The 1970 Michigan Tech Forester

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Foreword

"The times, they are a changing," even at Michigan Tech. In order to keep abreast of the changes, we have increased the size of this year's Forester. Along with our standard articles, we've added a few new ones: foresters' wives and girl foresters, Xi Sigma Pi honorary fraternity, and Tech's Environmental Teach-in. We have also printed, with regrets, a memorial to an alumnus who fell in Viet Nam. To start the issue, we are proud to dedicate this year's Forester to an alumnus who has done an outstanding job in the field of forestry — Mr. Gordon Trombley, Idaho Commissioner of Public Lands. Our main feature and theme is the Pictured Rocks National Lakeshore. We acknowledge with thanks the fine cooperation of the National Park Service in making available information and pictures used in this issue.
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We acknowledge with thanks the many photographs provided for this issue by the National Park Service, United States Department of Interior.

Page 30 photo by Jim Blevins.
The “Forester” Salutes

In May, 1967, an important event occurred in the State of Idaho. Gordon C. Trombley was appointed Commissioner of Public Lands. For the first time in its history, a professional land commissioner had been appointed to oversee the public lands of the State of Idaho.

This event also was important for Michigan Tech University, for Gordon Trombley is a forestry graduate of Michigan Tech, class of 1952. In recognition of his outstanding service in the profession of forestry, in his demonstrated abilities as a land manager and administrator, and in his achievement in attaining his present distinction, the Forester salutes an outstanding alumnus, Gordon C. Trombley.

Gordon’s entire career, following his graduation from Michigan Tech, has been pursued in the State of Idaho. His first employment was as a scaler with Potlatch Forests, Inc. While an employee of Potlatch, he participated in the widely known “log drive” conducted annually by this firm. The drive began on the upper north fork of the Clearwater River and ended two weeks later at Lewiston, Idaho. During the drive, the loggers lived on a Wanigan which consisted of three tent houseboats supported on rubber floats. The discomforts of being wet to the waist most of the time, and straining to keep up with the fancy “da doos” performed by the old timers with the peavey, were minor concerns in comparison to the thrill of taking part in this historic experience. The Potlatch log drive is truly a matter of history today, for it was discontinued some years ago.

During the summer of 1953, Gordon was in charge of a logging camp near Headquarters, Idaho. Later in the year he joined the Idaho State Forestry Department, with an initial assignment at Kamiah, Idaho. Later he was stationed at Orofino and, in 1959, moved to Coeur d’Alene.

Mr. Trombley remained at Coeur d’Alene until 1967, in that year moving to Boise. It was in 1967 that the Forestry Department was merged with the Idaho Land Department to form the present Department of Public Lands. Gordon was one of three men appointed by the Governor of Idaho to draw up plans for the new department. When the merger was effected, Mr. Trombley was appointed by the Governor as Commissioner of Public Lands.
Gordon is a native of Minnesota, having been born and reared in Remer, Minn. Following his graduation from high school at Remer, he was employed by the W. A. Rogers Lumber Company at Cass Lake, Minn., until he entered the military service in 1942. He received a commission as an officer in the Army Air Corps and served with the 87th Troop Carrier Squadron in England, France and Germany.

In 1945 he married Evelyn Rogers at Cass Lake, Minn. After another period of employment, Gordon entered Ferris Institute at Big Rapids, Minn. Soon he decided that forestry was his calling, and transferred to the Sault Branch of Michigan Tech at Sault Ste. Marie. After completing the two-year program there, he moved to Houghton for the final two years of his undergraduate work, and received his degree in 1952.

Mr. and Mrs. Trombley have three children. They are Gordon, who lives in Libby, Mont.; Susan, a student at Creighton University, Omaha, Nebr.; ten-year-old Steven. The family enjoys outdoor activities and has a special attachment to Priest Lake, in northern Idaho, where Mr. Trombley built a cabin some years ago.

Gordon's recreational interests include hunting and fishing, with duck hunting a favorite activity. His duties as Land Commissioner, however, are exceptionally demanding of his time. In addition to being responsible for the administration of three million acres of land, he is the Governor's Representative for the Public Land Review Commission and is Secretary of the State Land Board which sets policy for all state land operations. Mr. Trombley also serves as Secretary of the Western States Land Commissioners Association, and is a member of the Association's Executive Board.

An ability to create a harmonious atmosphere in a contentious situation has been an important factor in Mr. Trombley's success. Humility and a talent for understanding his fellowman are among his attributes which complement his professional abilities.

As Idaho's first non-political land commissioner, Mr. Trombley follows the motto "If it's good for Idaho — it's Good!"

The Forester proudly salutes one of Michigan Tech's most illustrious graduates, Gordon C. Trombley.
Tom Pakula Killed in Action in Vietnam; Memorial Loan Fund Established at Tech

Students and faculty of the Forestry Department were saddened by the news of the death of Thomas V. Pakula in Vietnam. Tom received his B.S. Degree in forestry at Michigan Tech in August, 1967. He was killed in action while engaged in a combat mission on December 27, 1969. He had been serving with the U. S. Army in Vietnam for seven months and held the rank of Specialist Fourth Class.

The son of Mr. and Mrs. Leo Pakula of Stambaugh, Tom graduated from Stambaugh High School before enrolling at Michigan Tech. While a student at Tech, he was a member of Chi Rho Fraternity.

As a memorial to Tom, the Forestry Club has established the Thomas V. Pakula Memorial Loan Fund at Michigan Tech, and endowed the fund with an initial amount of 350 dollars. The fund is available only to forestry students for short-term loans. It is being administered by the office of the Dean of Students.

Additional contributions to the fund have been solicited from forestry graduates who were enrolled at Michigan Tech during the time Tom was a student here, and from members of the forestry faculty. Thus far, contributions from individuals have raised the total amount available for loan to 511 dollars. Further contributions will be welcomed and may be sent to the Michigan Tech Forestry Club. Checks should be made payable to the Michigan Tech Forestry Club, with proper notation as to the purpose of the donation. All such contributions are tax-deductible.
Department of Forestry
Faculty

DR. NORMAN F. SLOAN
Associate Professor
B.S. Michigan Tech
Univ.
M.S., Ph.D. Univ.
of Wisconsin

H. M. STEINHILB
Professor
B.S., Michigan Tech
Univ.
M.S. Michigan
State Univ.

ROBERT L. SAJDAK
Assistant Professor
B.S. Michigan Tech
Univ.
M.S. Univ. of
Minnesota

C. RICHARD CROWTHER
Associate Professor
B.S., M.S. Iowa
State Univ.

CLARENCE A. ENGBERG
Teaching Associate
B.S. North Dakota
State Univ.
M.S. Michigan
State Univ.

DR. MARTIN F.
JURGENSEN
Assistant Professor
B.S. Syracuse Univ.
M.S. Syracuse Univ.
Ph.D. North Carolina
State Univ.
DR. GENE A. HESTERBERG
Professor and Head
B.S. Purdue Univ.
M.S., Ph.D. Univ.
of Michigan

Our Department is graced by two excellent secretaries
Miss Judith Wuebben
Mrs. Julia Allen

VERNON W. JOHNSON
Professor
B.S., M.S. Syracuse Univ.

DR. WILLIAM R. WYND
Associate Professor
B.S. Oklahoma State Univ.
M.S. Auburn Univ.
M.B.A., Ph.D.
Michigan State Univ.

ROSWELL K. MILLER
Assistant Professor
B.S., M.F. Syracuse Univ.
Forestry Developments at Michigan Tech

by C. R. Crowther

Activities in the Department of Forestry during the past academic year have concentrated on consolidation and refinement of the programs and advances accomplished during the several preceding years, including such landmark events as completion of the new Forestry Institute of Wood Research building, establishment of the School of Forestry and Wood Products, and initiation of a graduate program in the Department. Several changes of note have occurred during the past year, however.

Dr. Paul S. Johnson, who handled instruction in soils, silvics and forest ecology for the past four years, left the Department at the end of the 1968-69 school year to accept a position with the U.S. Forest Service. He is now engaged in research at Columbia, Mo.

William W. Moschler, Jr., who taught wood technology and forest utilization courses since the fall of 1966, terminated his position in the Department during the summer of 1969 in order to return to Virginia Polytechnic Institute for work toward the doctorate.

Both of these men contributed significantly to the instructional program in forestry while members of the Michigan Tech Forestry faculty.

Prof. Roswell K. Miller returned to the faculty during the summer of 1969, following a year's residence at the University of Michigan, where he is engaged in a doctoral program. Professor Miller is teaching in the field of Forest Management and handled the wood technology instruction this year. He also teams with Professor Steinhibl in the instruction of surveying in the forestry summer school program.

Dr. Martin F. Jurgensen is a new member of the forestry faculty this year. He recently completed a tour of duty with the U.S. Air Force, in which he held the rank of captain. A native of Syracuse, N. Y., Dr. Jurgensen holds a B.S. Degree in forestry and the M.S. Degree in silviculture from Syracuse University. He received his Ph.D. Degree from North Carolina State University, with a major in soil science. Dr. Jurgensen is married and has two children. He is engaged in teaching and research activities in the fields of soils, silvics and forest ecology.

Dr. Bernard C. H. Sun joined the Forestry Department faculty during the spring of 1970. A citizen of the Republic of China, Dr. Sun received the B.S.A. Degree from the National Taiwan University, and the M.S. and Ph.D. Degrees from the University of British Columbia, Canada, in wood and pulp science. He will be teaching wood technology, wood fiber technology, and forest utilization. Dr. Sun is married and has one child.

The Department was fortunate indeed to have the services of Mr. Clarence A. Engberg during the fall quarter, 1969. Mr. Engberg taught the course in Soils during the fall term, holding the rank of Adjunct Professor of Forestry. He is eminently qualified in the soils field, having served for 21 years as state soil scientist in Michigan with the Soil Conservation Service, until his retirement in 1966. Mr. and Mrs. Engberg resided in the Daniell Heights housing facilities of Tech while in Houghton. They proved to be a delightful couple who made friends quickly and readily settled into the faculty circle. It was with real regret that students and faculty bid farewell to Mr. and Mrs. Engberg at the conclusion of their stay, as they returned to their home near Homer, Michigan. Although their stay in Houghton was brief, they will not soon be forgotten by their many friends at Michigan Tech.

During the past year, two new upper-class options have been added to the forestry curriculum. These are the Forest Business option and the Recreational Land Management option. These supplement the existing options, available to juniors and seniors, in Forest Management and Forest Science. Forest Science options include Forest Genetics, Forest Entomology, Wood Science and Technology, Forest Game Management, Forest Ecology, and Forest Hydrology.

(Continued on page 53)
Seniors

ARTHUR W. ABRAMSON
Lake Linden, Michigan
Forestry Club, Xi Sigma Pi,
Mich-Wis Timber Producer's
Scholarship '69-'70.

JOSEPH E. ASIALA
Hancock, Mich.
Forestry Club — Conclave Comm.,
Society of American Foresters,
Intramurals.

ROBERT F. BALL
Lancaster, New York
Forestry Club — Conclave Team
'68, Intramurals, Varsity
Rifle Team.

LOUIS R. BEST
Pontiac, Michigan
Forestry Club — Vice-Pres. '69,
Conclave Team '68 and Chairman
'69, Dendro. Lab Instructor,
Res. Asst. — Wadsworth Hall,
Xi Sigma Pi, Phi Kappa Phi,
Cad. Bat. Commander, AROTC '69
'70, Intramurals.

GARY R. BIRD
Westland, Michigan
Forestry Club — Conclave Team
'68 and '69, Rifle Raffle
Chairman '68 and '69, Varsity
Football Team, Intramurals.

THOMAS M. CAIN
West Lafayette, Indiana
Forestry Club — Camp Comm. '68
and '69, Rifle Raffle Comm. '68.
THOMAS J. DELANEY  
Sault Ste. Marie, Ont., Canada  
Forestry Club.

TERRANCE B. DUCROCHER  
Milwaukee, Wisconsin  
Forestry Club – Intramural Comm. '67-'70, Conclave Comm. and Team '68 and '69, Intramurals.

DEAN R. FARR  
Menominee, Michigan  
Forestry Club, Superior Seals  
Skindiving Club, Phi Kappa Phi.

WILLIAM J. FRENCH  
Menominee Falls, Wisconsin  
Forestry Club – Feature  

EDWARD J. DEPUIT  
Wyoming, Michigan  
Forestry Club – President ’69-70, Forester staff ’66-69,  
Editor-in-Chief ’68, ’69, Intramurals,  
Phi Kappa Phi, Xi Sigma Pi,  
Who’s Who in Amer. Colleges and Universities.

JOHN R. FABER  
Findlay, Ohio  
Forestry Club, Society of American Foresters.
RICHARD A. HANSON
Saginaw, Michigan
Forestry Club, Varsity Rifle Team, Most Valuable Shooter '65-'66 and '67-'68. Captain of Rifle Team '66-'67.

WARREN JAMES HEIKKILA
Ishpeming, Michigan
Forestry Club, Xi Sigma Pi.

MICHAEL R. HERTH
San Diego, California
Society of American Foresters, Delta Sigma Phi, Intramurals.

LEE W. JACKSON
Reedsburg, Wisconsin
Forestry Club.

JEFFREY J. JAHNKE
Renton, Washington
Forestry Club, Band, Intramurals Tau Kappa Epsilon, Xi Sigma Pi.

ADRIAN R. JENTOFT
L'Anse, Michigan
Forestry Club — Conclave Team '69. Intramurals, Xi Sigma Pi.
JAMES W. JUOPPERI
Garden City, Michigan
Forestry Club, Intramurals.

RAYMOND B. KALDOR
Kingsford, Michigan
Forestry Club, Cycle Club.

DANIEL G. KEANE
Mahwah, New Jersey
AFROTC, Arnold Air Society,
Scabbard and Blade, Varsity
Track, Gymnastics Club,
Management Assistant — Coed Hall,
Student Liaison Committee.

MICHAEL E. KERTTU
Arnheim, Michigan
Forestry Club, Intramurals.

MICHAEL R. KING
Green Bay, Wisconsin
D.H.H. Council, Daniell
Heights Association,
Intramurals, Xi Sigma Pi.

DENNIS H. KOSKI
Aura, Michigan
ALAN R. LARSEN
Hermansville, Michigan
Forestry club, Xi Sigma Pi,
Forester Staff — Photo-Editor,
Intramurals.

DANIEL D. LEMKE
Toledo, Ohio
Forestry Club, Xi Sigma Pi,
Phi Kappa Phi, Intramurals,
Rifle Raffle-Big Brother Day-
Camp-Snow Statue and
Homecoming committees.

DANIEL W. KRETZ
Antigo, Wisconsin
Forestry Club, Dorm R. A. — DHH,
Varsity Football, Intramurals,
Blue Key, Phi Kappa Phi, Xi
Sigma Pi, Dorm Council Rep.,
Student Council, Jr. Alt.,
Sr. Student Council Rep.,
Who's Who in American Colleges
and Universities.

LON P. LA BUMBARD
Rapid River, Michigan
Forestry Club — Forester
Staff Writer, Mich. Tech.
Pistol Club, D.H.H. Judiciary
Committee, Xi Sigma Pi.

THOMAS E. LITTLEFIELD
Bronson, Michigan
Forestry Club, Society of
American foresters, Student
Liaison Committee.

DAVID L. LONGRIE
Sidnaw, Michigan
Forestry Club, Foresters
Staff '69-'70, Wadsworth Hall
Weight Lifting Club.
GERALD M. LUKACH  
Bessemer, Michigan  
Forestry Club, Intramurals,  
Publicity Chairman — For. Club,  
Phi Eta Sigma, Phi Kappa Phi,  
Xi Sigma Pi, Conclave Team ’69.  

FERDINAND LUNDBERG  
Trout Creek, Michigan  
Michigan Tech’s Vet. Club,  
Intramurals.

JOHN C. MAURER  
Bath, Pennsylvania  
Forestry Club, Newman Club,  
Married Students Assn., Chi Rho,  
Phi Kappa Theta, Intra-Fraternity Assn. Rep., Dorm  
Rep., Intramurals.  

DONALD M. MAZANY  
Saginaw, Michigan  
Forestry Club, Xi Sigma Pi,  
Ski Patrol, Ski Club, Rep. of  
Coed. Hall Council, Society  
of American Foresters.

GEORGE G. MEADOWS  
Hibbing, Minnesota  
Forestry Club — Conclave ’69,  
Chairman — Intramurals Comm.,  
Ski Club, Intramurals,  
Conclave Events Chairman.  

JOSEPH S. MINIER  
Port Clinton, Ohio  
Forestry Club — Secretary  
and Social Chairman, Conclave  
’69, Intramurals.
ERIC J. PAAVILAINEN  
Painesdale, Michigan  
Intramurals, Varsity Basketball.

GLEN A. PINNELL  
Bruce Mines, Ontario, Canada  
Forestry Club — Conclave Team and Conclave Committee, Intramurals, Xi Sigma Pi.

MATTHEW C. NOWAK  
Trenton, New Jersey  
Forestry Club — Chairman Membership Committee, Business Manager ’69 Forester, Xi Sigma Pi, MTU Soccer Club — Vice Pres., Intramurals.

THOMAS E. OLDFIELD  
Fond du Lac, Wisconsin  
Forestry Club — Secretary, Vice President and Social Chairman, Conclave ’69, Xi Sigma Pi, Student Liaison Committee, Phi Kappa Phi, Intramurals.

THOMAS J. POKORA  
Milwaukee, Wisconsin  
Forestry Club, Phi Kappa Phi, Xi Sigma Pi, Intramurals, Mich-Wis Timber Producer’s Association Scholarship.

DAVID L. POSTLER  
Appleton, Wisconsin  
Forestry Club, Intramurals.
MIGUEL E. RESUS
Lianga, Surigao, Philippines
Forestry Club, Intramurals, International Club.

JOHN A. SAMULI
Hancock, Michigan

ARNOLD F. SCHOECK
Wayne, New Jersey
Forestry Club — Treasurer, Ski Club, WGGL-FM, Lutheran Student Association, Intramurals.

JEFFORY D. STILL
Union Lake, Michigan
Forestry Club, Army ROTC, Scabbard and Blade, MacArthur's Engineers Drill Team, Society of American Military Engineers.

ROBERT J. ST. PIERRE
Monroe, Michigan
Forestry Club, Intramurals.
CHARLES A. TRIPHAHN
Chicago, Illinois
Forestry Club, Intramurals.

PETER J. WACKER
Belford, New Jersey

MICHAEL E. WICHMANN
Greenville, Wisconsin
Forestry Club.

WILLIAM K. WILKE
Canton, Ohio
Forestry Club, Flying Club,
Rifle and Pistol Team,
MacArthurs Engineers, AROTC,
Intramurals.

RICHARD R. WINDNAGEL
Port Clinton, Ohio
Forestry Club, Conclave Team,
Intramurals, Phi Kappa Phi,
Snow Statue Committee.

DENNIS J. WYLLE
Port Huron, Michigan
Forestry Club, Dorm Council
Rep., Intramurals, Camp
Committee.
DAVID A. YANKEE
Manistee, Michigan

NORMAN D. BENEDUM
Milwaukee, Wisconsin
Scabbard and Blade, Mil Ball Committee,
Track, Intramurals

GARY F. ALBIG, Hamburg, New York
RICHARD E. JOHNSON, Norway,
Michigan

Master of Science Degrees

RALPH G. DUFFEK
RONALD L. HENINGER
THOMAS L. KELLEY

Forest Technology
Graduates

TIMOTHY M. BULERA,
North Tonawanda, N. Y.
WILLIAM D. HEISS,
Houghton, Mich.
HARRY J. HOUSE,
Highland, Mich.
ALTON L. LARSON,
Vulcan, Mich.
JOHN M. MOFFETT,
Trenton, Mich.
ALAN L. NOGA,
Detroit, Mich.
EDWARD J. WHITE,
Appleton, Wis.

ERIC B. MAHRINGER
KENNETH H. MAKI
Report From the Dean
by Dr. Eric A. Bourdo, Jr.

One full year has passed since the creation of the School of Forestry and Wood Products. The year has been eventful. It has in addition been a year of growth for all three of the departments which comprise the school.

The academic Department of Forestry has been particularly active in developing new curricula, in curriculum streamlining, and in increasing student enrollment. A new curriculum in Wood Fiber Technology has been approved and decisions for other new curricula are pending. Hours required for graduation have been brought in line with those prevailing elsewhere; and curriculum study is continuing to keep the Department’s programs abreast of the changes and developments in education.

Enrollment will certainly reach an all-time high next fall, which is contrary to the trend at four year institutions, all of which have been affected by the rapid growth of community colleges.

The programs at the Ford Forestry Center and the Institute of Wood Research have grown, too. Particularly noticeable at the Center is the new $80,000 Laboratory building which rapidly is nearing completion. Even before this lab is finished, however, construction will have started on a 9200-square-foot General Purpose building, which is intended to provide space badly needed for both education and research at Alberta.

Most important of all, in my view, has been the progress in drawing closer together the activities of the School’s three departments in ways which complement each other. Researchers of the Ford Forestry Center have begun to teach courses of particular use to the graduate students who are working with them. Even greater use of interdepartmental facilities has developed for undergraduate students as well.

A large step forward has been progress on the preparation of 15-year plans for the University, the several schools and colleges, and their component departments. Each department of the School has planned its future development and growth in conjunction with the other two. Similarly, in its long range planning, each department of the School has involved those departments of other schools and colleges of the university with which each has common interests. A great deal of credit for the success of the School of Forestry and Wood Products must go to the students. The fact that they have successfully equated a concern for problems in the United States and a concern for their education, with level-headed realization that disruptive activities advance the cause of neither, has enabled them to pursue their goals in a realistic atmosphere.

The past year, then, has been one of growth, promotion of cooperation, long-range planning, and student foresight. With this foundation, the School of Forestry and Wood Products can certainly look with optimism to the years ahead.
Good foresters, like successful people in business, politics, community affairs, industry and other fields exhibit certain common traits. The most significant of these characteristics are leadership and caring about ourselves and caring for others. The phrase "who cares" is one which all of us should remove from use and this brief note promotes the theme of caring for others.

Leadership is important in all our activities. It requires learning, effort, determination, enthusiasm, resourcefulness; and a lot more. But the successful forester of today — and certainly of tomorrow — is that person who ideally combines leadership with a sincere understanding of his fellowmen. The forester who truly cares for others. He must sense the emotions, experiences and feelings of his associates as well as those for whom he works.

More than at any other time, I feel the years ahead will recognize those foresters having a moving personal concern for all members of our society. For it is only by leadership of the caring forester that we will be able to earn society's respect for multiple-use of forest resources. Caring about ourselves — AND OTHERS — is the giant step to understanding resource users, their needs and their interests. And we need to care about others in our society before we can truly understand their needs in forest, in forest products, in forestry services.

Socrates admonished man to "know thyself." Shakespeare described one's self as more dear than a friend. It is by developing proper concern for ourselves that we learn the first lesson of social responsibility — caring for others. Care for one's self requires a corresponding care for others and it is by knowing about others that our forester can best serve his profession. Although dynamic leadership is important, responsiveness to the needs for our fellowman is a pivotal point in our work — the keystone to the forester's duty.

True care for others is evident when we respond to the needs of others. There must be an action; a move to help others, to resolve problems, to demonstrate care. We must avoid becoming so engrossed in our work that we dampen our human warmth for others. Modern administration in our occidental world places a premium on speed, on immediate action, and prompt decision making. Many forest managers can sense advantages to a more moderate rate of forward progress in exchange for a pace that would allow more time for polite, courteous care and concern for others. Perhaps we should think on the time-honored oriental manner which places concern for others high on the order of life. Could it be that gross error in judgement may be eluded by our daily use of the gracious art of caring for others?
The Pictured Rocks National Lakeshore

by Walt Summers

in cooperation with the National Park Service of the U.S. Dept. of Interior.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in order to preserve for the benefit, inspiration, education, recreational use, and enjoyment of the public a significant portion of the diminishing shoreline of the United States and its related geographic and scientific features, the Secretary of the Interior is authorized to take appropriate action, as herein provided, to establish in the State of Michigan the Pictured Rocks National Lakeshore."

During the years 1957-58 a Great Lakes Shoreline Recreation Area Survey was conducted by the National Park Service. In the survey report, released in 1960, the length of Lake Superior shoreline between Munising and Grand Marais, Michigan was rated as one of five areas on the Great Lakes of national significance. Through further study and consideration nearly 67,000 acres of land was selected for inclusion into a proposed Pictured Rocks National Lakeshore. Finally on October 15, 1966 a law was enacted by Congress which allowed this consideration to become a reality.

Almost a century of concern precedes the proposal for establishing a National Lakeshore in the Pictured Rocks area. Since the area for Yellowstone National Park was set aside in 1872 mounting public pressure has demanded that more and more areas be set aside for preservation and public enjoyment. Much of the same attitude went into the building of both of these parks, but certain features in their creation do differ. Nearly all previous National Parks were created from land in the public domain; whereas the Pictured Rocks National Lakeshore is being made up of land that is 79% privately owned. Earlier parks were established where it was realized that their greatest use would be by future generations, but now there is a rapidly rising current demand for outdoor recreation. Because of the increase in demand, places designated in the 1930's as possible locations for seashore parks have already been privately developed. Individual private development and private commercial development is the pattern by which most resources are employed in the United States economy. At the same time public investments are a means of maintaining natural beauty spots that would sometimes be difficult to establish under conditions of private ownership. Under public ownership the general public is provided access to the resource. Such public investments are not necessarily in opposition to private enterprise; they may, in fact, be complimentary to them.
National Lakeshores and national seashores are regarded as similar. They are defined as follows by the National Park Service:

"Natural coastal areas set aside for the preservation and public recreation use of their nationally significant scenic, scientific, historic, or recreational values, or a combination of such values."

The close relationship of national seashores and lakeshores to national parks is shown by the definition of national parks:

"Spacious land areas essentially of primitive or wilderness character which contain scenery and natural wonders so outstanding in quality that their preservation intact has been provided for by their having been designated and set aside by the national government to be preserved unimpaired for the benefit, enjoyment and inspiration of the people."

The Pictured Rocks National Lakeshore as now proposed by the National Park Service would include about 65,611 acres of land lying in a relatively narrow belt along the south shore of Lake Superior between Munising and Grand Marais, Michigan. This area is further subdivided into two parts. An inner zone lying next to Lake Superior, which contains about 28,438 acres. Land in this belt would all eventually become federal land to be held inviolate for park or recreational use. And an outer zone of approximately 37,173 acres where timber in private holdings could continue to be harvested under a sustained-yield timber production plan. Both the "recreation zone" and the "management zone" would remain open to public hunting, fishing and camping. Division of the area into two zones is a concession to demands to reduce the acreage held inviolate under full jurisdiction of the National Park Service. By this means timber harvest can continue over a large acreage that will remain on local tax rolls. In addition, about 6,320 acres of water in Lake Superior would be included within the park boundaries.

Park development is scheduled to take place over a four year period beginning the second year after land acquisitions have been accomplished. A sum of nearly $6,000,000 will be spent for development operations and for materials. A major feature of the development plan is a road traversing the length of the Lakeshore from Munising to Grand Marais. The road would be designed for optimum interpretive value and be intended for enjoyment of the area rather than for high speed travel. In places this road would run along the rim of the uplands overlooking the important natural and scenic areas, leaving them road-free yet visible. Twenty-three stops at special park features are scheduled.

Six major features of the Lakeshore are recognized in the plan for development. These are: The Pictured Rocks; Beaver Basin, which includes a large inland lake; Pine Bluff Beach, with a campground; Au Sable Point with its lighthouse; and Grand Sable Banks and Dunes.

The geological history of the National Lakeshore area is limited to two relatively brief intervals of geologic time: the Cambrian and early Ordovician periods when sediments deposited in shallow seas became the sandstones that form the Pictured Rocks escarpment; and the Pleistocene epoch when glaciers reworked and mantled the underlying bedrock with a nearly continuous veneer of drift.

Bedrock is best exposed along the escarpment where bluffs rise 50 to 200 feet above Lake Superior and extend 17 miles from Munising to the Beaver Basin. The Jacobsville sandstone is the oldest formation in the lakeshore. It is a feldspar rich, quartz sandstone, deep red in color with white mottlings.
The Munising sandstone, which was formed during the middle Cambrian period, lies above the Jacobsville formation and is divided into the Chapel Rock member and the Miners Castle member. The lower section of the Chapel Rock is a conglomerate, which contributes many of the colorful pebbles of quartz and other minerals found along the Lake Superior beaches. The next 50 feet is pink or light buff with several thin, blue-shale beds. The Miners Castle member is a soft silty-shaley quartz. In the western half of the escarpment a late Cambrian Trempealeau forms a cap rock on the weaker Miners Castle member.

The Pictured Rocks escarpment has been carved by frost action and wave erosion of the present lake, as well as higher lakes stages, into a plexus of shore cliff features such as: stacks, caves, sea arches, thunder caves and promontories. These features have been named Lovers Leap, Rainbow Cave, Grand Portal, Miners Castle, Chapel Rock, The Battleships, Flower Vase, and Indian Drum Cave. Most of the features can be reached by hiking but the best way to appreciate the cliffs is by boat tour.

There are many waterfalls along the Pictured Rocks escarpment. All are fed by small streams from small watersheds and are thus most active in the springtime during wet periods.

During a million year period, ice sheets probably advanced through what is now the National Lakeshore area. However, ice advancing through the area during the most recent of the Wisconsin stage of glaciation wiped out all trace of previous advances and left only its own record.

In time, several small and separate outwash plains formed that are now seen as terraces on the face of the upper Kingston Plain both east and west of Kingston Lake and on the southern rim of the Beaver Basin. The most prominent outwash feature is Grand Sable Banks, a huge formation about 5 miles long and rising to 275 feet above the level of Lake Superior at about a 35 degree angle. The banks are composed of sand and gravel material which filled a very large crevasse in the retreating glacier.
Perched on top of the banks are the Grand Sable Dunes covering an area of 5 square miles and rising 80 feet taller than the banks. The dunes were initiated at a time when the waters of former lake stages such as Nipissing began to subside. Sand was blown into ridge rows from successive beaches. The dunes, in general, are actively moving inland from their original position.

The forests in Michigan's Upper Peninsula are mainly a transition between the northern hardwoods and the boreal forest. This northern hardwood type is dominated by sugar maple with mixtures of white and yellow birch, beech, ash, basswood and elm. The conifers are usually white pine and hemlock. The true boreal forest is not common in this national lakeshore, but there is enough mixed with birch, aspen and mountain ash to give the feeling of the "northwoods."

Since the lakeshore is in a relatively narrow zone, most large mammals of the area are not restricted to its borders. Deer are quite numerous in the region, however, and do provide excellent hunting opportunities in season. A few otter still exist and beavers are rather common with the reduced trapping pressure that once cut their populations down.

Game birds such as ruffed grouse, sharp-tailed grouse and woodcock provide hunting pleasures as well as being available for observation and study by non-hunters. Bald eagles, ravens, pileated woodpeckers and many species of small birds may be seen in season on migration or in residence.

Fishing is a popular sport in the region. Rainbow trout are found in several of the inland lakes in the area. Brook trout are common in many of the rivers and streams that flow through the park boundaries.
Ford Forestry Center Over-View — 1970
by Roger L. Rogge

Once again the Ford Forestry Center has this fine opportunity to communicate with the students and Alumni through the FORESTER. The Center’s objectives and role in the 15 year plan include: "... dedication to the future of Michigan’s forests and to the economic wellbeing of the Upper Peninsula and the state; to serve as a focal point for basic and applied research in silviculture, forest management and economics, as well as forest soils; to provide facilities and/or projects and programs for research; to perform co-operative and externally sponsored research with and for others ...”

"Contributions towards the forestry undergraduate program include providing a field laboratory for the. . . educational program in subjects related to forest land management, silviculture, etc.; to provide an instructional facility for forestry student summer classes; to provide facilities and a field laboratory for the Forestry Technician Associate Degree program; and/or programs for technician training in such areas as forestry aide, saw filer, and other vocational areas.”

Dr. Stephen Shetron’s forest soils research is designed to study and develop soil productivity data for the major forest types and soils in the U. P. Investigations have been concerned with a graduate student study into the soil fertility — tree nutrient relationship of sugar maple; stem analysis and specific gravity of sugar maple; soil genesis and classification of several sandy soils; and soil productivity for major forest types. He recently authored F.F.C. Research Note No. 5 titled, “Variation in Jack Pine Growth By Individual Soil Taxonomic Units in Baraga County, Michigan.” In addition Dr. Shetron is also engaged in a study concerned with the vegetative stabilization of solid wastes created by the conversion of low grade iron formation ore into pellets containing a high percentage of iron.

Prof. Jim Johnson’s work has recently led him into battle with the Jack Pine Budworm. During 1967 the Center initiated direct seeding studies. Using heavy disk- ing equipment large acreages will be scarified and direct seeded. The resulting costs and stocking achieved will determine the feasibility of regenerating the jack pine plains by direct seeding. In 1966 Dr. Eric Bourdo collected seed from a remnant red pine for the purpose of attempting its re-establishment on the Baraga Plains.

Jim is interested in testing the feasibility of using a herbicide on the Baraga Plains in lieu of furrowing.

The continuing project of developing a standard computer program for more efficient and complete analysis of CFI data is near completion. Prof. Jim Meteer has completed special forest inventory and growth computations for several large landowners. Three graduate theses have resulted.

The first graduates of the two year Forest Technician program will graduate in June and receive the Associate in Applied Science degree. Additional classes completing training include lumber graders, saw filers, and sawyers; bringing to over 500 the number who have received specialized training at the Center.

New facilities at the center include a Morbark Chipper and the Debarker. A new Laboratory Building housing a soils lab, two general purpose labs, and the herbarium is completed.

The entire Center staff extends a cordial welcome to all students and alumni to visit Alberta and view firsthand the various projects and activities. The staff is eager to discuss your interests over a cup of coffee.
Improved Lumber Utilization
Through Improved Wood Seasoning

by
Carl W. Danielson

Interest in dry kiln clubs, organized for the purpose of exchanging information on seasoning practices, dates back to the early 1930's. At this time the Dry Kiln Engineers Club of Memphis, Tennessee was organized. This is the first dry kiln club to be formed in the United States and its function was to help dry kiln operators with their problems. Presently there are approximately fifteen regional clubs located in the United States. They keep their members informed on progress in drying techniques at periodic meetings and disseminate information to them. Especially active at the present time are the New England Kiln Drying Association, Central California Dry Kiln Club, West Coast Dry Kiln Club, Midwest Wood Seasoning Association and the Wisconsin-Michigan Wood Seasoning Association.

The Institute of Wood Research has been associated with the Wisconsin-Michigan Association since its inception. Technical information on all aspects of drying was presented by two men from the Wood Seasoning Division of the United States Forest Products Laboratory at Madison, Wisconsin. Enough interest was generated at this meeting to prompt the formation of the Wisconsin-Michigan Wood Seasoning Association. The Association has since actively pursued its purpose "to promote improved seasoning, storage, and handling of wood through the exchange of ideas and discussion of problems at regular and special meetings." The Institute of Wood Research has been the headquarters for this group and has provided secretarial and program-planning services.

Membership is comprised primarily of dry kiln operators, but people with other responsibilities are also represented. The Association encourages management participation and attendance at meetings. Membership area covers all of the U.P. of Michigan and the northern part of Wisconsin.

Three meetings are held each year, one of which is a joint meeting with the Midwest Wood Seasoning Association, at which time an expanded program is presented. Since its beginning in 1954 the Association has presented over 100 technical talks at some 50 meetings. The meeting program provides not only for technical presentations of current interest but also allows for individual participation in discussion of problems. At each meeting one or more plant tours is arranged. Periodically, a meeting is scheduled to methodically inspect a member's kiln for proper maintenance and operation, using an inspection checklist prepared by IWR personnel.

There are several benefits to be gained through membership:

1. Ways to reduce degrade and losses associated with drying are learned.
2. Results of research sent out.
3. Subsequent problems can be eliminated.
4. Techniques can be learned through the experience of others.
5. The importance of wood-moisture relations in wood products manufacture is learned.

A thorough knowledge of the process is important to those responsible for drying lumber. Affiliation with and participation in a seasoning organization can be beneficial to them. This is an adult education activity which the Institute of Wood Research will continue to promote in the years to come.
In last year's MTU Forester, we mentioned a program of research aimed at bark removal after chipping. Several such studies are now underway.

The first study is designed to determine how much separation occurs between the bark and wood during the chipping process. If adequate separation occurs, then the problem becomes one of segregation of bark from wood chips. In these studies samples are cut on a bimonthly basis to determine the bark-chip bond separation and to test several potential methods for segregating the bark from the chip mass.

The air flotation method consists of an oscillating screened deck with an air lift through the deck. Segregation of the bark and wood particles depends on one or more of the following material differences: (1) specific gravity, (2) shape, or (3) size.

A second method now under study is compression debarking of chips. Here the wood-bark chip mass is subjected to compressive pressure as the particles pass between two rolls with very close nip settings (fig. 1). Depending on the species and bark nature, the compression will cause the bark to either crumble into smaller particles than the wood chips or adhere to the compression rolls and be doctoried off clear of the good wood chips.

Other studies include liquid medium methods of segregating bark from wood. One method, under study cooperatively with the Chemistry-Chemical Engineering Department at Tech, is the use of binary immiscible liquid systems. This method depends on the surface tension properties between the two immiscible liquids to hold either the bark or the wood at the interface between the two liquids and allow the other to pass through (fig. 2).

All of these studies require a considerable amount of manual analysis to measure the effectiveness of any of the research approaches. The research effort is justified though by the potential recovery of vast quantities of residue wood.
Michigan Tech Forestry Club
1969-70

The 1970 Forester Staff

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The staff of the Forester is proud to present what they hope is a successful account of the activities in the Forestry Department during the academic year of 1969-1970. We would like to thank Brad Kral for his excellent job in designing the Forester cover, and Prof. Crowther for his untiring advice and assistance.
Xi Sigma Pi Chapter
Installed at Michigan Tech
by Richard Crowther

Michigan Tech’s forestry program advanced another notch in stature on May 18, 1970, when a chapter of Xi Sigma Pi, national honorary fraternity in forestry, was installed here. Known as Alpha Eta Chapter, Tech’s is the thirtieth active chapter in the fraternity.

Dr. Charles Olson of the University of Michigan, national secretary-fiscal agent of Xi Sigma Pi, presided at the installation ceremony which included initiation of 36 new members into the fraternity. These initiates, in addition to six faculty members who were previously affiliated with the fraternity, became charter members of Alpha Eta Chapter.

Chapter officers for the coming year are Dr. Gene Hesterberg, forester; Dr. Stephen Shetron, associate forester; Dr. William Wynd, secretary-fiscal agent; and Prof. Richard Crowther, forest ranger.

The 36 initiates included four faculty members, four graduate students, and 28 undergraduates of the junior and senior classes. Faculty initiates were Dean Eric Bourdo of the School of Forestry and Wood Products; Professors Vernon Johnson and H. M. Steinhilb of the Department of Forestry, and Prof. James Meeter of the Ford Forestry Center.

The installation of the chapter and initiation of members, followed by a banquet, took place in the ballroom of the Memorial Union. Dr. Olson spoke after the banquet, on the role of Xi Sigma Pi in a school of forestry of the present and future.

Xi Sigma Pi was established in 1908 at the University of Washington. It is the oldest and largest honor fraternity in the field of forestry. Student eligibility for membership is based on outstanding scholarship and evidence of sound moral character. Only students enrolled in forestry or forest-related curricula are eligible for membership.

Activities planned by the chapter include informational programs and social events, these will be designed to complement and promote activities of the Michigan Tech Forestry Club, in order to avoid interference with the Club program.

With establishment of Alpha Eta Chapter, Michigan became the first state to contain three chapters of Xi Sigma Pi. Other chapters are located at the University of Michigan and at Michigan State University.
Conclave

by Lou Best

The eighteenth Annual Midwest Foresters' Conclave was held at Michigan Tech., on October 11, 1969. Despite a cold rainy day, it was an enjoyable event. Teams from the Universities of Michigan, Minnesota, Southern Illinois, Purdue, Michigan Tech, Missouri, Illinois and Michigan State attended and finished in that order. Competition was stiff and there were over 100 tired men at the end of a day concluded by a tortuous special event.

Meals were provided by the Tech. Wives Association. Following the evening banquet at St. Al's, awards were presented. After everyone's appetite had been satisfied the guest speaker, Dick Black, from "Michigan Outdoors," presented a fascinating film story of the Coho salmon in Michigan. It was a fitting close to a year of hard work and a very enjoyable weekend.
Gentlemen. that's just not economical.

'Looks,' may be deceiving.

right, Terry!

The bolt throw.

But, everybody's happy.

as long as, you keep it on the paper.

Another five minutes, and we'll have the longest time on record.

Finally!

Gentlemen, that's just not economical.
Who's doing all the work around here, anyhow.

I sure wish you would have told me how to use this thing, before we started.

No matter how long it takes, I'll still have the 'Best' time.

Amazing, I don't believe it!

Nobody could 'Match' this record 'Splitting' concentration.
Summer Camp 1969
by Dennis Stone

Despite previous warnings, fifty odd (and I mean ODD) forestry students turned out to brave the perils of summer camp. The first two weeks were typical of Houghton summers; it rained every day. From the third week on, however, we enjoyed one of the nicest summers in the history of Tech.

This had a definite effect on the faculty. Vern sat around with a blank stare on his face mumbling, "C'est la vie." Norm went bananas and started popping out from behind trees shouting, "That's a No No." The whole schedule for the summer had to be revised to fit in those projects for a rainy day. And what if the Alumni ever found out that our class made it through the summer without one case of pneumonia? In desperation, the Profs found a suitable substitute for rain — a SWAMP. In fact, they found two swamps. So the class of '71 enjoyed a wet summer like every class before us.

It was a summer of blood, sweat, and tears: the mosquitos took our blood, the Profs made us sweat, and wives, sweethearts, various bartenders, and an occasional minister got our tears. But don't get me wrong, there were some high points. Our days were brightened and the grossness modified to some extent by the presence of Laura Carlson, the second girl in Tech’s history to go through summer camp. At the other extreme, we had a select group with us known as the "Zero Squad." This group was named for their cumulative grade point average, but their antics made summer camp bearable. Then, while we were tip-toeing through the toolies, the U. S. landed the first men on the Moon and we got an extra day off.

After the final problem, Hammer and Ros Miller spent the next four weeks teaching us how to use the transit, chain, leveling rod, and the four letter words associated with surveying. Everything went smoothly with two exceptions. First, the sun refused to shine during the sun shot problem, so the two-day assignment stretched into two weeks. Then, during the last week of the term, Ros was overcome with an urge to revisit the swamps. Have you ever tried to use a transit that was slowly sinking into the muck?

On the last day of school, I asked one of our classmates, Dave Hartley, to give me his views on summer camp. He summed up his feeling in one word, "PLASTICS."
You sure know how to hurt a guy, Ros.

Let's get organized.

Exciting lectures.

Cit.: Daily finger exercise.

Getting close to nature.

Ughh! Don't eat the berries.
On the evening of November 20, 1969, Mrs. Hesterberg, wife of the Forestry department head, held a tea for the "forestry girls." The guests included the wives of the forestry faculty and students, and the female foresters. The purpose of the party was to help the girls get to know each other.

Among the afternoon's events was a name guessing game. Everyone wore a name tag and the group had ten minutes to learn as many of these names as possible. At the end of this time the girls were given paper and pencils and were asked to write down the names they could remember. The game proved to be a great success and a clever way to introduce everyone.

The agenda also included a poetry contest which produced a variety of amusing and interesting compositions. Tea and sandwiches were served later and the evening closed on an enjoyable and very successful party.
**Venison Booyaw**  
by Joe Minier

The annual Venison Booyaw was held in the all purpose room at St. Albert The Great Parish. The meal was prepared by the talented faculty of the Forestry Department, who each had a hand in serving in their chef’s hats.

After dinner, Mr. and Mrs. Ron Quilliam presented an interesting program on the life of a Peace Corps worker in Chile. Ron is a 1967 graduate and his wife is currently enrolled as a Forester at Tech. Ron was assigned to Chile and his program and slides proved not only interesting but informative.

This evening was enjoyed by everyone present. The new atmosphere added to the feeling of togetherness in the club. All those who attended walked away a little smarter, fatter, and happier.

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**Rifle Raffle**  
by Glen Pinnell

The profits from this year’s annual Rifle Raffle were a good indicator of the efforts which were put forth by our Forestry Club members. Led by the two highest salesmen, Eric Bourdo and Terry Lane, we established record high sales.

This year as in the past, our prizes have proved to be appealing. The first prize was a Winchester Special which was won by Scott Strehlow, brother of a Forester attending Tech. The other prizes were a pair of 7x35 binoculars, a sleeping bag, and a pair of snowshoes, all of which were won by other students and by local people.
Smil —
You’re on Candid Camera.

Big Brother Day
by Julie Brown

Rain, Rain, Go away —! The 14th annual Big Brother Day held at the Otter River Camp on September 19, 1969, was ushered in by the pitter, patter of raindrops. Although it did attempt to clear up by noon, raincoats for the events were a must. The one — and two-man bucking events were held under the cover of tarps. Hot coffee was the drink of the day.

Participation in the events increased competition among the classes. The girls proved they could pull their own weight against the fellows by competing in the two-man bucking and not taking last place. Tobacco spitting was left totally to the fellows, who seem to be able to handle it quite well.

Despite the dampening weather, appetites were as big as usual. Hotdogs were top on the menu, accompanied by Norm’s potato salad. Baked beans and chips were side dishes and of course there was cake for dessert.

As dusk came on, weary bodies were dragged back to rooms to rest up till Spring Field Day. The top competitors of each event were selected to form our 1969 conclave team. The general census was that the day had been a success.

Who said they wanted a toothpick?

What a way to light a cigarette.
Big Brother Day Events

Firing up to a Good Meal?

Is this thing supposed to move?

While the ladies do the work . . .

Big Lou still eating.

# #! Who said this cuts?

Up, up and away . . .

Merrily we roll along . . .
"The Greatest Snow On Earth"

Anybody who would run in snowshoes must be in a big hurry.

Slush and pack, slush and pack, only eight more hours to go.
The Foresters participated energetically in the 48th annual Michigan Tech Winter Carnival. This year's theme was "The Greatest Snow on Earth," revolving around the fascination, humor, and just plain fun of an old-fashioned circus. The Twigs put their meaty heads together and the result was a snow statue that just couldn’t lose. The idea tied the circus theme in with the carnival hockey series with the Michigan State Spartans; it consisted of a somewhat harried Spartan dog trainer trying to escape from a few of his Huskie trainees one of which had an uncomplementary grip on his backside. After many, long, cold hours of slush, wine, and frozen-up hoses the statue was completed and we titled it "Getting a Little Behind." Although it failed to place, we were all pretty proud of our statue and a well-deserved vote of thanks goes to all those who donated their time and efforts.

In special events the Foresters did well in snowshoeing — taking 3rd place — and overpowered all opposition to capture first place in skating. Congratulations go to Jim Conley, Dave Lieb, Lou Best, and John DePuydt in snowshoeing, and to John DePuydt and Dave Lieb in skating. Our broomballers came up strong and fired-up but dropped a close, one-point decision in the opening round.

In regard to overall competitive points, the carnival was somewhat frustrating to the Forestry Club. But memories aren’t gauged by points, and our experiences during the "Greatest Snow on Earth" will long be remembered.
Intramurals 1969-70

What has happened to the Foresters' competitive spirit?? Foresters' participation in intramurals was considered low last year and we haven't budged an inch since then.

We managed to get enough foresters out to put teams together for hockey, basketball, bowling, and golf. Beyond that, however, interest was limited to one or two individuals in sports like paddleball, tennis, and wrestling. I don't think we have to mention where we stood in the final intramural standings.

Our basketball teams, the Foresters and the Twigs, did fairly well but didn't finish too close to the top. With a little more desire and luck the Foresters could have been battling for the number one spot in the league. Instead some heartbreaking close losses, including one in overtime, proved to be the stumbling block.

The hockey team, with Class B material, battled Class A competition all season. An abundance of fighting spirit wasn't enough to put points on the board and we finished without a win.

Participation and desire are what we need to put the Foresters back in the running for the trophy. What will the story be next year? It's up to you!

Dunkin' Durocher

Throw me another nice slow one.

Fireballing Dave

Look at that rebounding strength.

Mike King...

and Terry Durocher skating hard.
Spring Field Day 1970

Unfavorable weather and clouds of black flies failed to dampen the spirits of Forestry Club members, families and guests who turned out for the 1970 Spring Field Day held at the Otter River Camp on Saturday, May 30. Dismissal of classes on Friday due to Memorial Day enabled many students to leave town for the weekend, and reduced attendance at the field day. Wet, chilly weather also discouraged attendance, but about 30 foresters turned out for the event. Wives, children, girl friends and faculty brought total attendance to about 60.

The day’s events featured competition among classes in contests such as one and two-man sawing, bolt throwing, log rolling, tobacco spitting, match splitting and canoe racing. Competitive spirit rose as the seniors, juniors and sophomores engaged in a close race for top honors. The final event of the day, a tug-of-war between the seniors and the combined junior-sophomore team, finally put the seniors “in the drink” and gave the juniors a narrow three-point margin of victory over the senior class.

A hearty and tasty lunch consisting of spaghetti, tossed salad, garlic bread and chocolate cake, was prepared by Dr. Norman Sloan and his capable kitchen crew. The meal, following an activity-filled morning, was welcomed by all.

The fog and drizzle ended by noon, signalling the appearance of swarms of black flies. Afternoon competitors displayed outstanding skill in fighting off the insect pests while rolling a log or paddling a canoe. Log birling also provided a test of skill for the foresters. The waters of the Otter River proved invigorating, indeed, at the conclusion of each attempt to balance on the rotating log.

At the day’s conclusion most agreed it had been a fun-filled day in spite of cold, rain, impromptu river plunges and hordes of Mother Nature’s more pestiferous creatures.

The Groups arrival at camp.
Who said this canoe would float?

Spring Field Day Activities

The rope stretchers.

Their target.

Another forester bites the water??

Big Lou's attempt at launching Apollo 13, not a complete success.

It's a Super Twig!

The day ends as they paddle off into the distance.

The firing squad.

What's everyone laughing at?
It's been a busy year at camp, patching and puttering around. All planned wasn't achieved, for we bit off more than we could chew. Big Brother Day was a success with old faces and new. The new faces were just as awed with the camp as the regulars and we saw them there again.

The sauna was a success also; by the way it has finally dried off enough to receive its first coat of paint. For those who didn't think it was hot enough, an upper tier of benches will be installed. It's a great way to scrub up after a hard day of work, then into camp to cool off over a little storytelling with a flair, card playing and relaxing around the fire. What a peaceful night! To hit the rack with no sounds other than the cracking of logs cheerily burning in the fire, the river splashing under the bridge, the whispering of the wind in the conifers, and little critters searching for a free meal in the kitchen; what more can a Forester ask for?

The crew braved the cold, snowy, Copper Country weather to shoe-in and relish the outdoors. Winter Outing was great! A 55-gallon drum of fuel oil was wrestled in dogsled fashion, with seven hearty Foresters as the team. Sue was heavy! It got away from us on the hill, and it was ride-em-cowboy for one man! And how about that football game in the snow!

A snowshoe hare hunt yielded two bunnies and nine frozen men, all exalting in their success. With the good times comes the bad. Fuel oil was "borrowed" and so too was the woodpile. The woodshed should deter further freeloaders of fuelwood, and the shutters have saved us some glass. The oil tank will be fool-proofed also, and maybe even the garbage pit should be anchored down . . . hey?

A larger parking area may prove to be a competitive field event rather than the camp yard, and a new—slightly used stove replaced old-reliable in the kitchen. Once again the river bank is being stabilized, while a new floor and roof are on the drawing board; so too is a new gate and fence at the entrance to inhibit snowmobile entrance.

When you come down again to visit folks, you'll be met in the yard by a new sign telling where you ended up on your traverse, and the old flagpole fixed up and "Old Glory" flapping in the breeze. Warms the innards though to have a few heads stick out of the kitchen door and holler "Howdy, coffee's on, come on in and grab a cup."
Distinguished Visitors

Three distinguished visitors during the 1969-70 school year added breadth to the instructional program of the department. Speakers were Dr. T. T. Kozlowski (photo on left) of the University of Wisconsin, Dr. A. Earl Erickson of Michigan State University and Mr. Jay H. Cravens, deputy regional forester of the U.S. Forest Service, Milwaukee, Wisconsin.

Dr. Kozlowski's visit was sponsored by the Visiting Forest Scientist program conducted by the Society of American Foresters, National Science Foundation and Michigan Tech. He presented talks on "Water Deficits and Plant Growth" and "Growth Control in Forest Trees." One of the nation's foremost tree physiologists, Dr. Kozlowski is author of several books and more than 200 other publications. He is also engaged in research and consulting activities.

Dr. Erickson, Professor of Soils at Michigan State University, presented two talks on "Short Term Soil Plant Stresses" and "Soil Modification — A Partial Answer to the World Food Problem." The latter considered retardation of percolation through a subsurface asphalitic layer. His appearance was sponsored by the American Society of Agronomy and Michigan Tech.

Mr. Cravens spoke on "Forestry in South Vietnam." The speaker reported on the Vietnamese forests and forest utilization and the effects of war on the Vietnamese forests.

Senior Banquet
Spring 1970

This year, more than ever, through the cooperation of the Forestry Club, students and faculty, a program, par none, was pulled from the proverbial bag of tricks. Through the use of teaching aids an "enlightening" slide show was presented by guest speakers Lou Best and Ed DePuit. In response to Gene's Name Game which brought howls from everyone present, faculty members were each presented with a special handout from the plunder bag which was enjoyed by everyone, students and faculty.

The Dreamland Motel was blessed by the gala event and everyone concerned felt the evening was both enjoyable and worthwhile.

A thank you is extended to all involved in setting up the event and to those whose participation and tolerance made it the success it was.
Environmental Teach-In

by Dennis Stone

April 22, 1970 was a day dedicated to the environment all across the nation. The coordinating committee at Michigan Tech, however, decided that one day was not enough time to tell the whole story. So, under the direction of Victor Marz, editor of the Michigan Tech Engineer, the committee set up a week-long program of seminars, guest speakers, movies, panel discussions, and debates.

The students made all of the arrangements, but the speakers were faculty members, businessmen, clergy, members of government agencies, and other professional people. The keynote speaker was Morris Udall, U.S. Representative from Arizona. He gave a speech on, "The Endangered Species — Man," on Thursday evening, April 23.

For the Forestry Club's part, we closed the week out with a debate over the U.S. Forest Service's management plan for the Sylvania Recreation Area. Dr. Emil Haney, Professor of Resource Economics at the University of Wisconsin-Green Bay and a member of the Save Our Sylvania Action Committee, Inc., presented SOSAC's objections to the way in which the area was being managed. Professor Richard Crowther of Michigan Tech's School of Forestry and Lou Best, a forestry student who has worked in the Sylvania Recreation Area, gave the Forest Service side of the dispute. It was gratifying to us to find that the program had to be extended an hour because of the interest of the audience.

The Forester would like to congratulate all of the people who donated their time, energy, and money to this very worthwhile project. This was not a spur of the moment, haphazardly planned, confrontation affair. It was a well planned program to enlighten the students and residents to the truth on the subject of pollution and environmental degradation. From seeing the number of people who have turned out to help on several pollution projects since the teach-in, it appears that the teach-in was an initial success. Only time will tell if it was a complete success.
Forestry Developments (continued)

Campuswide, improvements continue unabated. A new divided route for U.S. Highway 41 through the campus area was opened during the fall of 1969, and construction of a second high-rise academic building is proceeding on the site of old Hubbell Hall in the central part of the campus. This new building will house the Mechanical Engineering-Engineering Mechanics Department.

Throughout a year of nationwide campus turmoil, the students, faculty and administration of Michigan Tech demonstrated the kind of maturity and sound judgement characteristic of Tech’s traditions and thereby added considerably to its stature and reputation.

The Lumberjack’s Lament
(Reprinted from the “Purdue Log”)

I have worked in the woods from coast to coast,
Took in every saw mill town,
On the snow clad hills of eastern Maine
I have chopped the tall pine down;
From California’s Golden Gate
To Florida’s flowery beds.
I stood the Douglas Fir in Washington,”
His retired logger said.

I would like to go where the tall pine grows
And my shoulders square in the bracing air
Of the mighty timber tracts,
I would like to whet my double bit
And fell a giant tree
Here the flying chips like a maiden’s lips
Throw kisses back to me.

Once again I’ll feel my Kelly steel
As true as a perfect die,
As the polished bits throw out the chips
In the will of the woodsman’s eye;
Then I’d raise the call as it leans to fall
And swing my trusty axe,
Like a fatal dart cut the thin white heart,
The thrill of every lumberjack.

I would meet again with stalwart men
First Charlie, Tom and Saul
And match my axe with their muscled backs
Where there are trees to fall;
And my heart would sing at each husky swing
As the sun in the woodlike wax,
Where God gives strength, breadth and length,
Give me a Kelly axe.

I would like to go where the clean white snow
Puts steel in the souls of men,
Where Mackinaws dull the north wind’s claws.
There I could live again;
There the white chips swept by my Kelly blade
From many a towering tree.
And I would ask no more out of God’s great sky
If this could be given to me.

Paul "Bunyan" Criss
Alumni Directory

A


AHILBERG, RICHARD C.: 1952, 1309 Hillcrest Dr., Stillwater, Minn. 55082. Sales Manager, 3-M Company.


ANDERSON, EINAR F.: 1948, 2161 Lincoln St., Eugene, Ore. 97405.


ANDERSON, KENNETH J.: 1940, 2153 Trenton Dr., Trenton, Mich. 48183. Forestry Supervisor III, Wayne County Road Commission.


ARDNT, ARTHUR M.: 1951, 16315 Kaliher St., Granada Hills, Calif. 91340. Senior Deputy Forester, Los Angeles County.


ARTIS, ROBERT G.: 1962, 247 14th Street, Tell City, Indiana 47586.


AVERTT, JOHN G.: 1951, 3105 Shadview Lane, Wayzata, Minn. 55391.

AYER, WILLIAM P.: 1966, 4915 Emerst Hills, Racine, Wis. 53406.

B

BABBI, ALAN J.: 1962, P.O. Box 608, Ketchikan, Alaska 99901.


BAKER, RUSSEL H.: 1957, 1722 Hamilton Dr., Macon, Ga. 31201. Wood Procurement Manager, Georgia Timberlands, Inc.


BARTER, NEAL JAY: 1969, 1080 East Forest Avenue, Muskegon, Michigan 49442.


BEGIA, ENZO E.: 1956, 2315 St. Elias Dr., Anchorage, Alaska 99503. Inventory & Research Forester, Alaska State Division of Lands.


BENSAL, EDWARD D.: 1957, 10815 Colton St., Country Club View, Fairfax, Virginia 22030.

BENTLEY, EVERETT JUDSON: 1940, 20 Floyd Circle, Silver Bay, Minn. 55614. Land Engineer, Reserve Mining Co.


BERNARD, ROBERT J.: 1966, 1938 Missouri St., San Diego, California 92109.


BERTSCH, ROBIN KENNETH: 1969, 2238 East 100th St., Chicago, Illinois 60617.


BONDE, RALPH A.: 1964, 2458 S. 18th St., Manitowoc, Wisconsin 54220.
BOSMAN, VENDEL E.: 1964, 40 Anofo St., Bradford Penn. 16701. Forester, U.S.F.S.
BOTTI, WILLIAM B.: 1964, Box 84, Newberry, Michigan 49868. Michigan Dept. of Natural Resources.
BOURDO, ERIC A.: 1943, School of Forestry & Wood Research, Michigan Technological Univ., Houghton, Michigan. 49931. Dean, School of Forestry & Wood Products.
BOURDOW, ROBERT T.: 1951, 405 Lily Lane, Wausau, Wisconsin 54401.
BOWMAN, STUART W.: 1962, Box 2, Wittenberg, Wis. 54499. Teacher, Wittenberg Public Schools.
BRADY, LENORD D.: 1966, Box 247, Remer, Minnesota 56672. District Forester, U.S.F.S.
BREITZMAN, MICHAEL W.: 1964, 237 Roland, Missouri 63011.
BROUSSEAU, CARL H.: 1964, Box 58, Gwinn, Mich. 49841. Assistant Area Forester, Michigan Dept. of Natural Resources.
BUCK, DAVID C.: 1966, Fern Mobile Estates, Rt. 1, Box 32, Junction City, Oregon 97448.
BURGER, JEFFERY JEROME: 1968, 416 Balfour Drive, Regina, Saskatchewan, Canada.
BUNK, FRANK JR.: 1968, 7469 St. Mary's, Detroit, Michigan 48228. Graduate Student, Forest Recreation, University of Michigan.

CAVARES, DAVID S.: 1965, Universidade Federal do Carana, Ecola de Flores Cas Rua Bon Jasus, 650 Curitiba, Parana, Brazil.
CAPUL, BENVENIDO: 1967, P.O. Box 46, L'Anse, Mich. 49946. Asst. Forest Manager, All-wood Inc.
CARLSON, BRUCE R.: 1958, 6028 Wilson Way, Milpitas, California 95035. USFS.
CARPENTER, ARTHUR V.: 1962, 1716 Woodlawn, Medford, Ore. 97501.
CHALFANT, MRS. DALLAS: 1961, Rt. 1, Box 436, Aumsville, Oregon 97325.
CHAMBRELL, HARRY L.: 511 Carey St., Lansing 15, Michigan 48915.
CORCORAN, DR. THOMAS J.: 1955. 13 Gilbert St., Orono, Maine 04473. Professor, School of Forestry, University of Maine.
CUNDY, GLYDE Y.: 1950. 707 Logger Dr., Olympia, Wash. 98501. Technical Director, Cascade Pole Co.

DESIARDEN, JOSEPH G.: 1958. Prospect, Ore. 97536. Project Forester, USFS.

E

F
FALGE, JAMES R.: 1959, Wildwood Rt. 1, Dickson, Missouri 65459. Owner, Wildwood Safari Camp Inc.
FALKNER, EDGAR H.: 1953, 8833 Powell, St. Louis, Missouri 63144.
FARBO, THOMAS P.: 1953, Box 1297, Orofino, Idaho 83544. Timber Staff Officer, U.S. Forest Service.
FLECHSIG, ALBAN R.: 1962. 4414 Cook St., Duluth, Minn. 55804.
FOLTZ, JOHN L.: 1965. Rt. 3, Box 367, Adrian, Mich. 49221. Forester in Chile, Board of Missions, United Methodist Church.
FOSSA, OTTAVIO Q.: 1953. P.O. Box 183, Lakewood, Wis. 54138. Staff Assistant, U.S. Forest Service.
FUCK, GEORGE C. JR.: 1943. 703 Kinzie Court, Menasha, Wis. 54952. Industrial Engineer, Marathon Corp.

GOODMAN, JAMES B.: 1950. 213 E. Wilson St., Elmhurst, Ill. 60126. Western Division Forester, Commonwealth Edison Co.
GOTTWALD, PAUL J.: 1954. 2916 Taylor St., Marinette, Wis. 54143. Area Forester, Wis. Dept. of Natural Resources.
GUERARD, JAMES A.: 1961, 40 Rupert St., Port Arthur, Ontario, Canada.

H


HAARALA, PAUL R.: 1956, 3189 N. Mt. View Dr., Ogden, Utah 84404.


HAKALA, JOHN B.: 1950, P.O. Box 280, Anchorage, Alaska 99501.

HALLISY, RAYMOND J. JR.: 1952, 201 10th Ave., Antigo, Wis. 54409.


HAMALAINEN, ARVI E.: 1949, 821 Faxon Parkway, Williamsport, Penn. 17701.


HANSEN, ROBERT D.: 1950. 2381 W. Streetsboro, Peninsula, Ohio 44264.


HASSLER, GERALD A.: 1965, Rt. 2, Galesville Motor Court, Galesville, Wis. 54630.


HEBNER, JAMES; 1968, Box 67, Dollar Bay, Michigan.

HECKEL, WILLIAM D.; 1959, Bly Ranger Station, Bly, Oregon 97622.


HENINGER, RONALD L.; 1968, 1212 Hickory St., Waukegan, Ill.


HENSLEY, CARL F.; 1963, Rt. 5, Tomahawk, Wis. 54487. Photo Interpreter and Forester, State of Wis.


HERTH, MICHAEL R.; 1969, 17062 Okulo Place, San Diego, Calif. 92127.

HEWETT, RALPH C.; 1962, R.R. 1, Box 45, Boulder Junction, Wis. 54512. Forester, Wisconsin Dept. of Natural Resources.

HICKEY, DEAN L.; 1963, 612 Kennedy St., Ironwood, Mich. 49938.


HILDEBRAND, PHILIP G.; 1953, Rt. 1, Box 259A, Colville, Wash. 99114. District Administrator, State of Washington, Dept. of Natural Resources.

HITESMAN, RICHARD F.; 1957, Iron River, Wis. 54847.

HOHLFELDER, DENNIS L.; 1963, R.R. 1, Appleton, Wisconsin 54911.


HOLM, EDMUND W.; 1952, 3802 Vineyard Dr., Redwood City, Calif. 94061. Teacher, San Mateo High School.


HORAK, JACK E.; 1959, 1120 Callon St., Wausau, Wis. 54401. Owner Texaco Service Station.


HOSKING, RAYMOND JR.; 1950, 902 W. Hughitt St., Iron Mountain, Mich. 49801.


HUTCHINSON, MILTON J.; 1950, Planview Rd., Rt. 1, Sussex, Wis. 53089.


JACKSON, ARMAND O.; 1964, 543 Cedar St., Apt. E, Chillicothe, Ohio 45601.


JANOV, CHARLES G.; 1966, 117 W. Harney Rd., Esso, Minn. 55733.


JENNINGS, The Rev. CLAIR G.; 1948, 5025 Harriet Ave., Minneapolis, Minn. 55419. Minister and Dean, Indep. Lutheran Seminary and Bible School.


JOHNS, WILLIAM E.; 1966, 4110 E. Lake St., Minneapolis, Minn. 55405. North Central Forest Experiment Station, U.S.F.S.

JOHNSON, CARL G.; 1957, 818 S. 14th St., Shelton, Wash. 98384. Sales Representative, Hime Realty, Inc.


JOHNSON, NORMAN L.; 1962, Box 63, St. John, Wash. 99157.

JOHNSON, RUSSELL A.; 1949, 1640 Spring St., Medford, Ore. 97501. Forester, Timber Management Assistant, Bureau of Land Management.

JONES, CHARLES G.; 1964, General Delivery, Nixxon, Montana 59853.

JONES, RICHARD S.; 1964, RDF 1, Vermilion, Ohio. Recreation Forester, Lorain County Metro Park District.

JORGENSEN, JACQUES R.; 1952, Box 12254, Research Triangle Park, N. C. 27709. Soil Scientist, Southeast Forest Experiment Station.


JUNTUNEN, GEORGE I.; 1943, 19430 Rock St., Roseville, Mich. 48066.

K


KALK, PETER A.: 1966, 434 NW 29th St., Corvallis, Ore. 97330.


KARLING, WILLIAM J.: 1953, 2150 Gridley, Reno, Nevada 89503. Lands Forester, USFS.


KEENER, JOHN M.: 1949, Box 450, Madison, Wis. 53701. Administrative Assistant, Game Management, Wisconsin Conservation Dept.

KEESLER, VERN: 1969, Lakewood, Wis. 54138. USFS Chatham, Wis.


KEPPEN, GARY H.: 1960, 4369 Croatian Lake, Rt. 3, Eagle River, Wis. 54521. District Ranger, USFS.

KETCHAW, LARRY W.: 1966, 1124 Pinto St., Rhinelander, Wis. 54501.


KIRSCHBAUM, JAMES W.: 1959, P.O. Box 804, Snowflake, Ariz. 85937. Forester, USFS.


KNAPP, CLYDE A.: 1949, 11653 N. Wauwatosa Rd., Mequon, Wis. 53092. Right-of-Way Officer, USFS.


KOCH, JEROME ROBERT: 1339 Reed, Green Bay, Wis. 54303.


KOSKI, DOUGLAS J.: 1953, 212 N. Wells St., Koscisklo, Miss. 39090. Unit Forester, International Paper.

KOTILA, PETER E.: 1950, P.O. Box 2268, West Palm Beach, Fla. 33402. Operations Coordinator, Bahama Agricultural Industries Ltd., Andros Island, Bahamas.

KRAMER, JOHN G.: 1964, 47 Judson St., Canton, N. Y. 13617.


KRAUTTER, DONALD C.: 1951, Box 7, Fanwood, N. J. 07023. Self-employed, Krautter’s Inc.


KRONEBERG, IVAN A.: 1950, P.O. Box 64, Norway, Mich. 49870. Forester, US Steel Corp.

KRONSNABLE, JAMES A.: 1965, P.O. Box 308, Montello, Wis. 53949. Assistant District Forester, State of Wisconsin.


L


LABYAK, Dr. LEO F.: 1944, 6120 Sylvan Dr., Columbus, S. C. 29206.

LAMB, DENNIS M.: 1968, 359 Woodlawn St., Winnipeg, 12, Manitoba, Canada.


LANDGRAF, DONALD A.: 1961, 2119 Windwood Lane, Bedford, Ind. 47421.

LANYOIS, RICHARD J.: 1956, 2924 Taylor St., Marquette, Wis. 54943.


LATHROP, KENNETH A.: 1964, Box 304, White Swan, Wash. 98952.


LAVIERDIERE, REUBEN J.: 1947, 933 Memorial Dr., Macomb, Ill. 61453. Farm Forester, Illinois Division of Forestry.

LEACH, PAUL J.: 1954, % Federal Water Pollution Control Adm., 911 Walnut St., Federal Bldg., Kansas City, Missouri 64106.


LEE, DAVID A.: 1956, 219 W. 2nd St., Ladysmith, Wis. 54848. Assistant District Forester, Dept. of Natural Resources, Div. of Coins.

LEHRER, GEORGE F.: 1958, 1730 Clermont St., Antigo, Wis. 54409.
LEHTOLA, EVERT M.: 1931, Box 144, Marble, Minnesota 55764.


LEWIS, RONALD D.: 1962, P.O. Box 260, Blue River, Ore. 97413. Silviculturalist (Supervisor Forester), U.S. Forest Service.

LEWIS, WARNER G.: 1959, 1118 Sequoia, Klamath Falls, Ore. 97601.


LINTELMANN, FREDERICK W.: 1958, Blackduck, Minn. 56630. USFS.


LITTLE, RICHARD B.: 1954, Rt. 1, Chillicothe, Ill. 61523.


LONEY, CRAIG C.: 1964, Box 43, Boulder Junction, Wis. 54512.

LOCKWOOD, JACK P.: 1954, Rt. 2, Box 434, Bayonne, N. Y. 47912.

Forester, Michigan Dept. of Natural Resources.


LUNDBERG, JOHN F.: 1959, Box 4, Athelstan, Wis. 54104.


MADISON, JAY C.: 1963, 2118 Monroe St., North Bend, Oregon 97459.


MAHRINGER, ERIC B.: 1966, P.O. Box 302, Houghton, Michigan 49931.


MAKELA, HOWARD J.: 1948, Box 96, Southrange, Michigan 49963.


MALKOFF, MAJ. ELI GEORGE P.: 1958, 115 Craig Dr., Savannah, Georgia 31405. Commander of Air Craft Direct Support Unit, Hunter Army Airfield.


NELSON, RODNEY L.: 1961, Mirror Lake State Park, Rt. 3, Baraboo, Wis. Park Manager, Wisconsin Dept. of Natural Resources.

NEUBAUER, CLIFFORD A.: 1951, P.O. Box 171, Federal Way, Wash. 98002. Designer, Boeing Co.

NEWMAN, Lt. ALAN G.: 1968, c/o Frederick L. Fretwell, 507 Church St., Doylestown, Ohio 44230.

NICKLE, DONALD G.: 1939, 904 Palmerof Dr., Yuma, Arizona 85364. Staff Assistant, Lower Colorado River Land Use Office, Dept. of Interior.

NICOLSON, JOHN A.: 1964, 7475 Osseo Rd., #12, Minneapolis, Minn. 55429. Research Assistant, Univ. of Minn.

NIelsen, CHARLES P.: 1950, 5608 Olde Post Rd., Sylvania, Ohio 43560. Vice-President, General Manager Woodlands, Owens-Illinois Inc. (Forest Products Div.)


NILES, CHRISTOPHER: 1962, P.O. Box 188, Andover, Mass. 01810.


NORGARD, ROBERT E.: 1950, 7846 Madison, Spring Lake Park, Minn. 55432. Vice President, MacGillis & Gibbs.


NORLIN, JOHN R.: 1957, 1244 Germono Ave. SE, Roseburg, Ore. 97470. Realty Specialist, BLM.

NORRIS, MAX E.: 1966, P.O. Box 1, Ashland, Montana 59003. Radarman, US Navy.


OLSON, WALTER A. JR.: 1953, 1700 Calumet, New Holstein, Wis. 53061.

OMERICK, DONALD J.: 1965, P.O. Box 87, Two Harbors, Minn. 55616. District Forester, Minnesota Lands & Forestry.


PASTORI, FRED M.: 1962, 4596 Barrett Way, S. Salem, Ore. 97302. Forester, BLM.

PAULSON, NEIL R.: 1937, Cle Elum, Washington 98922. Research Assistant USFS.

PEKALA, OLIVER W.: 1950, 407 5th St., Waiverly, Ohio 45690.


PIEL, THOMAS W.: 1963, 1006 Hamilton, Minneapolis, Minn. 55416.

PIESEPBRINK, HOWARD H.: 1961, Box 205, Ashland, Wis. 54806.


PIERCE, RICHARD L.: 1949, Box 900, Dallas, Texas 75221. Senior Research Geologist, Mobile Oil Research and Development Corp.

PIETILA, JAMES A.: 1965, Rt. 1 Blue Lake Rd., Minoqua, Wis. 54548. Forester, Commissioners of the Public Lands.

PIIPARINEN, LAURI I.: 1967, 7808 Colgate Ave., Cleveland, Ohio 44102. Graduate Student, University of Minnesota.


POLECHECK, JONATHAN E.: 1968, Big Falls, Minn. 56627.

W


WAISANEN, PETER B.: 1962, 705 8th St., Post Falls, Idaho 83854.


WARREN, JOHN H.: 1964, Rt 1 Menasha, Wis. 54952. Park Manager, High Cliff State Park.


WEINBERG, GLEN L.: 1942, 511 Brompton Place, Chicago, Ill. 60613. Assistant to the President, Royal Continental Co.

WEISINGER, RUSSELL J.: 1962, PO Box 77, Baraga, Mich. 49908.


WENZEL, DAUKE E.: 1951, 200 N. 5th St., Crystal Falls, Mich. 49920. Game Biologist, Michigan Dept. of Natural Resources.


WHIPPLE, JAMES W.: 1964, 206 Clay, Neillsville, Wis. 54456. Assistant District Forester, Wisconsin Dept. of Natural Resources.


WHITE, JAMES A.: 1960, 320 Meadow Lane, North Bend, Oregon 97459.


WIDERSTROM, GUNNAR A.: 1967, Box 212, Preston, Minn. 55965. District Forester, Div. of Lands & Forestry, Minnesota Conservation Dept.


WILLIAMS, THOMAS E.: 1963, Rt 1, Box 237, Evelth, Minn. 55734. Assistant Nursery Supt., USFS Evelth Tree Nursery.

WOERPEL, LOREN S.: 1961, 624 Sank Dr., Port Washington, Wis. 53074.


WOOD, ROBERT D.: 1960, Rt 2, Box 168, Traverse City, Mich. 49684.

WOOD, WILLIAM B.: 1963, 780 Meadow Dr., Rhinelander, Wis. 54501. Assistant Manager, Hugo Sauer Nursery, Wisconsin Dept. of Natural Resources.


Y

YANKEE, RICHARD A.: 1957, 114 Lincoln St., Lake City, Mich. 49651. Regional Superintendent, Wood Procurement, Packaging Corp. of America, Div. of Tenneco, Inc.


Z

ZAUG, DALE A.: 1965, 5021 Tomahawk Trail, Madison, Wis. 53705.

ZEMISKE, ARTHUR R.: 1949, 8100 Noid Ave., Minneapolis, Minn. 55428.

ZENKE, TIM C.: 1962, 3452 Stark St., Eugene, Ore. 97402. Forester, BLM.


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