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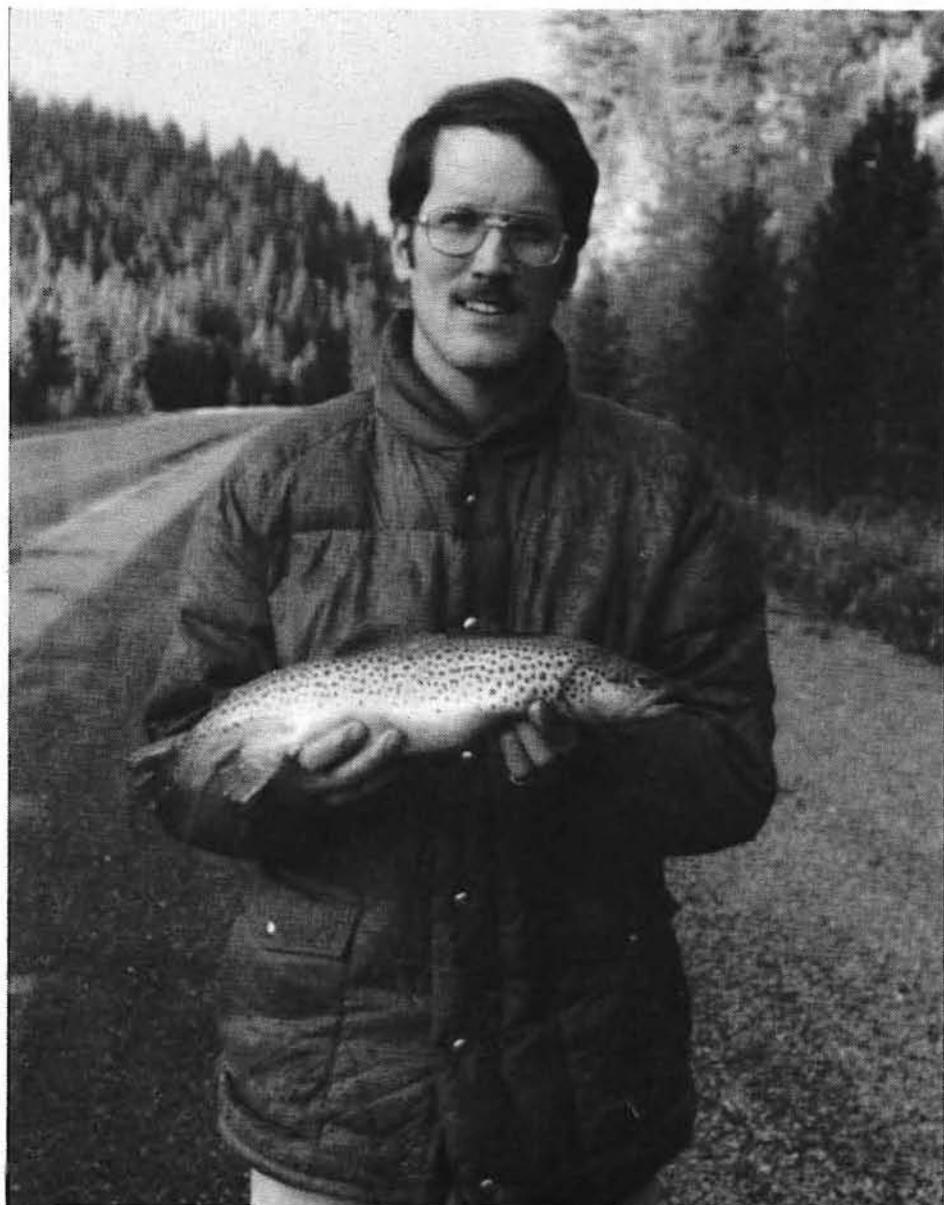
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DEDICATION



ROBERT C. BERNARD

Robert C. "Bob" Bernard, a 1986 College of Forestry graduate, died November 1, 1987 as the result of an industrial accident October 30, 1987. He was born July 5, 1957 in Lansing, MI to Charles and Marie Bernard. At the age of 11 he moved with his family to St. Paul, MN and in 1972 they moved to Prior Lake, MN. He graduated from Lakeville High School in 1975. From 1975 to 1977 he attended Normandale Community College to complete his Pre-Forestry curriculum. He attended the University of Minnesota the Fall quarter 1977, but was unable to make a go of it at that time. Six and a half years later he decided to return to school and complete his Forestry degree. With hard work and determination Bob was able to hold down a full-time job and help raise a family while attending college. He graduated from the College of Forestry in Forest Products Marketing in March 1986. Bob was a sales service representative for Georgia Pacific Corp. since August 1986.

Bob's interests included camping, fishing, reading, and a general enjoyment and appreciation of the out-of-doors. He also enjoyed various types of music (his favorite being songwriter/singer John Denver) and he possessed a wonderful sense of humor (especially when it came to the Far Side cartoon). To those who knew Bob it was evident that he valued his faith, family and friends over anything else of this world. Bob survived by his wife Lori, son Joseph-6, daughter Rebecca-5, parents Charles and Marie Bernard, four sisters, two brothers and grandmother Isabel Bernard.

A scholarship is being established in Bob's memory and will be titled *The Robert C. Bernard Forest Products Scholarship*.



Lake Itasca photo by Al Lundstrom

Every woodland, or forest in addition to yielding lumber, fuel, and posts should provide those who frequent it a liberal education about nature. This crop of wisdom never fails but unfortunately it is not always harvested.

—Aldo Leopold

Contents

The Future of Forestry and the Significance of Moonshine	
Chris Siems	2
Dean's Report	
Richard A. Skok	4
Department Reports	
Forest Resources, Allen Ek	7
Forest Products, James Bowyer	10
Fisheries & Wildlife, Ira R. Adelman	13
Faculty	
Forest Resources	16
Cloquet Forestry Center Staff	25
Forest Products	27
Fisheries & Wildlife	32
Staff	36
Graduating Seniors	40
Graduate Students	45
People & Places	46
Cloquet Field Session, 1987	
Gregg Hove	50
Itasca Field Session	
Elizabeth Krueger	51
The Epic of Minnesota Forests	
Eric Nordlie	54
Burn-Out: Firefighting in California Forests	
Paula Meyers	56
TAPPI	
Mark Olofson	59
RRM Club	
Patrick McKenna	59
Notes from the Student Chapter of the Wildlife Society	
Tom Roster	60
SAF Student Chapter	
Laura Held	61
Forestry Club	
Laura Held	62
Conclave 1987	
Elizabeth Krueger	63
Fall Bonfire	
Elizabeth Krueger	63
Tree Cut	
Amanda Sjoquist	66
It's Christmas Time in the City	
Robb Collett	67
Forester's Day	
James Radzak	68
Scholarship Recipients	70
Advertising	74

The future of forestry and the Significance of Moonshine

Chris Siems

“*... Full moon. Harvest moon. Among the moonshadows, I could easily see the spider web of deer paths winding across the hill and along the ridge. Still, I crouched behind a thicket and waited. I knew I'd see them soon now. Moments later, but as always when my head was turned, the two does emerged from the woods. The woods sit down in a bowl valley that I've always called the hollow. They saw me, but did not run. They see me often. They expect me. I watched them rise up out of the mist, gliding effortlessly through the tall grasses, disappearing over the ridge to bedding sites nestled in a sheltered plateau on the other side. They faded into the harvest moon like ghosts. Mysterious, graceful ghosts. Down in the hollow, the old great horned owl booted softly, to himself . . .”*

That's how I was going to start this essay. That's how I wish I could start it now, but it would be a lie. The hill is now flat, bulldozed to make way for picnic tables and volleyball courts. Tonight I saw for the first time the raw dirt and the massive piles of dirt from across the marsh. My heart dove, a red-tailed hawk after prey. I looked over to the hollow just then, and I saw the two does slipping out, as the deer have done here for years. They stopped and turned back; there's no place for them to go. The hollow's woods, once day-time protection and water when the brook was high, now seem a prison, barred by stems of boxelder, elm and oak; all is heavily browsed.

And so tonight I think about becoming a forester, and what that really means. My

thoughts turn to people who make management decisions about land without really knowing it. And most of all, where this all leaves me, in the great ecological scheme of things. Urban Forestry major, class of 1980-something. Probably.

Acid rain. Tropical deforestation. Atmospheric carbon dioxide increase. When I think about the role of foresters in the future, I think of these; I hear about them every day in class. I hear about them without my heart sinking as much. Big as these problems are, my heart should dive like a gyre of falcons, But that intensity of feeling is reserved for land that I know, land that I love. Acid rain seems somehow removed, distant in time and space from this land, though I know that it is not.

My role as a forester, as our earth spins toward the twenty-first century, will be to try to tackle these problems the best I can. But I can't help thinking about how I'll never be able to run along those deer paths to the crest of the ridge and bask in the moonlight, or watch the sunset from there again.

Maybe the most important thing I can do is find another small piece of land, love it, and take care of it, as one with wisdom and knowledge about the land's ways takes care of land. I realize that we need the forest's yields. I know not all people share my love for deer and harvest moons and great horned owls. But more than the fact that we need the land's resources, its timber, we need the land, plain and simple.

Problems like acid rain frighten me. Deforestation terrifies me. But small scale misuse of land makes me angry, and that is where I will start. That is where I can make the biggest difference. That's where I can

really practice the craft I am learning, and will continue to learn. Because one well-managed piece of land leads to another. Knowledge builds on knowledge.

Slowly, methodically, these phenomena became very threatening problems. Slowly, methodically, foresters in the twenty-first century will use their knowledge and skill to solve them.

Nathaniel Hawthorne wrote *The Scarlet Letter* on the premise that bare reality is revealed only in the soft light of the moon. He knew that only then is our mind wonderfully, mysteriously free of our sunlit mindsets and preconceptions. In the moon-glow, we see things anew. I pray that I saw the future of forestry in those old moon-shadows on the ridge.



Chris Siems is a junior majoring in Urban Forestry. His area of interest is the effects of suburban construction on native wildlife and vegetation. Outside of his classes at the University of Minnesota, Chris writes prose and poetry about wilderness related topics. His career plans include pursuing his writing, and advancing the cause of wildlife and forests in suburban areas by forming a new home construction company that practices wildlife-safe construction techniques that he has developed.

Richard A. Skok

Changes are occurring rapidly for the College of Forestry and more lie ahead. I believe they will provide a firm foundation for our programs as we assess the directions that must be taken to maintain the quality and responsiveness to emerging needs and issues that both you and we have come to expect.

The nearly completed Phase I construction and the legislature's approval of \$4.76 million for the Phase II remodeling of Green Hall, which will begin over the next several months, promises to provide Minnesota with top quality facilities for forestry and related instructional and research programs.

By mid-April 1988 the new building completed as part of Phase I construction will be occupied. The Natural Resources Administration Building (NARB) is the name approved by the Board of Regents in November for this new facility. New and expanded space for the Forestry Library, a college computer lab, student commons and student organization officing, conference and seminar meeting facilities as well as administrative offices for the Office of the Dean and Office for Student Affairs will be located in this building. Marilyn Workman, Administrator in the Office of the Dean, took on the major share of the task of working with contractors, project managers, architects, designers, trades people, furniture and equipment suppliers and many others in representing the college on the day to day informational needs, referrals and general problem solving that are necessary to keep a project of this magnitude on track. All this came on top of her regular duties which continued unabated. Those of us observing this close at hand know how much we owe her for such devoted service.

By mid-March faculty and support staff will be able to move into the new labora-

tories built as additions to Green Hall in Phase I. These sorely needed labs open opportunities in our research and graduate education programs in biology and water resources that were simply not available to us until now. Professor Ed Sucoff deserves special recognition for the detailed coordination and oversight he provided in the layout and equipping of these labs.

In a similar manner Professor Tom Burk has been the inspiration and guiding hand in the planning, equipping and set up of the computer lab located on the first floor of the new facility. This will provide students in all programs of the college access to instruction and individual use of personal computers unparalleled on campus.

Jean Albrecht and her associates in the University Libraries have also been involved in a major way with the planning for and layout of the expanded and new Forestry Library that will be located on the below ground level of the NARB. This will provide space for at least 10 years growth, a more controlled collection, and the ability to deliver modern services to the users of the Library. Coincidentally, the University's Forestry Library and the Library of the North Central Forest Experiment Station, Forest Service, USDA, were merged this past year and this combined facility will serve as the eastern node for the Forest Service national network of library access. It will operate out of the new facility with Forest Service employees officed there full time.

Not all things are accomplished in such a project as this with out losses and setbacks at least of a temporary nature. The Department of Forest Resources faculty, staff and students will have at least one year of major disruption while they move to the old Health Services Building on campus so that Green Hall can be remodelled and brought up to contem-

porary health, safety, and comfort standards. This also entails the potential loss of the mural on the wall in Green Hall on the ground floor. This has stirred the emotions of many who wish to have this historic artistic rendition of forestry in Minnesota kept and restored from the wear and tear of the years. The engineers and architects are restudying the issue and while they do not seem optimistic that a reasonable alternative to the present plan can be found they have been urged to try their best.

The Academic Priorities Plan of the University administration has now been forwarded to the Board of Regents for their consideration and action in March and April. This culminates several years of planning activity initiated by former University President Keller's *Commitment to Focus* statement in 1985. The overall Academic Priorities plan relates to the Twin Cities Campus of the University of Minnesota and has as its goal moving the University of Minnesota into the top 5 of public universities nationally.

The following are some of the recommendations in the Academic Priorities proposal that would most directly affect programs and people in this college if adopted:

1. Change the college name from College of Forestry to College of Natural Resources. (We proposed this in the College plan.) As a part of this change, the mission and activities of the college are to be reviewed in a state-wide study on instruction, research and technology transfer programs supportive of natural resources (mineral, water, renewable resources, under the aegis of the University's Natural Resources Executive Council and with advice from the Legislative Commission on Minnesota Resources, the Department of Natural Resources, and other appropriate state agencies.
2. Increase the percentage of high-ability students enrolled in programs of the college.
3. Reduce the number of degree programs offered by the college.
4. Develop broad core courses that can serve the basic science needs of several majors in the college, where possible faculty members in the college are encouraged to participate in teaching courses for students in other parts of the University.
5. Establishes a maximum undergraduate enrollment goal of 300-500 for the present programs of the college. (We had 284 students enrolled at the undergraduate level fall 1987.)
6. All freshmen will enter the University of Minnesota-Twin Cities through a newly established Regent's College beginning fall 1990. This would mean no freshmen and possibly no sophomore



Dean Richard A. Skok

students enrolled directly in the College of Forestry (Natural Resources) effective that date.

7. Move to the semester system from the present quarter system beginning fall 1990. (This finds little favor among the faculty in the college.)

This is a far reaching document and set of proposals with only a few that appear to have the most direct bearing on the college noted above. There are major reallocations and retrenchments proposed in the plan with the college being told to reallocate 10 percent of its instructional budget over the next five years as proposed in our collegiate submission one year ago.

I am pleased to note the appointment of Scott Reed as the Cloquet Forestry Center coordinator. Scott has been based at the Center for several years as an extension specialist and member of the faculty of the Department of Forest Resources. He replaces Al Hallgren who announced his retirement plans last year.

We also bid farewell to Cliff and Isabel Ahlgren who served for many years as research associates with primary responsibilities to the Wilderness Research Center at Fall Lake near Ely but were members of the College of Forestry faculty. They have retired to Arizona but will spend the 1988 and perhaps additional summers at the Center completing work they have ongoing there.

You can understand that this has been a busy year for us. The department heads' reports presented elsewhere will provide you more specific information on programs and people. Overall I believe it has been a good year for the college and accordingly I like to believe for the people we serve.

Allen Ek

Professor and Department Head, Department of Forest Resources

1987 has been a year of change and anticipation. Commitment to Focus planning is nearing completion and the first phase of the Green Hall addition and remodeling project is ready for occupancy. Especially important to the Department are the new research laboratories the project has added onto the back of Green Hall. Along with these additions there have been a number of staffing changes that promises a bright future for our efforts.

The major story in the past year has been the Commitment to Focus planning for the University. We are still trying to sort out the details, but it appears that it provides significant new opportunities for the department. Department faculty will be assisting in the development of forestry and related natural resources course offerings across the Twin Cities campus. One possible result is a redefinition of "liberal education" so that the basic requirements for all students encompass more natural resource subject matter.

Another major story is the new forest biology research laboratories on the back of Green Hall. These are more than just new facilities. Together with new faculty and changes in emphasis by existing faculty, these labs represent our active participation in the "quiet revolution" taking place in biology research. Briefly, our interest remains high in the traditional problem areas of forest biology, but there are important new tools and approaches that promise exciting results. Progress in areas such as tissue culture, genetic engineering, micropropagation, etc., are changing how we approach research and the potential for major accomplishments. As phase II (remodeling) is completed we will also be able to share that excitement with more students through new teaching laboratories.

Our newest faculty member is Robert

"Buzz" Martin who comes to us from the completion of a Ph.D. program at Kansas State University in their Evapotranspiration Laboratory. Buzz is a research fellow in the Remote Sensing lab and will be assisting with the design, development and integration of digital image analysis and geographic information systems. Buzz will replace Bill Johnson, who left the lab earlier this year to return SUNY. Doug Meisner also left the lab to develop a local enterprise involving video technology. Glenn Furnier joined us as an assistant professor in forest genetics and molecular biology and will develop our new biotechnology laboratory. Glenn comes to us from a postdoctoral position in forest genetics at the University of California at Riverside. Glenn holds a Ph.D. in forest science from Oregon State University, a master's degree in plant pathology from the University of Minnesota and a baccalaureate degree from the University of Michigan.

Howard Hoganson joined us as an assistant professor in the forest management and economics area. Howard is stationed at the University's North Central Experiment Station at Grand Rapids and will work closely with researchers in St. Paul on forest management including economic analysis and silvicultural opportunities. Howard will also help coordinate the forest management and silviculture research out of Grand Rapids. Prior to this appointment, Howard served on the faculty at Virginia Polytechnic Institute and State University and as principal economist for the USDA Forest Service North Central Forest Experiment Station in Duluth. Howard holds a Ph.D. from the University of Minnesota and a masters degree from the University of Washington. Dave Lime, formerly a project leader in river recreation with the USDA Forest

Service North Central Forest Experiment Station joined us as a research associate in May 1987. Dave has taken responsibility for the instruction of FR 3232 Forest Recreation course formerly handled by Larry Merriam. He has also been very active in developing the campus Tourism Center and related research and problem solving in the area of recreational land management for public agencies. Bob Hanson joined us for a year as a research fellow in extension to assist Scott Reed and the Logging Business Management extension program and to develop new 4-H and youth education materials. Bob comes to us with a Ph.D. in forest ecology from Stephen F. Austin State University in Texas.

As many of you know, Frank Irving stepped down from his position as Director of Graduate Studies last summer and has been wrapping up his research and education programs over the last few months. We thank Frank for many years of dedicated service and his always helpful wisdom on matters of policy and personnel management. Ken Brooks has taken over Frank's role as Director of Graduate Studies for the forestry graduate program which includes the Departments of Forest Resources and Forest Products. Al Hallgren has also retired as professor and Coordinator of the Cloquet Forestry Center. We owe Al a special thanks for his consistent help in conducting programs at Cloquet. Scott Reed assumed the role of coordinator in January, 1988 and we wish him well in this new and challenging role. Janelle Schnadt has also been reclassified to Assistant Administrator in the Department and she will handle even more of the details that keep our operation afloat.

Drs. M. L. Bhat and O. P. S. Bana have returned to India. It was enriching having them here for a year as part of the Indian University faculty trading program. Dr. P. S. Chauhan is here with us now as a visiting scientist from Solon University in India. He will work in the silvicultural modeling area with Tom Burk and myself.

The completion of the first phase of the

Green Hall addition and remodeling project will provide the department with first class facilities for computer-based instruction. The new computer laboratory in the Natural Resources Administration Building is among the best on campus. We will see heavy use of that facility for FR 5212 Natural Resources Inventory, FR 5226 Forest Economics and Planning, FR 5130 Geographic Information Systems in Natural Resource Planning and a variety of other courses.

The Great Lakes Forest Growth and Yield Cooperative was initiated this past year. The cooperative is being steered by the department together with the North Central Forest Experiment Station and the Department of Natural Resources. The cooperative is seeking membership across the Great Lakes region and will serve as a vehicle for enhancing the quality and availability of growth and yield models for assessing short- and long-term forest dynamics. Such models are a prerequisite to solid forest management planning. That cooperative is assisted in its development by Tim Bottenfield who came from a growth and yield project at Auburn University. Tim will be with us as a research specialist to get that organization going. The cooperative is one component of a larger Legislative Commission on Minnesota Resources (LCMR) sponsored project on "future timber supply scheduling techniques" under the direction of Dietmar Rose. The LCMR also is continuing support of a large "biotechnology applications in forestry" project headed by Carl Mohn. Al Lundgren has joined us part-time as a research associate to assist with the conduct of the Pew Foundation grant on sustainable development involving Hans Gregersen, Ken Brooks and a number of other faculty. Charlie Blinn is also assisting Beltrami County in an LCMR sponsored project to assess the status of regeneration of young stands under county land management there. That project will fit in well with the growth and yield cooperative and its data collection needs.

The Department has done well in University-wide competition for IBM and Apple microcomputer equipment. Professors Dietmar Rose, Sean Ahearn and Ken Brooks lead in acquiring much new equipment that puts our capabilities at the forefront of similar programs. The goal of the competition is to encourage instructional software development.

The Department hosted the 1987 IUFRO Forest Growth Modeling and Prediction Conference held in Minneapolis in August. Tom Burk and I were heavily involved in coordinating this very successful conference. The meeting drew over three hundred participants from nineteen countries. The proceedings, due out soon, will be a key source of information on progress in the field. Ken Brooks, Sandy Verry (Adjunct Professor from the North Central Forest Experiment Station) and Irv Berglund (Adjunct Professor from the Department of Natural Resources) led a major workshop on the "Hydrology of Wetlands" with an emphasis on peatlands September 14-19, 1987. That workshop involved both the application of computer based hydrologic models and field trips in northern Minnesota. The North Central Forest Experiment Station and the Department of Natural Resources were co-sponsors. Marna Bulter, Phil Splett and Vilis Kurmis also conducted a workshop on Forest Weed Identification at the Cloquet Forestry Center. Additional shortcourses/workshops are too numerous to mention but in total suggest a high level of faculty effort directed at continuing education.

Travel this year was an expression of the respect the international community has for our faculty. Jim Perry and Charlie Blinn visited Caribbean countries in December to discuss collaborative research in the water quality and database management areas. Ken Brooks, Hans Gregersen and Dietmar Rose visited Morocco in January. Professor's Brooks and Gregersen were invited by the Moroccan to introduce the French version of their UN-FAO publication on the economics of watershed management. Pro-

fessor Rose was sponsored by the USAID/Minnesota project to advise Moroccan graduate students and consult with faculty there on forest management planning methodologies. These faculty seem especially adept at bringing this international experience back to enrich the classroom experience of students here.

For the inside story, see Kathy Middleton at the reception desk. Kathy, Clara Schreiber and Ruth Davidson continue to staff the FR office. Mary Ann Hellman and Betty Schiefelbein continue as staff in the Extension and Remote Sensing Lab offices, respectively. Two very recent additions are Kathy's son Tyler and Betty's daughter Stephanie.

The coming year will see a number of changes. Just to warn you, the next time you visit us many of the faculty may be in the Health Service Building just west of Green Hall. That is where we will stay for a year while the remodeling of Green Hall is conducted. Bear with us, the future looks very bright.



*Alan Ek, Professor and Department Head
Department of Forest Products*

James Bowyer

Professor and Department Head, Department of Forest Products

The past year was marked by sidewalk detours and fences around Kaufert Lab, the melodious sound of jackhammering, and the brick-by-brick emergence of a new structure just to the south. The year also brought new faces to the department and significant developments in research and fundraising activities.

The "price of progress", as it is sometimes referred to, was in evidence at every turn throughout the year as the new building continued to take shape. One of the costs was expressed in the form of an elaborate detour from Kaufert Lab to Green Hall which seemed to grow in length as the weather became colder. Inconvenience aside, the progress was fun to watch. The glassed-in entry to Kaufert became a favorite spot for faculty and students alike who, coffee cups in hand, often offered suggestions regarding construction procedures to whomever would listen. By year's end, a new underground tunnel joined Green Hall and Kaufert Laboratory, reducing the building to building trip by about 4½ miles (or so). The relocation of the forestry library to the lower level of the new structure, combined with the connecting tunnel from Kaufert Laboratory, will bring library facilities literally within a few steps of forest products faculty, staff, and students and will eliminate the need for coats gloves, and galoshes when seeking library materials. This is truly progress!

In the personnel category, several talented individuals were added to the staff over the past year. *Vern Guyer* joined us in September as a Lecturer/Research Associate. Vern comes to the University after some eighteen years in research and development with Conwed Corporation; he is teaching several courses related to the Paper Science and Engineering pro-

gram and will be engaged in research related to wood permeability and fiber science. Joining the faculty ranks is *Tim Larson*, who carries the title of Assistant Professor and Extension Educator. Tim is the latest addition to our Cold Climate Housing Information Center. Tim has a MS degree in forest products from Minnesota and several years experience as an engineer with Citation Homes in Spirit Lake, Iowa. He is currently close to completion of a Ph.D. degree in Wood Science.

Speaking of the Cold Climate Housing Information Center, there have been many developments over the past year, with new faculty hired in the departments of agricultural engineering, and design, housing and apparel, in addition to forest products. *Lew Hendricks* was named coordinator of the Center early last Spring. Lew is directing faculty/staff efforts, including establishment of an annual summer session for Minnesota Technical Institutes building construction instructors, beginning in the summer of 1988.

In a development related to the Cold Climate Housing Information Center, the University established in 1987 the Minnesota Cold Climate Building Research Center (MNBRC). MNBRC was created as broad-based, interdisciplinary organization to research the energy-related performance of residential and commercial buildings and to transfer that technology to people who can use it. The new center is composed of scientists and professionals from four colleges and six academic departments, including forest products. Stay tuned for further developments!

This past year was another good one for forest products graduates, who enjoyed a very strong job market. Especially good was the marketing field where available jobs exceeded the number of graduates by

something like a 6:1 ratio. In recognition of the strong job outlook and the need for more forest products marketing graduates nationwide, a drive to significantly expand the marketing program through private contributions began in earnest in mid-year. Some \$1,000,000 in private contributions, which will be matched dollar for dollar from University funds, is being sought.

The forest products research effort was given a significant boost with a \$250,000 contribution in December to create the Buckman Scientific Project Support Fund. The gift was made by Mertie Buckman, of Buckman Laboratories, Inc., in honor of her husband Stanley. The donation was matched by University funds and used to create an endowment, with income from this fund to be used for purchase of research and teaching equipment in the department. This gift addresses a critical need in our scientific and graduate education programs and will help us remain competitive. By way of background, Stanley Buckman, who passed away in 1978, received a bachelor of science degree in forestry in 1931 and a doctorate in forestry and biochemistry in 1933, both from the University of Minnesota. After a rapid rise through the wood treating industry, Mr. Buckman became a partner in and president of Central Laboratories, Inc. of Memphis, Tennessee in 1941. In 1945, he founded his own company in Memphis—Buckman Laboratories, Inc. to manufacture chemicals to combat the undesirable effects of microorganisms in various industries. The Board of Regents of the University of Minnesota awarded him Outstanding Achievement Award in 1951.

The faculty and staff have been extremely active through the year conducting teaching, research, and extension pro-

grams. *Simo Sarkanen's* lignin research group made several important discoveries in 1987 that bring the commercial use of lignin as a chemical feedstock closer to reality. His work is expected to have a major impact on the use of the approximately 25 million tons of by-product lignins generated annually in North America. *Rolly Gertjeansen* continued his heavy teaching schedule of years past, but has managed as well to expand the funding base and scope of activity in the composite products project—now one of our most active projects. *David Ritter* and *Bob Kroll* are both now heavily involved in the wood composite products effort and are contributing very significantly to the success of this program. *Phil Steklenski* has assumed a new role in the department over the past year, working closely with industry, and economic development units of government. Phil has worked with



*James Bowyer, Professor and Department Head
Department of Forest Products*

a number of companies and several agencies over the past year in short-term applied research efforts aimed at products and process assessment and development. Phil also continued his teaching of the production systems analysis course; based on student evaluations, he has developed into an outstanding instructor.

One of our newest faculty members, *Bruno Franck*, spent most of 1987 developing courses and laying the groundwork for an aggressive research program in wood mechanics and structural design. Bruno is also in the process of developing and promoting wood products and wood structures design courses for civil engineering students at the University and for practicing engineers and architects.

World traveler *Bob Erickson* is now back in residence. Bob has brought a number of new ideas for wood drying improvements back with him and is gearing up to investigate these further.

Quite possibly the most notable research development of the past several years has come from the laboratory of *Elmer Schmidt* and *Simo Sarkanen*. They have discovered what appears to be an inexpensive and effective bio process for delignifying wood chips. More tests are needed, but you will likely hear a great deal more about this in the months ahead.

Harlan Petersen continued his work with the marketing program and his involvement in a wide variety of extension

projects. Harlan has worked unrelentingly to extend the forest products education to a wider audience. This year, as in the recent past, he has worked with youth involved in the Minnesota 4-H wood technology project. Harlan also became a member this year of the Education Committee of the National Lumber and Building Material Dealers Association-Northwest.

The effort led by *Bob Rouda* to build the Paper Science and Engineering program forged ahead in 1987. Student numbers and financial support have grown over the past year and a new four year scholarship program, designed to help attract students at an earlier point in their academic career, has been developed.

Last but not least (someone has to be last in a report like this) *Tom Milton* served as chairman of the Upper Mississippi Valley section of the Forest Products Research Society, and from all accounts has done a bang-up job. Tom will officially join the Forest Products Department next year in a step that will formalize a close cooperative arrangement that has existed for years.

So much for the news from the St. Paul Campus. All in all it's been a good year. Hope yours was the same. If you are ever in the area be sure to stop by to see us!

Ira R. Adelman

Professor and Department Head, Department of Fisheries and Wildlife

A new major was approved in the Department of Fisheries and Wildlife in 1987. Students entering the department in fall of 1988 will no longer graduate with degrees in fisheries or wildlife; the degree will be fisheries and wildlife. Graduates of the combined major will be more cognizant of the interconnectedness of aquatic and terrestrial resources and the universal ecological principles governing the management of both. This more broadly based undergraduate degree will better prepare students to compete for the kinds of employment available to them and will make them more competent at making decisions affecting more than one environmental system. The curriculum is very tightly structured with new course requirements in problem solving, people management, and communications. A course in ethics and values in natural resource management has also been added. Seniors will work as a group on a senior problem involving a contemporary fisheries and wildlife management issue. Group efforts will consist of problem identification and analysis design, information and data gathering and analysis, and oral and written problem reporting. Students currently enrolled in the department will graduate with the current separate degrees unless they opt to fill all requirements of the combined degree. However, some of the required courses in the current curriculum will be taught with the combined fisheries and wildlife perspective.

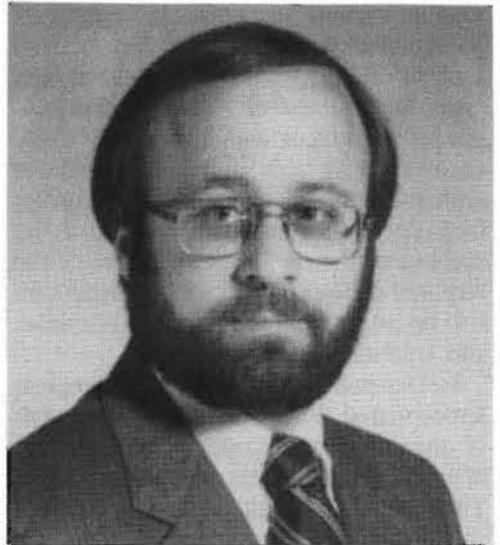
In December 1987, the U.S. Congress appropriated funds for the establishment of the Minnesota Cooperative Fish and Wildlife Research Unit in the department. The Cooperative Unit is a formal relationship for research between the U.S. Fish and Wildlife Service, the Minnesota Department of Natural Resources and the

University. We are now in the process of hiring three faculty members who will fit the Unit positions. The increased collaboration between the department and the Fish and Wildlife Service and the expansion of the department by three new faculty will likely result in more part-time employment opportunities for undergraduates and the opportunity to gain from the expertise of these new faculty.

A number of new projects were begun by department faculty in the past year. Dr. Cooper began evaluating the impact of the metropolitan mosquito control program on waterfowl. Dr. Kapuscinski began a collaborative genetic engineering project with faculty in Animal Science, Genetics and Cell Biology, and the Institute of Human Genetics. They hope to insert extra growth hormone genes in fish to produce fast growing strains, initially and primarily for aquaculture purposes. After returning from a sabbatical in Sweden, Poland, and Israel, Dr. Jordan undertook a cooperative project on moose ecology in Sweden. Dr. Spangler began a project sponsored by the Red Lakes Chippewa tribe through the Bureau of Indian Affairs to estimate the sustainable fishery yield of Red Lakes. Dr. Cuthbert has been studying Burrowing Owl reintroduction feasibility. Dr. Waters began a project on diets of early larvae of smallmouth bass. Dr. Smith is taking a quarter leave this year to study conservation of small carnivore populations in Nepal. Dr. Cohen is continuing his ecosystem studies in a variety of habitats including Lake Superior, wetlands, and in the laboratory. Dr. Gullion's studies of Ruffed Grouse have taken a new twist with his finding that aspen defense mechanisms may influence grouse feeding. I have continued my research on thiamin nutrition of lake trout as related to their reproductive

success in the Great Lakes. Dr. Kitts, the wildlife extension specialist, has become very involved in issues relating to wildlife in agricultural lands relative to the possible benefits of recent farm legislation. David Landkamer, assistant extension specialist in aquaculture, joined the staff in December 1987.

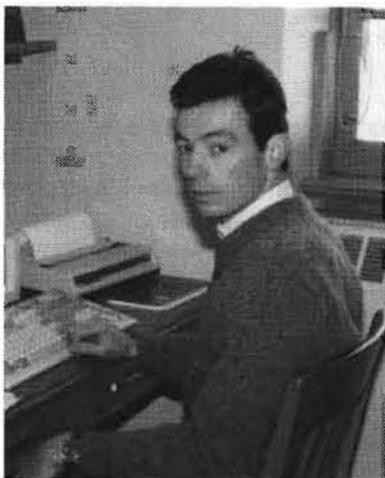
The first two issues of a new department newsletter published in 1987 were enthusiastically received by alumni. Graduating seniors are encouraged to leave current mailing addresses with the department so they can receive the newsletter.



*Ira R. Adelman, Professor and Department Head
Department of Fisheries and Wildlife*

College of forestry faculty

DEPARTMENT OF FOREST RESOURCES



Sean C. Ahearn

Joined the faculty of the University of Minnesota on September 1, 1986. He will serve as assistant professor of remote sensing in the Department of Forest Resources. As such, he is responsible for conducting research and teaching undergraduate courses on remote sensing of natural resources.

His recent research involved the development of advanced techniques for digital image classification through the incorporation of artificial intelligence and expert systems technology.

Sean has worked in Indonesia on United States Agency for International Development (AID) — funded program for technology transfer of microcomputer-based remote sensing image processing systems. The work included hardware integration and software development in the U.S. and installation and training in Indonesia.



Alvin Alm

Professor (Cloquet Forestry Center)

Teaches Silviculture and Senior Silviculture Seminar in St. Paul and Field Silviculture at the Cloquet Forestry Center. Advises a number of graduate students and conducts research in areas of regeneration and site preparation. Office is at Cloquet but often commutes St. Paul.



Egołfs Bakuzis

Professor Emeritus

Continues to work on the series "Foundations of Forest Ecosystems: Lecture and Research Notes."

DEPARTMENT OF FOREST RESOURCES

Marvin Bauer

Remote Sensing Laboratory Director and Professor
Teaches Advanced Remote Sensing. Research interests include measurements and modeling of the spectral properties of vegetation, development of spectral inputs to growth and yield models, and applications of quantitative remote sensing methods to inventory and monitor crop and forest resources.



Melvin Baughman

Assistant Professor
Teaches short courses and workshops and writes publications for private woodland owners on forest management and taxation, arranges continuing education courses for natural resource professionals. Conducts research on forest land appraisal and management of non-industrial private forest lands.



Robert Blanchette

Associate Professor
Currently teaches the Forest Pathology course in the Department of Plant Pathology. Active research projects include investigations of wood decomposition and industrial uses of fungi that selectively degrade lignin, biological control of soil-borne diseases in tree nurseries, screening trees for resistance to gall rust, and other studies involving forest and shade tree diseases.



DEPARTMENT OF FOREST RESOURCES



Charles Blinn

Assistant Professor/Extension Specialist

Co-taught Forestry Applications of Microcomputers. Major areas of interest are in forest management and economics, timber harvesting, marketing, and quantitative natural resource management.



Kenneth N. Brooks

Professor and Director of Graduate Studies

During the past year, teaching responsibilities included, Forest Hydrology, Forest Hydrology — Field Applications (Cloquet), Advanced Forest Hydrology, Range Management and a colloquium "Forestry for Sustainable Development" with Hans Gregersen and Al Lundgren. Research has focused on the hydrologic function of peatlands and further development of a hydrologic model of peatlands. Other research has been initiated to identify the role and importance of watershed management in sustainable resource development with an emphasis on developing countries. Related work led to his participation in a forest hydrology workshop in Harbin, People's Republic of China in August, and participation in a seminar on watershed management held in Rabat, Morocco. Sandwiched in between all this, he is now in the final stages of completing a textbook "Hydrology and the Management of Watershed", co-authored by Peter Ffolliott and John Thames of the University of Arizona and Hans Gregersen. The plan is to have the book published by Iowa State Press within the next year.



Thomas Burk

Associate Professor

Teaches Natural Resources Inventory, Forestry Applications of Microcomputers, and Forest Biometry. Research interests include development of forest growth and yield modeling methodologies, use of Bayesian concepts in sample survey design and analysis, microcomputer implementation of forest projection and planning systems, and statistical computation programming.

Paul V. Ellefson

Professor of Forest Economics and Policy

Teaches courses in natural resource policy and administration. Serves as chair of the Society of American Forester's national committee on Forest Policy and chaired the Society's National Convention Program Committee for the 1987 SAF National Convention in Minneapolis, MN. Participated in forest study tours of Australia and New Zealand (Spring 1987) and Austria and Switzerland (Spring 1988). Major research activities focused on evaluation of statewide forest planning programs and assessment of state forest practice regulations. Currently addressing issues regarding strategic directions for forest economics and policy research.



David French

Professor

Lectures on three subjects in forest pathology and is involved in the Urban Forestry course. Research involves vascular wilts (Oak Wilt and Dutch Elm Disease), aspen cankers, dwarf mistletoe of spruce and jack pine, chestnut blight and other tree diseases.



Hans Gregersen

Professor

Courses taught include Forest Economics and Planning, Natural Resources in Developing Countries, and Economic Analysis of Forestry Projects. Current research deals with forest and economic development of less developed countries, evaluation of forestry research and the process of technological innovation in forestry.





David Grigal

Professor

Teaches Advanced Forest Soils and Silviculture: Soil-Site Relationships at Cloquet. Interested in forest vegetation — soil relationships, including nutrient cycling, especially nitrogen nutrition and cation depletion; productivity on peatlands; and relationships between soil map units and forest productivity. Past work has dealt with biomass estimation, effects of forest disturbance, and numerical classification of forest ecosystems.



Robert S. Hansen

Assistant Extension Specialist

Teaches forest fire management. Has interest in natural resources education for youth and is developing new curriculum for the Minnesota 4-H Forest Resources Project. Other interests include forest management and fire effects on northern forest ecosystems.



Timothy Knopp

Professor

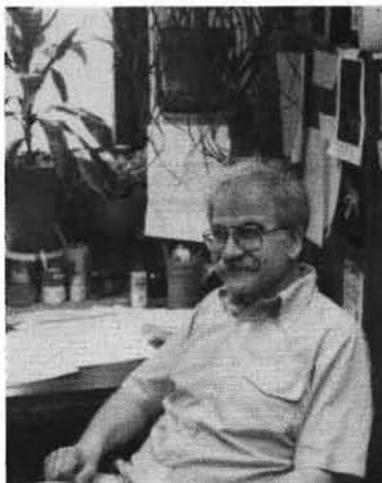
Teaching courses in Recreation Land Design and Planning. Analysis of Recreation Behavior, and an interdisciplinary seminar in Resource and Community Development. Research interests are focused on policy and decision making in the allocation of recreation resources, outdoor ethics, and tourism. Has a strong interest in the promotion and development of trails for hiking, cross-country skiing, and bicycling.

DEPARTMENT OF FOREST RESOURCES

Herbert Kulman

Professor

Teaches Forest Entomology, Current Topics in Forest Entomology and part of Wood Deterioration in Forest Products. Research includes ecological studies on forest insects, especially defoliators of spruce, fir, aspen and jack pine.



Vilis Kurmis

Associate Professor

Teaches Forest Ecology and Field Forest Ecology at Itasca. Current research deals with productivity, reproduction, and succession in Black Ash and White Cedar Communities of Northern Minnesota and vegetation changes in upland forests of Itasca State Park.



David Lime

Research Associate

Joined the faculty in March 1987. Teaches the introductory Forest Recreation course. Is affiliated with the University's new developed Tourism Center coordinated through the Minnesota Extension Service. Research interests focus on natural resource based tourism and recreation resource management with particular emphasis on water recreation and wilderness recreation use problems.





Allen L. Lundgren

Adjunct Professor and Research Associate

Director and Co-principal Investigator of the Forestry for Sustainable Development Program. Together with Ken Brooks and Hans Gregersen he is teaching a Colloquium on Forestry for Sustainable Development winter and Spring quarters of 1988.

Has been an adjunct professor with the College since 1973. Obtained his B.S. (forestry), M.F. (forest economics), and Ph.D. (forest economics) degrees from the University of Minnesota.

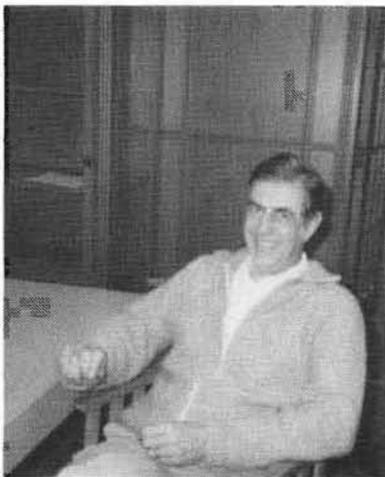
In 1983 he retired from the U.S. Forest Service after a 30-year career in forest economics research. Since then he has been a consultant on USAID and other projects; a visiting professor at the school of Renewable Natural Resources at the University of Arizona, Tucson; and a research fellow at the Environment and Policy Institute, East-West Center, Honolulu, Hawaii.



Robert Martin

Research Fellow

Joined the faculty of the University of Minnesota in the Remote Sensing Laboratory on February 16, 1988. His research interests lie in the integration of radar and optical measurements for the purpose of improving resource inventories and condition assessments of forests, grasslands and crops. Additionally, his interests include modeling the influence of canopy geometry on radar returns from vegetated surfaces. Related research interests include the development of ground truthing techniques necessary for the quantification of canopy morphology, vegetation moisture status and soil surface roughness.



Carl Mohn

Professor

Teaches Dendrology, Introductory Tree Physiology and Genetics, and Forest Genetics. Research includes forest tree improvement through selection and breeding; hybridization in *Populus*.

James Perry

Associate Professor

Teaches Forest Water Quality Management: Ecosystem Perspectives and Meteorology and Climatology for Natural Resource Managers, leads the Forest Water Quality Program which includes research on carbon cycling in labs and streams, acid deposition effects in aquatic systems, water quality monitoring designs, and international watershed management. Recent work includes travels through Thailand, Pakistan, India, Sri Lanka, Nepal and West Africa. Results of these research efforts are transmitted to students and the public through published reports and through the above classes.



Dietmar Rose

Professor

Taught Role of Renewable Natural Resources in Developing Countries, Timber Management Planning and Quantitative Techniques in Forest Management. Current research interests include forest planning models, regional timber supply modeling and development of management information systems for efficient dissemination of forestry research information worldwide. Currently developing several microcomputer programs in the area of forestry investment analysis, forest regulation, and forest planning. Planning workshops and short-courses in project analysis, forest planning, and data-base management applications in forestry. Continued to be active in international forestry projects. Working in a project to develop a global management information system for fuelwood. Providing leadership in IUFRO as project leader to a new project "Forestry and Rural Development" which addresses questions of economic development of developing countries. Participated in seminars and workshops in Yugoslavia, Costa Rica, Thailand, and Malaysia.



Scotty Scholten

Professor

Teaches Important Forest Plants at Itasca, Farm and Small Woodland Forestry, and Conservation of Natural Resources. Research is on tree and shrub species, of known sources, being tested for use in farmstead shelterbelts, field windbreaks and under center pivot irrigation systems. Presently working on designs of shelterbelts to reduce snow damage on young trees and design of windbreaks to get more uniform snow distribution over cropland.



DEPARTMENT OF FOREST RESOURCES



Philip Splett

Instructor

Career Opportunities coordinator and Instructor. Teaches Conservation of Natural Resources, Forest Resources Orientation, Field Forest Measurements at Itasca, and conducts the Forest Resources Southern (U.S.) Forestry Tour. Provides information and assistance to students and alumni seeking employment. Currently chairs the College of Forestry Scholarship Committee.



Edward Sucoff

Professor

Teaches and learns from a great group of students in Tree Physiology and Genetics, Tree Physiology Lab, and Field Ecology at Itasca. Current research examines how acid rain affects trees and the physiology of water stress. Also involved in the Forest Vegetation Management Program.



Carl Vogt

Courses taught include introduction to Forestry, Introduction to Minnesota's Natural Resources, Directed Study — S.E. Minnesota Hardwood Silviculture and Forestry for Teachers. Part-time Instructor and Extension Forester at the College of Forestry. General Chairman, 1988 — Minnesota Forestry Fair. Main areas of interest are Black Walnut management, maple syrup production, hardwood silviculture and Christmas trees. Manages woodlots and tree farms as a consulting forester and operates a nursery specializing in nut trees and hardwood seedlings. Very active in a number of forestry related organizations and professional societies.

CLOQUET FORESTRY CENTER STAFF

Marna Butler-Fasteland

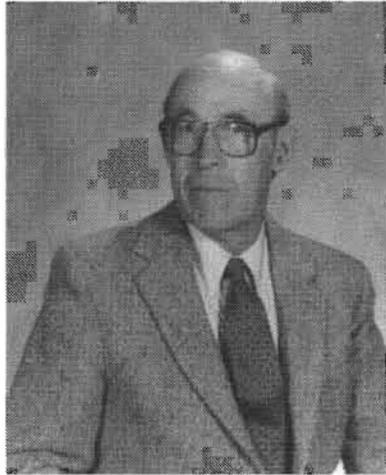
Research Fellow, Forest Vegetation Management Specialist
Directs the Forest Vegetation Management Cooperative at the Cloquet Forestry Center. She is responsible for conducting forest vegetation management research and transferring research results to forest managers.



Gordon Gullion

Professor

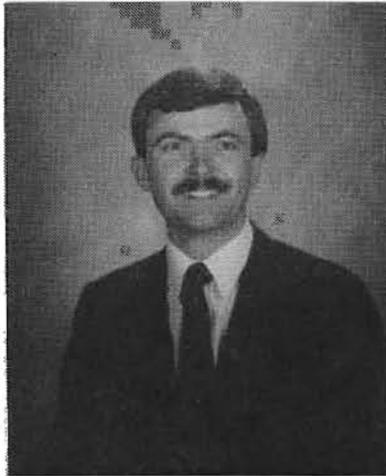
Activities have been mostly involved with ruffed grouse and their management. This has included experimental timber harvesting in various configurations to determine the best options from both a biological and economic standpoint. This forest manipulation has been mostly directed at aspen management. Involved in assessing the impact of hunting on a grouse population. Teaches the Forest Wildlife Techniques Course to foresters who attend the Cloquet session and participates in various workshops and training sessions in various parts of the country.



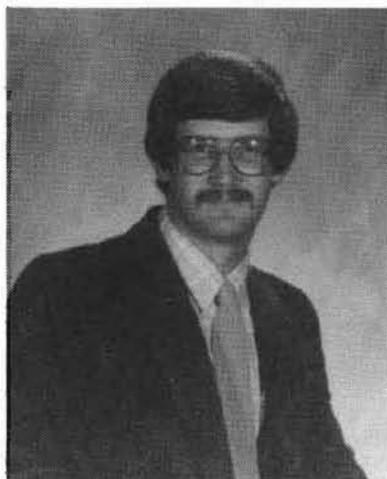
A. Scott Reed

Assistant Professor

Extension Forestry Specialist and Coordinator of the Cloquet Forestry Center. Teaches Forest Harvesting and Engineering during the Cloquet session, also coordinates the popular Logging Equipment Operation Workshop. Develops, implements and evaluates Extension educational programs for loggers, forest landowners, and the forest industry. Recently developed programs include a forest management correspondence course and a comprehensive logging safety training program.



CLOQUET FORESTRY CENTER STAFF



Ronald Severs

Associate Scientist/Forest Manager

Current responsibilities include developing forest management programs for the Cloquet Forestry Center coordinating these programs with research activities at the Center.



Robert Stine

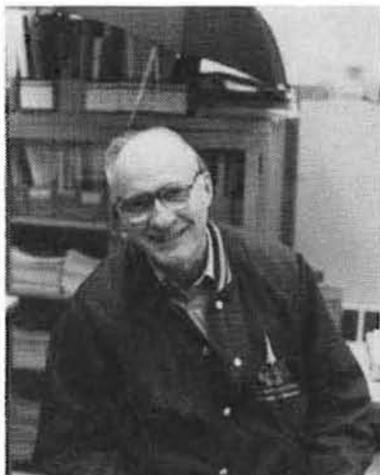
Research Fellow

Directs the activities of the Minnesota Tree Improvement Cooperative, working out of the Cloquet Forestry Center. Genetic improvement work is being carried out on red, jack, white, and Scotch pine and on black and white Spruce.

Robert Erickson

Professor

Teaches Topics in Wood Moisture Relationships. Research focuses upon developing improved processes for the drying and overall production of lumber, the analysis of drying stresses and strains, moisture movement and its effects, and the analysis of perpendicular-to-grain creep in first-dried wood.



Bruno M. Franck

Assistant Professor

Joined the faculty in September 1987. His responsibilities cover teaching and research in the area of structural design of wood structures. Teaches Mechanical Properties and Mechanics and Structural Design with Wood Products; will also teach Design of Wood Structures and Mechanics of Wood and Wood Composites. His research deals with the development of expert systems for the evaluation of structures and the application of artificial intelligence, qualitative physics and expert systems to the design of wood structures.



Roland Gertjansen

Professor

Teaches Pulp and Paper Technology, Wood-Base Panel Technology, Pulp and Paper Processes Laboratory and Advanced Topics in Panel Products Technology. Research is on utilizing Lake States hardwoods for structural panel products.



DEPARTMENT OF FOREST PRODUCTS



Vernon L. Guyer

Lecturer

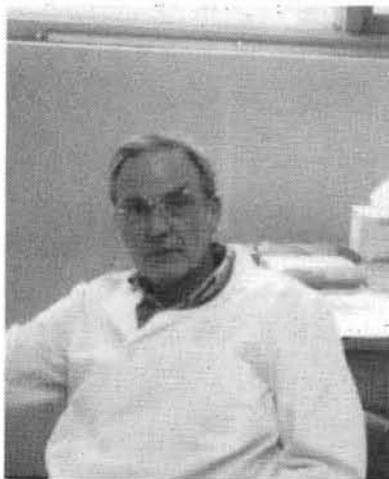
After many years of R & D experience in the adhesives and paper industries, I am now teaching courses in Surface and Colloid Chemistry, Paper Physics and Coating Developments. My research interests include: the chemistry and utilization of starch, paper and board technology, and the fundamentals of permeability.



Lewis Hendricks

Professor

During 1985-86 acted as a visiting professor at the University of Wisconsin on special assignment to the Forest Products Laboratory. Interested in improving energy efficiency of housing and moisture problems in light frame construction. Still conducts annual Lumbermen's Short Course (the 39th annual program was held in February). Also coordinates new U of M Cold Climate Housing Information Center Program.



Robert Kroll

Research Associate

Composite panel research; specifically work with anatomical structures — features of balsam poplar as they relate to problems in machinability.

DEPARTMENT OF FOREST PRODUCTS

Timothy Larson

Graduate Research Assistant

Teaches Mechanical Properties, Wood-Fluid Relationships, Wood-Frame Building Systems and Materials, and Wood Drying and Preservation Processes. Thesis research examines the effect of pre-freezing on the perpendicular-to-grain creep of redwood during drying.



Thomas Milton

Associate Professor

Responsible for designing and implementing Extension programs and publications for Minnesota's sawmill industry and wood product manufacturers. Co-editor of the Minnesota Forest Products Marketing Bulletin.



Harlon Petersen

Assistant Professor

Extension programs in forest products utilization and marketing, with emphasis on wood drying and use of wood in construction. Responsible for the undergraduate program in Forest Products Marketing, including teaching Wood Frame Building Systems and Materials, Forest Products Marketing and conducting the annual Wood Industry Tours course.



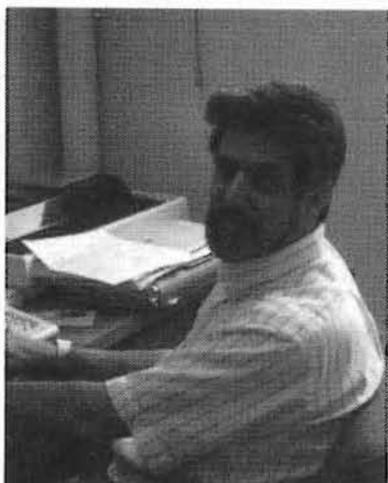
DEPARTMENT OF FOREST PRODUCTS



David Ritter

Associate Scientist

Will finish Ph.D. from University of Idaho in Spring of this year. Research interests are in composite panel technology and utilization of eastern hardwoods in composites. Teaching responsibilities include partial responsibility for Wood as a Raw Material. Also teaches Wood Structure and Identification.



Robert Rouda

Professor

Teaches Pulp and Paper Process Calculations (including the use of microcomputers for process modeling and simulation), Pulp and Paper Process Operations (applications of chemical engineering to industrial unit operations), and Paper Engineering Laboratory (including studies of industrial processes with the cooperation of local paper manufacturing companies). Interests lie in the development and application of modern computer process simulation technology to the improvement of pulp and paper process operations. This includes the development of computer simulation laboratories for graduate and undergraduate education seminars and workshops for industry, and associated computer programs for these purposes.



Simo Sarkenen

Assistant Professor

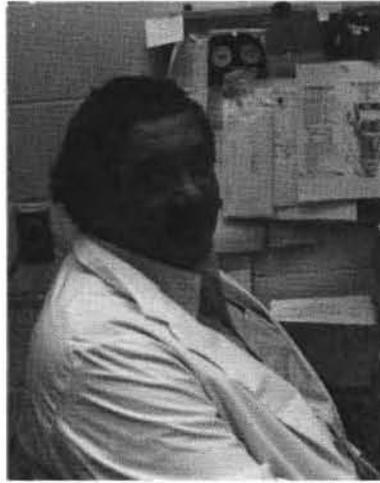
Course instructor for Wood Chemistry I, Wood Chemistry II, Adhesion and Adhesives, and Graduate Seminar. Research is on physicochemical properties of byproduct lignins and chemicals and engineering plastics from renewable resources.

DEPARTMENT OF FOREST PRODUCTS

Elmer Schmidt

Associate Professor

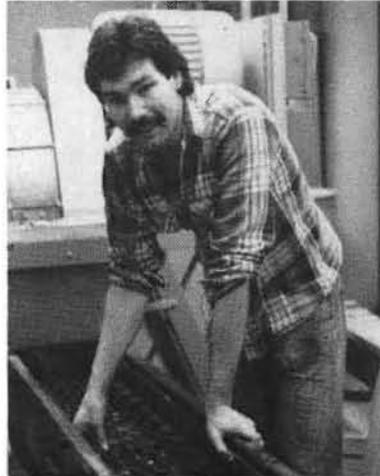
Teaches wood deterioration, Undergrad Seminar, Methods and Advances in Wood Protection and Mushroom ID and Ecology (Extension Course). Research is on control and application of fungi in forest products. Projects include: Fumigation of export oak, spore germination of wood decay fungi, preservative systems for wood composites, remedial treatment of decay, shiitake mushroom production on Minnesota hardwoods, biodegradation of kraft lignin components, and evaluation of new wood preservative systems, and biodeterioration in hardwood fuel chips.



Philip Steklenski

Associate Scientist

Teaches Analysis of Production Systems. Major research interests are the technical and economic evaluation of new technologies in forest products.



DEPARTMENT OF FISHERIES & WILDLIFE



Yosef Cohen

Assistant Professor

Teaches Wildlife Ecology Management: Planning, Policy and Administration. Involved in ecosystem modeling and competition in aquatic ecosystems.



James Cooper

Associate Professor

Teaches Wildlife Population Ecology and Management and Waterfowl Management. Research includes incubation behavior of North American waterfowl, ecology and management of Canada geese and trumpeter swans, and waterfowl ecology in an urban environment.



Francie Cutbert

Associate Professor

Teaches Introduction to Fisheries and Wildlife Biology and Management. Research includes behavior, ecology and conservation of nongame birds.

Peter A. Jordan

Associate Professor

Is teaching the undergrad course in wildlife habitats and a grad course on ecology and management of large mammals. He was overseas last summer to continue studies of moose in Sweden and porcupines in Israel, along with participating in the International Game Biologists Congress held in Poland. At home, Jordan started a new ecological study of deer in the Metro area, and continued working on moose-silvicultural interactions on the Superior National Forest. He also spent several weeks at Isle Royale collecting data for his long-term moose-forest study.



Anne Kapuscinski

Assistant Professor

Courses taught include Aquaculture and Conservation. Biology: Genetic and Demographic Issues (alternating spring quarters). Research is on quantitative genetics of fish, genetic engineering of fish, and aquaculture of cold and cool water fish species. Extension specialist in aquaculture.



James Kitts

Associate Professor

Each spring teaches Wildlife Management for Non-majors. Conducts workshops, seminars and field courses in Management of Woodlands for Wildlife. Organized and supervises the Minnesota Volunteer Woodland and Wildlife Advisor program. Instructs Master Gardeners, structural pest control operators, food processors and grain elevator operators in control of problem wildlife. Counsels urban and suburban landowners in methods of landscaping and management to attract desirable wildlife. Contributes to life skills of youth as a member of the National 4-H Shooting Sports Projects Committee and in Minnesota as an instructor and judge for 4-H projects in Minnesota 4-H Natural Science Program. Current research includes bird nesting activities in shelterbelts and educational evaluation of youth marksmanship programs.



DEPARTMENT OF FISHERIES & WILDLIFE



David Landkamer

Assistant Aquaculture Extension Specialist

Extension programs in aquaculture. Conducts conferences, workshops and seminars in aquaculture development. Counsels aquaculture clientele in technologies, regulations, and opportunities in aquaculture.



David Smith

Associate Professor

Courses taught include Fisheries and Wildlife Orientation and Introduction to Fisheries and Wildlife Management. Research is on conservation of small wildlife populations.

DEPARTMENT OF FISHERIES & WILDLIFE

George Spangler

Professor

Teaches Ecology of Fish Populations and Fish and Wildlife Population Dynamics. Research includes fisheries management, fishery population analysis and modeling predator-prey interactions.



Thomas Waters

Professor

Teaches Fishery Management in Inland Waters. Research includes stream ecology and secondary production. Director of Fisheries Graduate Studies.



Staff



FORESTRY LIBRARIANS

Left: Cheryl Owens
Right: Jean Albrecht



FOREST PRODUCTS STAFF

Back Row: Teschon Linsley, Carol Laffoon
Front Row: Emily Sundeen, Linda Prowatzke



FISHERIES & WILDLIFE LIBRARIANS

Left: Marion Parnacott
Right: Barbra Kautz

FISHERIES & WILDLIFE
STAFF

Left to right:
Roslyn Zippa, Llewelyn Wright,
Jo Schroeder, Cate Potter,
Norma Essex, Chip Welzing



FOREST RESOURCES STAFF

Left to Right:
Janelle Schnadt, Kathy Middleton,
Clara Schreiber, Ruth Davidson,
Mary Ann Hellman
(Samuel Green pictured behind)



NATURAL RESOURCES
ADMINISTRATION

Bottom Left to Right:
Karen DeWanz, Gail Gangstee
Top Left to Right:
Ann Mayhew, Terri Ray, Karen Kanda





ADMINISTRATOR

Marilyn Workman

OFFICE FOR STUDENT AFFAIRS STAFF



John Bell
Assistant Dean



Left to Right:
Sandy Gibbs, Bill Ganzlin,
Janine Settle

STUDENT FACULTY BOARD

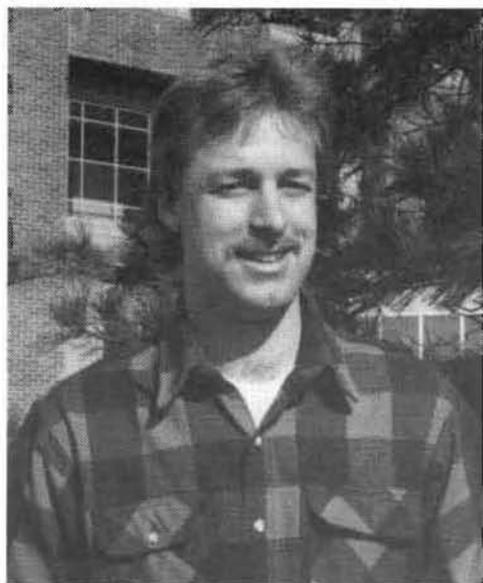


Left to Right

- | | |
|-------------------------|---|
| John Bell | Faculty Co-chair and assistant Dean |
| Charlie Blinn | Forest Club Advisor |
| Richard A. Skok | Dean, College of Forestry |
| Ruby J. Anderson-Barker | Jr. Class Rep./Sec., Student Faculty Board |
| Tim Knopp | Advisor, RRM Club |
| Harlan Peterson | Advisor, Forest Products Club |
| Tom Roster | President, Fisheries & Wildlife Club/Co-chair,
Student Faculty Board |
| Mark Reed | Xi Sigma Pi |
| Nancy Johnson | Xi Sigma Pi, President |
| Laura Held | SAF Chapter Chair/Forestry Club President |
| Erik Petersen | President RRM Club |
| Eric Nordlie | Gopher Peavey |

Not Pictured: Steve Tillman, Gopher Peavey

GRADUATING SENIORS



Robb Collett
Forest Resources
Spring 1988



Brennan Ferguson
Forest Resources
Winter 1988



Laura Held
Recreational Resource Management
Spring 1988



Gregg Hove
Forest Resources
Winter 1988

GRADUATING SENIORS



Byron Johnson
Recreational Resources Management
Spring 1988



Randy Kirk
Forest Resources
Spring 1988

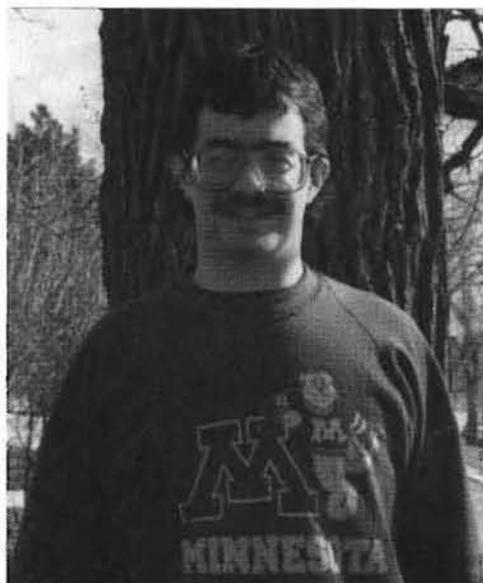


Amy Krieger
Forest Resources
Spring 1988



Blythe Leidig
Recreational Resource Management
Spring 1988

GRADUATING SENIORS



Patrick McKenna
Recreational Resource Management
Winter 1988



Janae Paehlke
Fisheries & Wildlife
Spring 1988

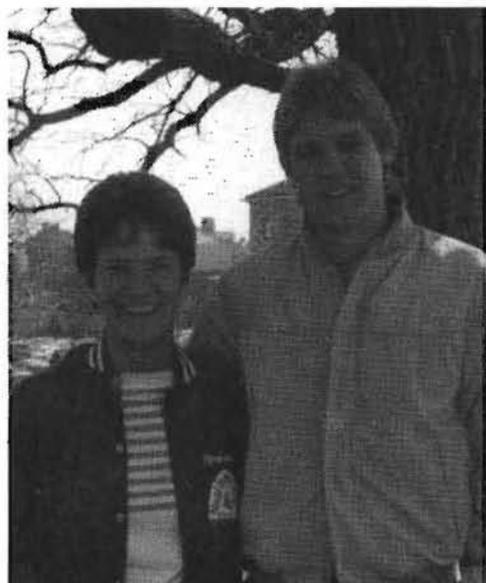


James Radzak
Urban Forestry
Spring 1988



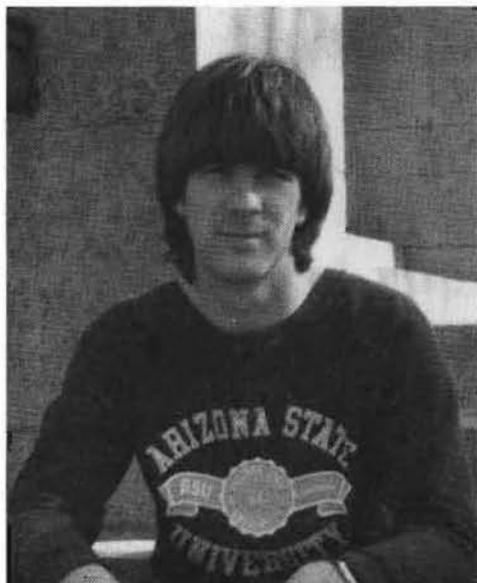
Russ Van Horn
Fisheries & Wildlife
Winter 1988

GRADUATING SENIORS

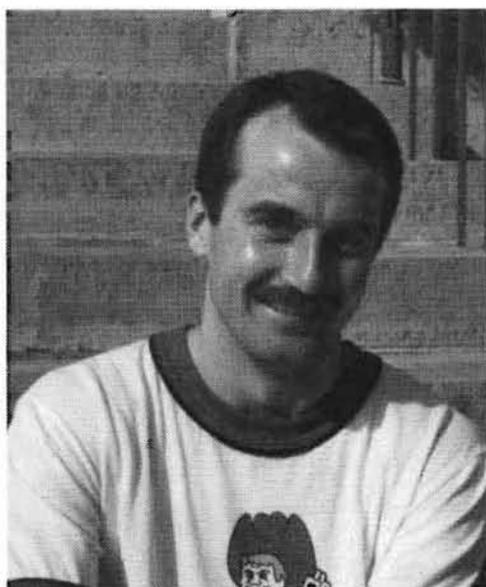


Roxanne Wagoner
Forest Resources
Fall 1988

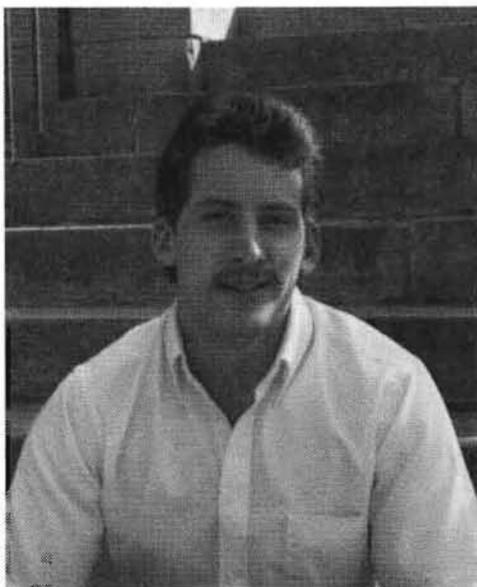
Greg Hoivik
Forest Resources
Fall 1988



Rick Walsh
Fisheries & Wildlife
Spring 1988



Arden Warm
Fisheries & Wildlife
Spring 1988



Stephen P. Warren
Urban Forestry
Spring 1988

GRADUATING SENIORS



Larry Wetmore
Urban Forestry
Spring 1988



Left to Right: Dan Kittok, Matt DeRosier, Todd Rau, John Sovel, Alice Windsor,
Arden Warm, Andrea Monson

GRADUATE STUDENTS



FOREST RESOURCE & FOREST PRODUCTS GRADUATE STUDENTS

Bottom Left to Right: Anne Hairston, Virginia Card, Stephen Dewhurst, Marian Erickson

Middle Left to Right: Mark Reed, Paul Mans, Kevin Powell, Dixon Shelstad, Wanbing Lei

Top Left to Right: Shuming Suo, Yong Chen, Brian Huberty, David Marcouiller, Zhi Xu, Eric Turnblom



FISHERIES & WILDLIFE GRADUATE STUDENTS

Back Left to Right: Ron Moen (W), Jim Kent (F), Sue Booth (W), Wally Jakubas (W), Christine Nixon (F), Moe Nelson (F), Paul Spencer (F)

Front Left to Right: Dimuthu deSilva (F), Pamela McInnes (W), Abby White (W), He Ling (F), Yong Jiu Cai (F), John Kaehler (F)

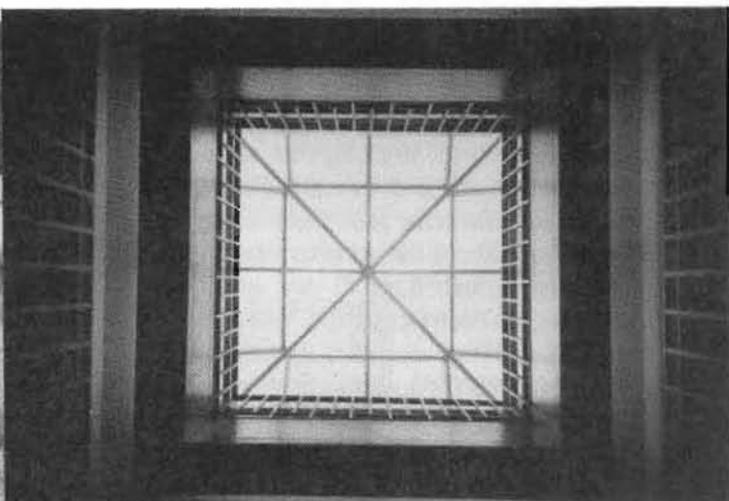
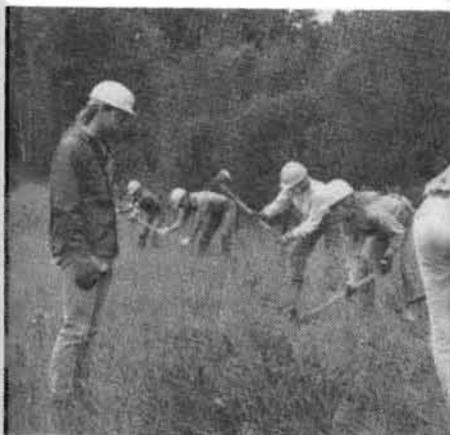
PEOPLE & PLACES



PEOPLE & PLACES



PEOPLE & PLACES



Cloquet field session, 1987

Gregg Hove

When I was asked to write an article about my experience as a forestry resources senior at Cloquet, I thought a while and finally agreed to, thinking that writing it wouldn't be too hard. I would just do what has been done in the past, that is comment (complain) about the weather conditions, walking through bogs all day, or all the meaningless exercises we did. I could probably fill this page with all kinds of negative aspects of the Cloquet session that we endured for ten weeks . . . but I'm not going to. I've come to appreciate too much what it is to have a field session available to us like the one at Cloquet.

Through my three years in the College of Forestry I've had opportunities to travel to various parts of the country and visit with other forestry students about what their colleges and curriculums are like. This exposure to other students came in the forms of SAF national conventions, here in Minneapolis and the year before in Birmingham, Alabama, through attending conclave competitions in Southern Illinois and Indiana, and through a Southern U.S. forestry tour to such places as Arkansas, Missouri and Louisiana. What I found out from all this was that few other colleges offer this kind of quality field session that students here have access to. I'm sure students from other parts of the country would jump at the chance to get the kind of field experience we're exposed to for ten weeks in September, October and November. It's one thing to sit in classrooms and be lectured to for 45 minutes at a time, but quite another thing to actually get out in the field and participate in "real life" exercises. These real life experiences included such tasks as setting up and appraising timber sales scaling and grading timber, thinning

a high density woods to a specified basal area, conducting regenerations studies, field inventory, and determining wildlife suitability of a certain forest tract. If we as students plan to enter the area of forest management (which most of us attending the session will) we will probably encounter most if not all of this type of field work some time in our career.

I think we have to especially appreciate this type of field session when we take a look at the small number of students recently attending the session. Within the last five years just thirteen of us last year. In these time of shrinking budgets, I'm sure it's difficult to justify conducting a ten week session, at a facility like CFC, for such a small number of students. There's recently been talk of only offering the session every other year if enrollment keeps dwindling. This will certainly be an inconvenience for students nearing graduation.

So, after all this I guess what I'm trying to say is that I'm really grateful for being able to attend the Cloquet field session. I feel I learned alot in those ten weeks about practical forest management. Like everyone else up there for the session, I know I made many new friendships and reinforced old ones, and went through many experiences that I won't forget for a long time. But as long as I'm writing this I might as well list some of these experiences so future can have something to look forward to. Let's see, there was getting a bird's eye view of the woods from the fire tower, watching the world series in the basement of our cabin with visiting state legislators, of course there were evenings at the Museum, K.P. for two weeks, hours of volleyball, horse shoes, and ping pong, and when time allowed relaxing evening walks on quiet forest roads. But, looking back on it now, the Cloquet experience was well worth the time and effort invested. I know it has made me a better forest manager.

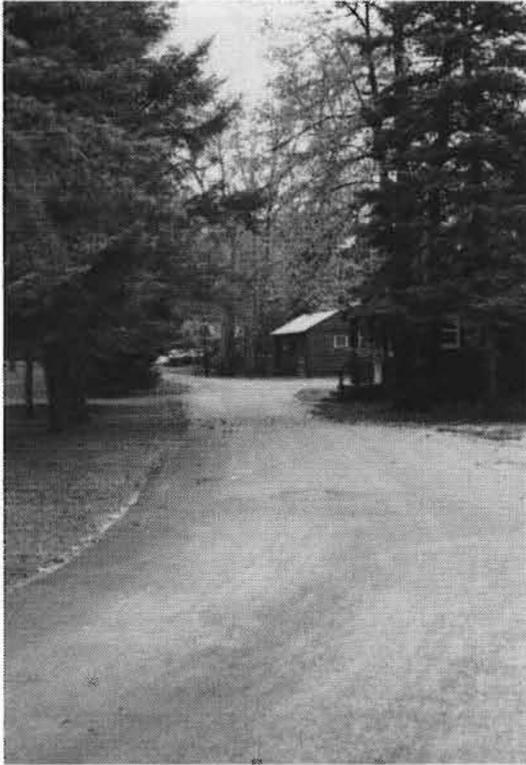
Itasca Field Session

Elizabeth Krueger

Mail delivery and pickup at Itasca is at 11:45. If you get back from the morning class before the lunch bell rings, you can stop by and see if you got a letter. If you want to be sure you get a letter mailed, you shouldn't count on class getting out early; drop it off at 8:00 en route from your cabin to the classroom.

While you're at it, you can read everyone else's postcards. Of course everyone else can read yours too, and you know they will, so if you're going to write any frank observations about your fellow inmates it should be in a letter. That's how I always did it.

I wrote letters at Itasca not out of a sense of duty but rather as a diversion. There was little to do besides study and fish, and you did both with the same people, who furthermore, you had not known before you all arrived at the testing range that Sunday afternoon. At times I wanted to do something unrelated to Itasca, and talk to someone outside this exclusive group of strangers; so I wrote letters to my close friends. The choice of subjects on which to write was rather limited. I could talk about the schoolwork, but that occupied nine-tenths of my time anyway; the other feature of life at Itasca was the



social scene. That was an education in itself, and undeniably more interesting to write about.

First was the task of learning twenty-two names and which face they each went with. After four days of laboring at this I sent my correspondents a progress report. So far, I said, we had been split into two groups for classes, and so I knew most of the eleven names in "Group B", though "Group A" remained an indeterminate mass, and if I

saw its members outside the cafeteria I couldn't tell if they belonged on the station or had wandered in from the campground. However, from group B, I now knew that the first person I'd seen when driving into the station, the blond boy with the long t-shirt, was Al. Unless it was Will. There seemed to be two of several names around, causing some confusion. A week later, I had the names figured out, and was working on the complex business of understanding the people

who went with the names. Instead of putting together that day's assignment promptly after class, I went down to the dock and wrote a letter, interrupted only briefly by some of the still nameless group A fishermen setting sail. I reported what new information the week had brought.

There were in fact three names which applied to six people. The only one which concerned me at the moment was Steve,

because both of them were in group B. In person, there was no problem in telling them apart, long-haired Steve on his bike and military Steve the former marine. When they weren't within pointing range, we took to calling them Bicycle Steve and Marine Steve.

Once that problem was solved, I saw that everyone needed an extra name too. It was a quick way to describe them to my correspondents and a source of some entertainment; not much, perhaps, but at Itasca you take what you can get. It sounded like the cast of a play (no doubt a farce):

Lumberjack Chris:

Out fishing, when not writing another perfect report which sends the grading curve out of sight, or consuming his daily gallon of milk.

Alnifolia: Proprietor of Al's Arboretum, which,

located in Cabin 22, is a questionable establishment where Al keeps his plant samples he collects each day in botany.

Johnny Corruption: The entertainment for the whole area, on newcomers like a fur coat and in charge of making them feel immediately at home.

Joe Pye: Named by the Troll after a swamp weed. Elusive as the 7-pound walleye.

Surfer Tim: Rides the breakers of Lake Itasca in his motorboat . . . and so forth.

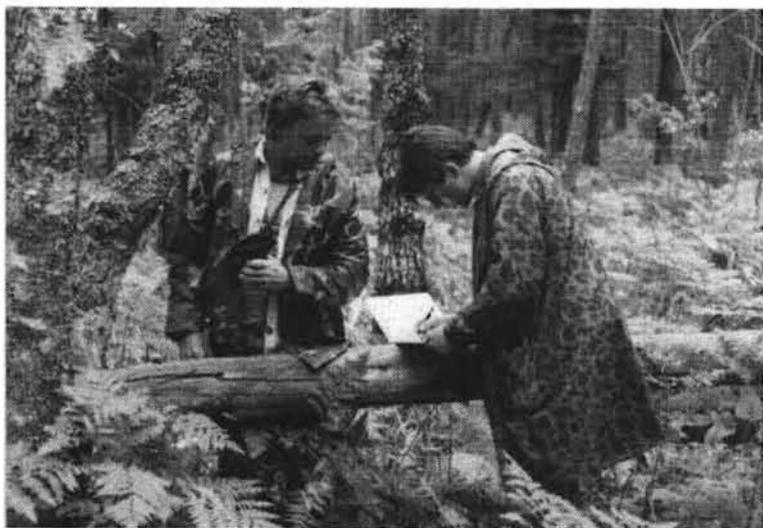
By the end of our third week at Itasca, the leaves were off the basswoods and the sun

was setting by 7:00. Preparing for winter, the red squirrels sampled for nest material my neighbor's laundry as it hung on the clothesline. We had a week of October-like clouds and rain, but, with four days to go, the sky cleared and the woods turned from gray to brilliant colors. The volleyball net made an appearance. One morning, while the boys played in the hot sun, I sat on the picnic table near them and wrote. I was behind on letter; I'd meant to tell the story of Danny's Bar to a correspondent one



evening, but I wound up spending the time fishing with Marine Steve and Chris. We used a boat with Al's community motor. It was a hot still evening; as we roared up to the headwaters end of the lake our wake upset the reflection, and Steve lounged at the motor, telling me about his and Chris's luck at fishing this lake. When we arrived at the edge of the weedy pool, they showed me how to use the borrowed open-face rod, and exclaimed that I was doing well when I cast and the lure landed twenty yards from where I was aiming. Chris didn't mind when I almost hooked him. I didn't catch anything, but the professionals didn't get much either, and they agreed the weather was wrong. The wind was cool as

we headed back; it was late, and we had a huge assignment due the next day (as every day), so I didn't get the letter written. I might have done it a few days later, when I had time on a Saturday evening, but rumors started at 8:00 that a convoy was considering a trip to the famous Northway bar. I went to see if it was true. After I visited the boat dock, the library, the cafeteria, my cabin and two others, stumbling from one to another in the pitch dark, I discovered there was in fact a group going, only it was now 9:00. Todd



(from group A) and I drove the bunch to the Northway's sea of mud parking lot. I got beat at pool again, but at least in doubles this time, so I wasn't guilty of all the shots. Dave fed the jukebox; Joe-Pye and Bicycle Steve and Engineer Tom showed up. Rod's pool game slowly improved. I had no time to write letters. The

next evening I went fishing again; this time it was cold and clear out. Johnny Corruption and I only had access to a canoe, which was a little unfortunate due to the size of the whitecaps. But when the wind went down at sunset the situation improved. I finally caught a fish (with my "antique" rod, moreover), and that shot down the rest of the evening, as I was obliged to tell everyone.

As I sat on the picnic table writing, a shadow fell across my paper. I looked up. "There's eight guys on one side," Marine

Steve informed me, "and seven on the other. I think you can see what that means."

I could. I didn't get any letters written that morning either.

The members of each year's Itasca group know each other well. They've seen each other under the stress of the field measurements with rain and mosquitoes, and during

breakfast when they were all asleep three minutes before. Groups from different year compare Itasca stories; everyone remembers the fish and the site indexes and botany and the Northway. It's an experience we have in common; it's an education you don't forget.

*The epic of
minnesota's forests*
Eric Nordlie

Judgment day came early for a piece of Green Hall history this year. The piece of history is the 10 foot by 45 foot "Epic of Minnesota's Forests" mural that adorns the hallway of Green Hall's ground floor. The much awaited renovation of Green Hall also brought it the news that the ground floor ceiling would have to be lowered two feet for an air conditioning system to be installed. The result of this would be no more head for Paul Bunyan and the overall loss of the spirit of the mural.

The mural was painted by Hazel Stoick, who was looking for a project to obtain her master's degree. She was an

art instructor at the university and wanted the biggest wall possible. The newly built Green Hall answered her prayers. The topic would obviously have to be forests so Miss Stoick traveled to northern Minnesota and began her research on the history of forestry throughout the state. She began the actual painting in 1941 and after two years the massive project was completed.

Starting with the coming of the pioneers, the mural takes the viewer through the Paul Bunyan era and the huge logging runs to the start of conservation and professional forestry as we know it today. In the first section an indian is shown bartering away vast white pine stands to the early pioneers. In the following section the peak of the logging years are illustrated. Paul Bunyan is shown cutting down a whole stand of trees with his mighty saw while his blue ox Babe takes the cut timber



to their logging camp. This section also includes the great logging runs of the time and the huge mills that processed the millions of board feet. The next section shows the famous Jim Root driving his locomotive through the scorching flames of the 1894 Hinkley fire to save hundreds of trapped people. The final section is dominated by General C. C. Andrews, the pioneer of conservation in Minnesota, issuing in a new era of forestry. He is followed by depictions of the Civilian Conservation Corps and the U.S. Forest Service, both of which have played major roles in the management of our forested lands.

The Green Hall mural is a fiery representation of Minnesota's dramatic forestry history and to destroy it would be the loss of more than a painting on a wall. The mural gives us a picture of how our profession evolved and is something that should be preserved and cherished. At the time

that this article was submitted the mural was not to be destroyed. Instead, ceiling lights are to be placed along the length of the mural so as to make it more visible, but a lot can happen during a year long renovation. Hopefully, when all is said and done the mural will still be a part of Minnesota's forestry history so future foresters may enjoy this beautiful work of art.





Burn-Out: Firefighting in California Forests

Paula Meyers

The '86-'87 school year was drawing to a close, people were worried about finals, and professors were thinking about summer vacation. Some had already found new jobs and places to live for the summer and some were trying to find something to do for the break. In Green Hall, I was frantically trying to find a ride to South Dakota. I and five other forestry students had gotten jobs in the Black Hills with the U.S. Forest Service. I had been offered a job in Wyoming as well, but took the one in South Dakota thinking it would be easier to get there. Not so.

Fortunately for me (not so for my mom), my mom had a little accident with the family van about a week before I had to leave. She swore off driving forever and I landed her car for the trip. Twelve hours, two tanks of gas, and one flat tire later, I made it to the hopping town of Deadwood, South Dakota where I met the rest of the crew. In all, there were six of us

from the U: Peggy Mlinar, Brennan Ferguson, Dave Larson, Mark Lohmeier, Eric Jolliffe, and me, Paula Meyers.

We were hired for the very difficult, important, dangerous job of timber marking. Oh yes, we were also the back-up fire crew. The first two weeks consisted of a lot of training. We learned not to mark trees with defects (except Brennan was known to mark a few forks, I had a tendency to mark trees that were too small, and Dave gets a funny look on his face if anything is mentioned about cobra heads?). We also went through an intensive fire training in which we learned to dig a trench, identify tools, run pumpers, and most importantly, deploy our fire shelters (commonly called shake-n-bakes by the experienced).

After our training, we were set loose in the woods with our fearless crew bosses, Dewey Stahl and Willy Gimler. As the summer wore on and the second week of timber marking drew to a close, we began to understand our crew boss's unusual

longing for fire. Now, as any timber marker can tell you, it's a great job if you can break the monotony with something new once in awhile. We all developed a sudden interest in the heritage of the American Indian, thinking that if the rain dance could be performed in reverse, it would make a fire dance. We would often practice this art in the morning hoping it would bring the welcome relief of a fire and at the same time delaying the beginning of a day of timber marking. All of our work eventually paid off and we began going to some fires. We went to different areas of our district as well as some of the other districts. Some of us went to places like Hot Springs or a fire near Mt. Rushmore by Keystone.

After a fire (and on Friday nights), it was the custom to go to a little bar underground called Durty Nellie's. Besides fire training, it was one of the places we got a lot of our education. It was there that we learned to shoot pool one-handed, cheat at darts, drink beer while standing on the bar upside-down on our head, and spit tobacco juice.

The summer drew nearer to an end and one by one the crew began getting smaller. Brennan and Eric had to go to Cloquet, Mark had to back to find a place for his wife, himself, and their cat to live during the year, and Dave wanted to follow someone with a reliable car. Finally, it was just us girls, Peggy and Paula. We were condensed from the original two crews to one skeleton crew. By this time we were in a timber sale called Bloody and it was appropriately named. The terrain was rocky and it was steep — the steepest we had marked yet. Bloody timber sale was to be a cable sale. To make our spirits sink even lower, we kept hearing stories about Western California and Idaho burning up. Morale sank lower with each succeeding 100,000 acres of burned land.

One day as we were on our way out to the Bloody sale, we heard rumor that some people from our district might be sent out west. The driver slowed a little,

we heard more news over the radio, then, we got a call from the office. We all had our fingers crossed hoping we would be the lucky ones to go. The message finished. **WE WERE TO RETURN TO THE OFFICE AND PACK OUR BAGS!!! WE WERE ALL GOING!!!** We made it back to town in record time and were packed to go in less than one hour. We picked up some more people from our district and headed for Rapid City and the Regional Airport. We still had no idea where we were going, but it didn't matter, this was the chance of a lifetime. It wasn't until we were on the plane that we found out we were going to California.

When we landed, we stayed at the airport until we got buses to take us to the fire. We loaded up and headed out for a trip that we thought was going to take four hours. Some of us tried to sleep, but the scenery was just too great. The ones that did manage to doze for awhile were constantly being awakened by the expletives of one of our crew bosses. He was so amazed by the size of the giant trees that he found new and unique ways to combine several swear words to create new ones. We could see the aftermath of one of the fires from the bus. Spot fires were still flaring up and even these seemed bigger than anything we had seen in the Hills. The driver didn't know his directions as well as he thought he did and we never made it to our original destination. Instead, we got lost and ended up, appropriately, at the Lost Fire.

We spent that night under the smoke sans tents or anything in paper sleeping bags in below-freezing weather. The next day, we were up and about at five waiting to go out on our first assignment. Due to some safety regulation about resting after travel, we didn't get to go out that day and were relegated to night duty. Night duty consists of long hours of putting out small fires and smoldering embers, trying to keep warm, and keeping awake. We were lucky the first few days because the school year hadn't started yet and we were driven

by bus from our base camp 1-2 miles to the fire, a drive that took over an hour. After school started, we had to put up with something the army calls a deuce-and-a-half. We fondly called them deush-and-a-half's. We worked at the Lost fire until it was considered contained and we weren't needed anymore.

Each camp has its own bureaucracy and ways of getting information to the fire fighters. We knew from bulletin boards and newspaper clippings that there were still fires burning out of control with new firefighters at the scene. We again knew we would be sent to another fire, but didn't know where until we got there. We arrived at our second fire near a small town in northern California called the Flume complex fire. This fire was getting big and kept burning together with other fires. It had all the makings of what they call of nuclear fire, a fire that is so big that it creates its own weather patterns.

By this time, we were exhausted from working 12 hour shifts and breathing smoke-filled air at the Lost fire. We welcomed the chance to rest for the afternoon before working again. We were playing a game of hearts when I began to realize the effect the air was having on me. I couldn't add the scores. I saw the numbers, and I knew what they were, but for my life, I couldn't add 2 and 2 to come up with anything near 4. That night we stayed in main camp and built semi-permanent showers out of plywood complete with 2-\$5,000 water heaters, and carpet to step out on. An operation that cost \$12,000 in materials alone not to mention the money spent to pay all the people. While our crew was working on the showers, another crew was make-shifting a picket fence to surround the command post, an operation that might even come close to the projects at Eastcliff.

We stayed at the Flume fire for the rest of our duty. We worked 16 hour shifts under skies so thick with smoke that it was hard to tell where the sun was. By the time we left, we could go through the alphabet

and come up with rock groups, songs, TV titles, and you name it to match the letter. We could go 3-4 times through on the same subject. When we finally waved good-bye to the base camp of the Flume fire complex, we waved good-bye to our skillfully constructed showers, a picket fence, plywood phone booths and supply buildings, a volleyball court filled with wood chips, and a recreation hall complete with large screen TVs and VCRs.

We were sent to a place in Anderson to wait our final days. The people who were there before us called it Andersonville after a prisoner-of-war camp used during the civil war. After we were there for awhile, we knew why. We had to be on five minute stand-by and weren't allowed to leave the area which was a converted fairgrounds. After a day plus at Andersonville, we were told we had to be on a bus to go to the airport within a half hour. We got excited and were ready to go in less than the allotted time. As we left, we sang our rendition of a song that had the words "hey, hey, good-bye" and waved our farewells to the poor slobbs that had to spend more time there. We loaded our bus and settled down for the ride to the airport when we were told to get off the bus. No one could believe what they heard. We were supposed to get off? No way, but get off we did. We spent another day at Andersonville before being flown back to Rapid City on a Boise Cascade private jet. The trip took about 3 weeks to complete all together but gave two U of M students an experience to last a lifetime. Right, Peggy?



Technical association of the pulp and paper industry

Mark Olofson

The 1987-88 school year was one of growth for the TAPPI chapter as membership grew to an all-time high. We completed the year under the direction of our adviser, Dr. Robert Rouda, and our officers: President Brian Hoover, Vice President Mark Olofson, Secretary Andy LaBrash, and Treasurer Paula Meyers.

Much of our time during fall and early winter was spent selling T-shirts as a fundraiser for a trip to TAPPI's National Meeting in Atlanta, Georgia on February 29-March 3. Five students represented the University at the meeting. They attended

conferences, presented a video tape of the Paper Science and Engineering discipline, and interviewed with various companies.

Other TAPPI events included tours of the Waldorf Corporation in St. Paul and Potlatch Corporation in Cloquet, and a dinner reception at the home of Mr. and Mrs. Rouda. In addition, chapter members invited local Boy Scouts to attend a series of lectures on papermaking to enable them to earn their Papermaking Merit Badge.

The end of the school year was marked by the election of new officers and the graduation of 8 of our seniors.

RRM club

Patrick McKenna

President:
Erik Petersen
Vice-President:
John Elholm
Treasurer:
Suzann Willhite
Secretary:
Dean Skalbeck



Bottom Left to Right: David Haugen, Erik Petersen, Patrick McKenna
Middle Left to Right: Theresa Kuhens, Suzanne McDonald, John Elholm, Suzann Willhite, Byron Johnson, Timothy Knopp, RRM Club Advisor
Top Left to Right: James Radzak, Dean Skalbeck

The membership of the RRM Club has grown in the last year. All of the members are Recreation Resource Management students. Elections were held in May 1987,

for the 1987-88 year. Dean Skalbeck was elected secretary, Suzann Willhite was elected treasurer, John Elholm was voted vice-president, Erik Petersen was elected

president.

In the spring quarter of 1987 the club went to Voyageurs National Park for a weekend of backpacking and volunteer work. Fall quarter the club had a barbeque at Dr. Knopp's house. Also fall quarter the club did volunteer work with the Adopt a Trail Program in the Chippewa National Forest. The club was assigned a five mile section of the North Country National Scenic Trail and must make two visits a year to fulfill the contract with the program. We use this program so students can meet the professionals in the field and also gain first hand experience in trail maintenance. Throughout the year the club has been attending orienteering meets sponsored by the Minnesota Orienteering Club. Spring quarter projects include, planning an orienteering event for the Minnesota Forestry Fair and also one for during the fall Conclave, and the continuation of the Adopt a Trail Program. This year the club has had a renewed interest among students in the College of Forestry, and we hope this new enthusiasm will continue into the future.

Notes from the student chapter of the wildlife society

Tom Roster

On February 9th members of the Wildlife Club attended a presentation by Bill Botsford at the Minnesota Valley National Wildlife Refuge. The presentation dealt with the various projects and services which the refuge is responsible for. To conclude the show, Mr. Botsford presented an overview of the multi-million dollar interpretative center which is soon to be built on the refuge. It is an exciting project and should provide a valuable learning resource.

Later in the month the club assisted the Minnesota Department of Natural Resources in a beaver survey along the banks of the Mississippi River. The survey showed foresight on the part of the DNR to determine early if these rodents are approaching nuisance levels.

Lastly, but certainly not least, the Wildlife Club will be attending the Midwestern Wildlife Conclave hosted by UW Stevens Point. Conclave provides an opportunity for Wildlife students from around the region to get together and share information and good times. It promises to be a great time!

SAF Student chapter

Laura Held

Vice Chairman: Brennan Ferguson

Secretary: Ann Hairston

Treasurer: John Elholm

Faculty Advisor: Phil Splett

The student chapter had a pretty big year this year. It all started with the 1987 SAF National Convention in Minneapolis. It took a lot of hard work and effort, but it all came together in the end. The student chapter was directly involved in planning the student activities of the convention. We put together a student hospitality and information room, a tour of Minnesota Forestry and a student swap session where we had each school bring some items to raffle off such as sweat shirts, mugs, and hats. We met many new friends and caught up on old ones.

The convention in general was well attended, some say it was the best in years. That's a tribute to all who helped and I'd like to say thank you to everyone.

In February, we sponsored a seminar by Mr. Dave Blackford, the Nemo District Ranger on the Black Hills National Forest. The topic was very timely and consisted of the Native American Claims to the Black Hills National Forest, and what a decision here will mean for other forests around the country.

We are now working on the Minnesota Forestry Fair which is essentially a convention in itself. It'll be held at the State Fairgrounds, and should prove to be interesting. This is the first year anything like this has been held and it should become an annual event.

Elections will be held at our next meeting and the new officers will take over beginning Fall Quarter. Each year the Student Chapter grows, and I wish luck to next year's staff.

Forestry Club

Laura Held

Whew! What a year! We took over the first day of spring quarter 1987. The "brain trust", or executive committee as it is more commonly called, included:

Robb Collett: Vice President
Gregg Hove: Assistant V.P.
Blythe Leidig: Treasurer
Ruby Anderson: Secretary
Jim Radzak: Sgt. at arms
Beth Krueger: Historian
Charlie Blinn: Faculty Advisor

Our term started off rocky. I was working spring quarter through the Cooperative Education Program, so Robb was essentially President. He did a great job with the College-wide spring picnic, and the Arbor Day tree sales. The picnic was especially a success because the students once again took the royal softball crown. The faculty vowed to practice up for next year so watch out, they've got that "We'll get 'em next year" attitude.

Summer came and went, and suddenly we found ourselves back in school. Fall quarter started out with a bang when we found out that Conclave 1987 fell on the same weekend as the SAF National Convention in Minneapolis. Many of us were involved in planning the student events at the Convention, so Conclave was a little strange this year. Things were put together very well by Dave Haugen, that master of last minute planning. The team went to Michigan State and tried hard, fun was had by all and they brought back a 6th place finish.

Next on the agenda was the Christmas tree cut and sales. Robb and Ruby were the Chairpeople, and they did a good job of handling the many hassles that are accompanied with our one moneymaking event of the year.

The next event to think about was Foresters Day. The banquet was held at the Earle Brown Center. Our guest speaker

was Mr. Jerry Rose, the new Director of the Division of Forestry for the Minnesota Department of Natural Resources. Mr. Jim Rupert of Grand Rapids was named Forester of the year, Bill Ganzlin was awarded Uncle of Paul for outstanding service to the club by a Faculty/Staff member, Ruby Anderson received the Daughter of Paul for outstanding club member, and 12 club members were awarded scholarships. The next day was the field events with the dance following the bean feed. All in all, a good time was had by all.

With all this going on, we hardly had time to think about the fact that Conclave 1988 will be held here in Minnesota. Dave Haugen and Todd Anderson were elected as chairmen of Conclave and have been working like crazy since then. Things are rolling now, and we expect to put on the best Conclave ever. (See next year's Peavey for reports on how we did.)

In the midst of all this, the Green Hall addition was being completed and we had trouble locating space for all our equipment and our trophy case in the new building.

Well, that about covers this year's activities, and I thank all my executive staff and the club members for helping out wherever they could. Elections were held and here are the results.

President: Amanda Sjoquist
Vice Pres.: Beth Krueger
Assistant V.P.: Eric Nordlie
Treasurer: Rod Fouks
Secretary: Will Nelson
Sgt. at Arms: Leo Larkin
Historian: Tim Mack
Faculty Advisor: Bill Ganzlin

Good luck to the new Executive Committee, and I hope that all the club members will help them as much and even more than this past year.

Conclave 1987

Elizabeth Krueger

Conclave 1987 was held October 16-18 near Cadillac, Michigan. Michigan State University hosted the annual forestry students' meeting and competition. The University of Minnesota team consisted of eleven undergrads and one grad student/van driver/judge: Ruby Anderson-Barker, Rod Fouks, Dave Haugen, Steve Johnson, Audrey Koltes, Blythe Leidig, Doug Magee, Eric Nordlie, Matt Pelkki, Jim Radzak, Rick Voldseth, and me.

The SAF convention was held in Minneapolis on that same weekend. Since some of our members wanted to go to both, we left Conclave on Saturday night rather than Sunday, which meant we spent as much time on the road as we did actually at Conclave. We spent the first seven-

teen hours in the close quarters of the van ("15-passenger" van clearly didn't count on the passengers trying to find enough room to sleep in, or bringing 6 tons of luggage, bucksaws and peaveys with them). Starting at midnight, we went to Cloquet to pick up Steve and then drove through deserted Superior in search of highway 2. It rained steadily and fog lurked in unexpected patches. At long last we neared Michigan and there was an "awesome sunrise", Rod said, as the black scenery turned to gray and brown. Marvelous fall colors!

We took a rollercoaster shortcut from Iron River to Escanaba, and I studied my map and tried to find the towns we were passing. "Felch"?? Steve and I played hangman (s w e r v e) until we stopped for the scenic view at a bridge on the north shore of Lake Michigan, which was after we stopped for the scenic view at a state park. About the time our desire for scenic views was wearing off, we got to the Mackinac Straits bridge. Matt told us indian massacre stories as we crossed.

As darkness began to fall again, we reached the camp, south of Cadillac. Despite being dazed we all found the bonfire.

The events began at 8 a.m. Saturday with bucksawing. Dave and Doug, sawing red oak, discovered the m-tooth saw was set for pine, and everyone after them used the old saw. Audrey and Blythe were the first 2-lady buck team, Ruby and I were the second; I wished I'd had a little more practice than the one time I'd tried it at the fall bonfire a couple of weeks before. Because of the SAF convention, Laura was not along, and we couldn't match the first place she and Audrey had won in 1986.

Bucksawing was just under way when logrolling began. Once it started, it went on indefinitely, as every school had several teams of every combination to sweat their way up and down the course. We got a chance to examine everyone's peaveys and see the latest improvements. Midway through this the tobacco spitters went en masse to the volleyball court,

Fall bonfire

Elizabeth Krueger

The fall bonfire was originally scheduled for the second Monday of the school year. However, as members of the Forestry Club made plans that afternoon, the temperature dropped, the wind rose, and the bonfire got postponed. The third Monday's weather was much better; it was also the day the Twins won the pennant, so the crowd of forestry students/baseball fans was in a particularly good mood. About 45 students and faculty attended, including many new students. The department heads and Forestry Club president summed up the coming year. Those of us bound for Conclave tried out the bucksaw and other forester traditions. By late evening, the dew on the grass was turning to frost, and we broke up the party in time to catch the next day's 8:00 class.

where the gale coming off the lake added a challenge to their messy event.

After lunch, Rick picked up our first points, in wood identification. Jim blew the competition away in the match split, and we saw some light of hope that we wouldn't end up last. We all went back to the main field in time to see Steve split the speed-chop ax in two.

The clouds were thick all day, but rain held off til the minute the dendrology test began. Audrey, Jim and I borrowed pencils to write on the soggy slips of paper and wandered through the dripping woods for half an hour, at which point the rain quit and we went back to the field. Doug was throwing bolts and the log roll was finally finishing up. Preparations for the special event were under way. Jim got to go identify more trees; Rod dragged the log yards, Blythe canoed out into the teeth of the gale and back, and Doug grudgingly accepted the assignment to drink a beer in a hurry.

After all this, we had half an hour to be unconscious in the dorm. On our way to supper we encountered the chalkboard, which now showed the final standings.

1. University of Missouri	73
2. Southern Illinois University	45
3. Michigan State University	19
Purdue University	19
5. Hocking Technical University	15
6. University of Minnesota	6
7. University of Michigan	5
Michigan Technical University	5

Whew! Didn't get skunked — and to think that all our points were in match-split, dendrology and wood identification. What a cerebral bunch.

Missouri carried off the honors, but we did get one consolation: after dinner and the awards we adjourned to the tv and watched the Twins take on the Cardinals in the first game of the world series. In order to get back to St. Paul in time, we had to leave in the middle of the game, before the Twins built up their lead, which

was just as well since the Missouri foresters outnumbered us four to one.

With some difficulty we got the van reloaded (did all this stuff come OUT of here?) and herded the stragglers in from the tv crowd. We chose to take a different route home, through Chicago this time. Matt drove us through Michigan, including a scenic shortcut from highway 131 to 196. Matt, we said, as we careened down a gravel road, where are we? Why does this road look like a driveway into someone's farm? Trust me, he replied. If we keep going west we'll either find 196 or hit Lake Michigan. Oh yeah? . . . and just what's that gonna do for us?

Audrey and Blythe drove later. I talked to Rod while he waited for the sun to come up so he could read the homework he'd brought with him (*War and Peace*, also useful as a large heavy weapon). All went well until we got off the tollway to change drivers and discovered there was no on-ramp. We took an unscheduled tour of the Illinois countryside. Eventually we turned around in some unknown driveway; everyone was wide awake by then and wondering what was going on. We backtracked nearly to Chicago, cursing the toll system.

We returned to St. Paul bearing our plaques and certificates and the hats we'd won in the drawing. The group that came back wasn't quite the same as the one that left: over the 60 hours together we had turned into Johnny Corruption, Joe Stretch, Hoink and Hink, Doug Puppy, Joe Frat, Wally and the Weav, Crash & Burn, Rick Quick, FRUP, and the Scribbler. The victims stumbled off to the SAF convention, while the rest of us tried to make it home before unconsciousness set in.

In 1988, the University of Minnesota will be hosting the Conclave. It's a big job and we'll be working hard on it. We hope to make it a good time for everyone, as it's been for us each year.



Tree cut

Amanda Sjoquist

The Tree Cut: an annual event essential for the success of our Christmas tree lot. There was a silent but strong excitement as we met at the tree lot on November 21 to begin our journey into the Christmas tree farming world. Our destination was Carl Vogt's farm, where we would spend the weekend at Chez Vogt. We took the tree-bailer with us, but it couldn't make it all the way. It and its flat tires spent some time on the side of the road while the rest of us started in on harvesting the Christmas trees. It was a pleasant weekend for the Tree Cut; the sun was shining and the saw blades were sharp. Everyone got to try their hand at cutting the trees down and hauling them to the side of the road. After breaking for lunch, we split up into groups. Some of us bailed the trees, others continued to cut, and still others were in charge of hauling and stacking the trees.

We worked hard and everything went as smoothly as a well-oiled machine, until the sun went down. Then it was time for supper. We decided to eat in shifts since there was a truck to unload and load back up. Those who had volunteered to go back to school Saturday night to unload the truck were to eat first, and everyone else would eat after the truck was loaded. It was a

great plan, but as many great things come to an end, so did the plan. The truck arrived before supper and we all worked while no one ate. We all did eventually get to eat a great supper of brats, potato salad, and milk (no beer this year). When the truck was gone and the stove was lit in our hotel we went for a ride on Carl's wagon to burn some slash piles. It was an awesome sight, but we were all anxious to get to the bar in town. We drank until the bar ran out of beer (which wasn't very long, three pitchers) and went back to Carl's. Laying plywood over the dirt floor, and fighting over who gets to sleep in the wheel ruts, we settled in for the night.

Sunday morning came and we started bailing trees and then loading the semi truck up with more trees for the lot. It was a low pressure day and Carl gave us a demonstration on tree trimming and explained about general tree farm operations. It soon came time for us to leave our great adventure and go back home. The tree cut is an important part of our tree sales; not only does it provide us with trees to sell, but it bonds everyone together to focus on the tree sales together, as a team. Thank You to Carl and everyone involved for this opportunity to be a part of the team.



It's Christmas time in the city



Robb Collett

The corner of Larpenteur and Cleveland was once again brought to life this winter as the Forestry Club continued the tradition of selling Christmas trees. Ruby A. Barker and Robb Collett were to find out what running a lot was all about.

With the sun shining, Forestry club members set up christmas tree stands, cleaned out the old school house, and prepared for the 3000 Christmas trees that would be sold. Set up went smoothly with the help of some recent graduates who stopped in to lend a hand. This year there was less room for the Christmas tree operation because of a fenced off area for bee hives. However, with an imaginative delivery schedule, this loss of space became no problem. Visitors were able to find their trees easier this year with the addition of new lighting.

With the trees rolling in, all was running well. This year's Christmas trees were all

Minnesota grown. Three growers provided us with seven species of trees. As usual, the demand for balsam and spruce was high. The popularity of scotch pine continued to increase, this may have been due to the excellent quality of our scotch. Red pine did not sell very well at all but white pine seems to be holding its own.

As the Christmas season went on, changes in the weather kept things interesting. Warm weather invites customers to take their time and find a tree they really like. You may think that this is bad because customers can be picky, but the warmth also allows the branches to fill back out after having been bailed. Unfortunately, warm weather also means rain instead of snow, which means mud instead of grass for our parking lot. Ruby and Robb countered this attack with straw for a walking path and a load of gravel for parking. Of course as soon as this measure was taken, temperatures dropped, never to see the freezing mark again until spring. Now customers hurriedly bought their trees, and were lured into the school house for warmth. Inside, maple syrup, wooden reindeer, and mistletoe were sold. Christmas coloring books replaced candy canes for the children (employees can't gobble up coloring books). The final days of the season brought fresh snow which would put all in the Christmas spirit even if they had heard "Santa Claus is Coming to Town" a hundred times while selling trees. The snow would also put cleaning up off until spring when the snow would melt. Nearly every single tree was sold in the end, what a success!

It is hard to say why our club has such success. It may be because we have the lowest prices and the best quality. Perhaps it is because of our tradition of selling trees and our customers are loyal. It could be because of the strong character of a small school house on the corner that has stood



the test of time. Whatever the reason, it is good to see that tradition of a real Christmas tree and of the family experience of buying the tree has not been totally lost to big business and commercialism. It is a special occasion for students to partake in something so sacred as the buying of the family tree. To see families delight in selecting a tree makes all of the work worthwhile. To those of you who get your tree from us, thank you, and to those of you who do not, you should.

Foresters' day

James Radzak

A fog-shrouded sky greeted the anxious, hungry foresters on the morn of this year's Foresters' Day. A fine feast of pancakes, with the added treat of blueberries (which the Dean said were from a herbicide study in Bertha, MN), was cooked by the faculty for the students. Some faculty members had a little more trouble than others in shaping their pancakes into dazzling works of art (right, Dr. Knopp?).

Once the yearning masses (all 40 of us) were satisfied, it was time for the skits. Bill Ganzlin opened the show with his writing debut about University life. After a second skit by the undergrads (nothing from the grads as usual) it was time to proceed onward to the field of battle. Several alumni decided to show up to compete in this year's events.

The fanfare began with the ceremonial bucksawing by this year's Lumber Jack and Jill, Gregg Hove and Laura Held. The day moved along steadily with many events, ranging from the snowshoe race (won of course by Bryan Pike) to the keg toss (also won by that lanky alumnus). As

a finale to the events the ever popular tobacco spit was chewed off.

It was now time to move indoors for the glorious bean feed. Once again the masses were satisfied and it was finally time to award the superb prizes. As this portion concluded the factions proceeded to leave and prepare for the wonderful dancing experience of the Stump Jumpers' Ball, which was held in the North Star Ballroom. Many new dance steps were created, especially the infamous Stroll, which completely exhausted the outnumbered male participants. The Dance concluded at midnight, and the throng of foresters dragged their sweat-laden, weary bodies homeward.

Forestry club scholarships

The recipients of this year's Forestry Club scholarships were:

Ruby Anderson-Barker, Robb Collett, Laura Held, Gregg Hove, Audrey Koltes, Amy Krieger, Elizabeth Krueger, Blythe Leidig, James Radzak, Steve Stenger, Amanda Sjoquist, Kevin Sturgeleski



Back Left to Right: Leo Larkin, Audrey's niece, Theresa Haugen, Dave Haugen, Paul Bunyan, Steve Stenger, Jeff Cordes, Amy Krieger
Second Row Left to Right: Ruby's Dad, Jim Barker, Jim Gustafson, Audrey Koltos, Jim Radzak, Ruby Anderson, Barker, Amanda Sjoquist,
Blythe Leidig, Byron Johson, Cheryl Nelson, Scott Hartneck, Bryan Pike, Kevin Sturgesleski, Beth Krueger
First Row Left to Right: Bill Ganzlin, Doug Magee, Sharon Raetz, Gregg Hove & Laura Held (with saw), Robb Collett

SCHOLARSHIPS

Scholarship recipients

College of forestry

*The College and Departmental Scholarship Committees have awarded the following 1987-88 Scholarships:

1987 Dayton Kirkham Scholarship Recipients

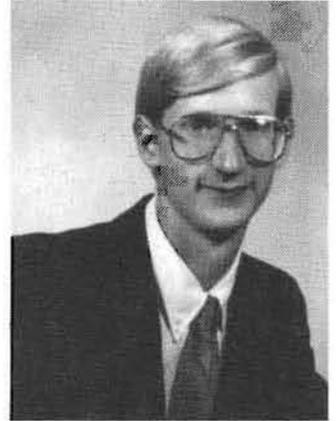
Name	High School	Location	Proposed Major
Andrew Bluhm	Marquette University	Whitefish Bay, WI	Forest Resources
Lyle Buss	Clara City	Clara City, MN	Fisheries and Wildlife
Eileen Gades	Montevideo	Montevideo, MN	Fisheries and Wildlife
David Gossett	Cambridge	Cambridge, MN	Recreation Resource Management
Scott Rogers	Northfield	Northfield, MN	Fisheries and Wildlife
David Schultz	Lakeland Union	Woodruff, WI	Paper Science & Engineering



Eileen Gades



Scott Rogers



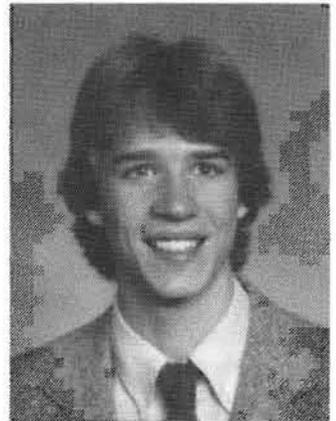
Lyle Buss



David Gossett



David Schultz



Andrew Bluhm

SCHOLARSHIPS

Carolind Scholarship

Rodney Fauks
Janet Larson
Suzann Willhite

Helen A. Young Memorial Scholarship

Khiam Yung Lin

W. R. Miles Scholarship

Stephen Tillmann

Minnesota Forestry Association Scholarship

Brennan Ferguson

Edward Everett Scholarship

Margaret Eliason
Stephen Tillmann
Russell VanHorn
Perry Ann Ward

Ken Merriam Scholarship

Bryan Johnson

K. E. Winsness Scholarship

Anthony Maas

E. G. Cheyney Scholarship

Leonard Kne

Samuel Green Scholarship

Arthur Karels

Caleb Dorr Scholarship

Lyle Buss
Arthur Karels
Tim Mack
Andrea Schwartz

Henry Schmitz Scholarship

John Elholm
Brian LaBrash
Erik Peterson
Steven Pitschka
Stephen Tillmann

Augusta Searles Scholarship

Janet Larson
Roxanne Wagoner

John Allison Scholarship

Steven J. Johnson

R. M. Brown Scholarship

Brennan Ferguson

Robert L. Goudy Scholarship

Rodney Fauks

Ralph L. Lindgren Scholarship

Stephen Warren

Frank Shearer Scholarship

Jeff Cordes

Boise Cascade Scholarship

Randy Kirk
Timothy O'Hara

C. L. Pack Essay Scholarship

Gregory Kruse
Raymond Rainbolt

Forest Products Marketing

Ruth L. Gunard

Anderson Corporation

David G. Edwall
Robert K. Lenzmeier
Robert M. Stafford

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Steven M. Carlstrom

Buckman Laboratories Inc.

Steven Corley

Blandin Foundation

Brian L. Hoover

Waldorf Corporation

Brian A. LaBrash

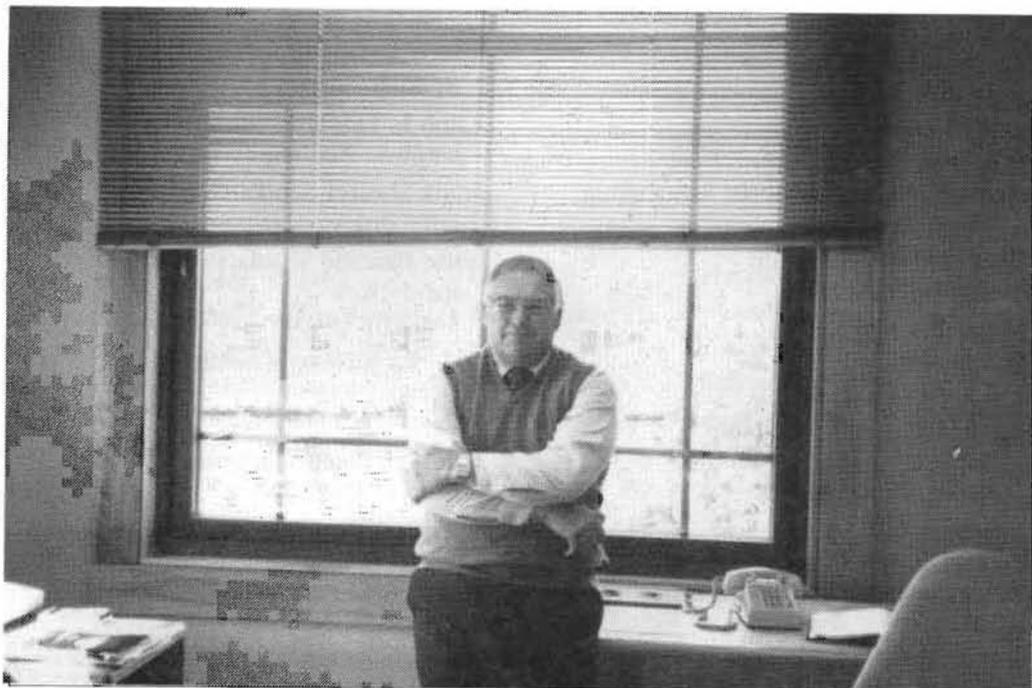
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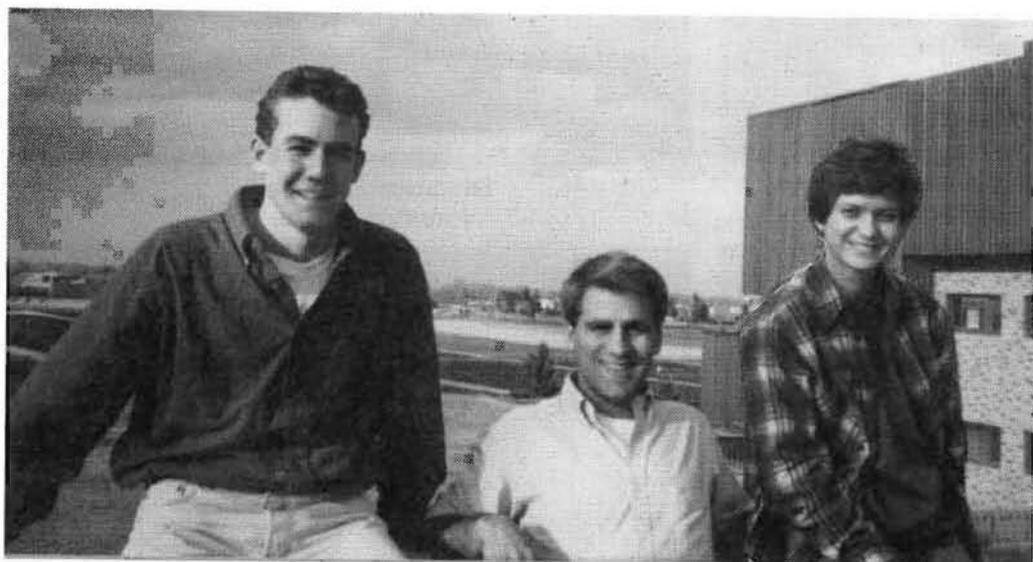
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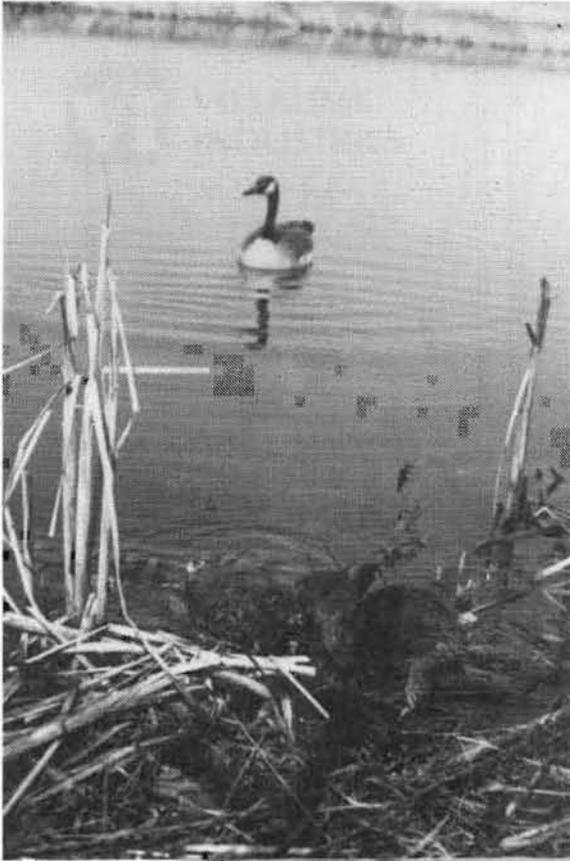


Advisor John Bell



G O P H E R P E A V E Y E D I T O R S

Eric Nordlie Steve Tillmann Beth Krueger



Urban Wildlife

These photos were taken at
Lake Vadnais by Steve Tillman

The survival of wildlife in a fast-changing world serves as a barometer of the health of man. If wild creatures can thrive, it is a good bet that human-kind will find the environment livable too.

—Preface to the Endangered
Species Act of 1973

A mink preys upon a muskrat as a Canada Goose observes the unfolding struggle for existence. Later . . .



. . . the mink retires to the security of a nearby brush pile to rest in the sunlight — its hunger satisfied for a time.



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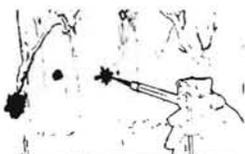
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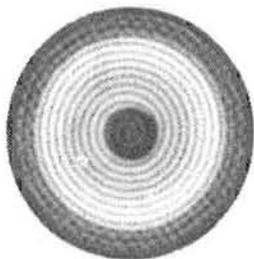


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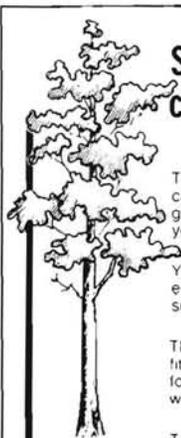
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