The Otter River Camp is located about three miles west from Elo. Where? Where a person can get away to a hot sauna then a jump in the snow, a roaring fire and warmth (?), and the sound of the creek to go to sleep by. Ah, the solitude and relaxation enjoyed by all. But make sure you pick the right time. This past summer six future foresters, myself included, stayed out at the camp during Summer Camp. If any person happened to drop by to relax they would have found six future foresters working for the rent, if there is work to be found in swimming and tubing down the creek. Or if a person happened to drop by any number of weekends this fall they would have found a sizable crew of future foresters improving the Camp. So if you heard that the Otter River Camp is the place to go to “get away” you might want to make sure none of us future foresters are going to come out to “work”.

No really, work and fun are one and the same out at the camp. We got a good deal done this past summer such as collecting firewood, putting up shutters, preserving the cabin and much more. And for fall work day, erosion control was done on one bank of the creek and most of all a new bridge was put up across the creek, without any problems. But while this work was going on, there was always time for having a grand old time.

So if you want to put the books down for a time, the Otter River Camp is the place to go, cause the work envolved is probably swimming, walking through the woods, snowshoeing, or...anything fun.

—Scott Stoery
Camp Committee
Chairperson
That one shouldn't wash out! Forestry Club members inspect a new abutment for the span connecting the island to the east shore of the Otter River. The old bridge was destroyed by high water last year.

Oops—watch out! Club members balance on logs while working on the new bridge.

Now, who changed the lock on the cabin door?
XI SIGMA PI SYMPOSIUM
THE JAAKKO POYRY REPORT — FUTURE OF THE U.P.?

The Michigan Tech Chapter of Xi Sigma Pi, honorary Forestry society, again sponsored a successful forestry symposium during the past spring. The symposium, held on April 26 at the Michigan Tech Memorial Union, was titled “The Jaakko Poyry Report—Future of the U.P.?”

The Jaakko Poyry Report, a study completed last year, was conducted by a Finnish forestry consulting firm. It examined the practice of forestry in the Upper Peninsula of Michigan and the potential of the Upper Peninsula forests for providing a sound economic base for the area.

Panel members for the symposium were Emil Groth, executive secretary of the Upper Peninsula Federation of Landowners; Ruth Hansen, Baraga County ASCS supervisor; Ray Pfeifer, section leader, Cooperative Forest Resource Development for the Forest Management Division, Michigan DNR, and Richard A. Sirken, planning manager, Lake States Operations, Champion Timberlands, Inc.

Kathleen White, president of the MTU Chapter of Xi Sigma Pi, served as chairperson for the symposium. Dr. E. A. Bourdo, Jr., Dean of Forestry and Wood Products, was keynote speaker.

The symposium was well attended by professional foresters and others interested in Upper Peninsula forests, as well as by students in forestry and others at Michigan Tech.

Kathleen White, president of the MTU Chapter of Xi Sigma Pi, opens the symposium proceedings. Panel members, seated left to right, are Richard Sirken, Emil Groth, Ruth Hansen and Ray Pfeifer.

Panel members listen as Dr. E. A. Bourdo, Jr., Dean of Forestry and Wood Products, presents the keynote address at the beginning of the forestry symposium.

A large and attentive audience, comprised mostly of professional foresters, listens to the symposium speakers. This annual event has become a major forum for discussion of issues facing forestry in Michigan’s Upper Peninsula.

66
XI SIGMA PI INITIATES


Fall 1977 Initiates, Xi Sigma Pi.


Spring 1978 Initiates, Xi Sigma Pi
Always a Popular Event —

The Episcopal Church in Houghton was the scene of the 1978 venison booyaw, sponsored by the Forestry Club. A good turnout, as always, was on hand to enjoy the unique concoction conjured by Dr. Norman Sloan and his crew of faculty chefs and bottle washers and aided by a few willing (?) students.

This year's booyaw, while tasty and satisfying, had a suspiciously beef-like flavor, which may be attributed to the corn-fed qualities of the locally bagged venison, or a trip to the nearby supermarket to supplement a meager supply of deer-meat.

The evening was capped by a slide-talk presentation given by Larry Jokinen, detailing the adventurous journey of the Forestry Club's Conclave team to and from the event of last fall.
The Forestry Club's Annual Venison (?) Booyaw
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