

GOPHER PEAVEY 1993

GOPHER PEAVEY

1993

Yearbook of the College of Natural Resources

University of Minnesota

Published yearly since 1922

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Printed on recycled paper

IN MEMORY OF

KIMBERLY ANN PAULSEN (1971-1992)

Kimberly A. Paulsen was a senior at the University of Minnesota in Natural Resources and Environmental Studies with an emphasis in Issues and Planning. She was an active member of the Environmental Studies Club, Habitat for Humanity and the environmental education programs at the Bell Museum of Natural History where she was employed.

Through her volunteer work with the Environmental Backpacking Program of the University YMCA, Kim became involved with the Common Vision Forum, a Minnesota follow up to the Earth Summit in Rio.

After finishing up her senior project at the University, Kim went on a backpacking trip in the Bear-Tooth Mountains of Montana. On September 2, 1992, while climbing, Kim was accidentally struck by a one-ton rock and later died from her injuries.

Kim was experiencing the wilderness to relate to nature and to learn how we, as human beings, can co-exist with it. Her lust for wilderness experience was only one facet of her personality which was imbued by motivation and empowerment. Her passions were endless. Kim was enthusiastically awaiting the start of her career so that she could be involved in the improvement of the environmental future of this state.

The legacy of Kim Paulsen's selfless involvement is still alive today. Kim's greatest achievement, instilling her vision that "one person can make a difference," is now our challenge.

Friends of Kim Paulsen

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DEDICATION

RICHARD SKOK

By Ann Mayhew

Richard A. Skok, dean of the College of Natural Resources, retired from the University on June 30, 1992. He has served on the faculty in the college since 1959 and as dean since 1974.

Skok was born on June 19, 1928, in St. Paul, Minnesota. He graduated with a bachelor's degree in forestry in 1950, a master of forestry degree in 1954 and a Ph.D. in forestry, with a specialization in forest economics, in 1960; all of his degrees are from the University of Minnesota.

Although Skok spent most of his career in academia, he, like many forestry students, worked summer jobs with the USDA Forest Service. He spent the summers of his undergraduate years working on the Superior National Forest in northern Minnesota (1947 and 1950), the Marquette National Forest on the upper peninsula of Michigan (1948) and the Payette National Forest in Idaho (1949). Skok enjoyed a brief stint with the U.S. Army (1950-52), serving as instructor in multiplex photomapping at Fort Belvoir, Virginia.

Skok began his graduate studies in 1953, studying forest economics. He took a year off to serve as assistant professor of forest economics and policy at the University of Montana in 1958-59. He came back to Minnesota in 1959 to complete his Ph.D. and serve as instructor of forest economics at the University of Minnesota.

Skok moved rapidly through the faculty promotion series from instructor to assistant professor to associate professor and finally professor. In 1967 he was appointed associate director of the School of Forestry, and in 1971, when the school attained college status, he was appointed associate dean of the College of Forestry. Skok was appointed dean of the college in 1974 when Dean Frank Kaufert retired and has served in that capacity since then.

Skok has been involved in many activities, both locally and internationally, that serve forestry, natural resources and higher education. For example, within the past five years Skok served as vice-chair of the Governor's Blue Ribbon Commission on Forestry and Forest Products; as secretary of the National Committee on Higher Education of the Joint Council on Food and Agricultural Sciences; as chair of the Education Committee, National Association of Professional Forestry Schools and Colleges; as chair of the Research and Education Committee of the Lake States Forestry Alliance; as a member of the Governor's Commission on Minnesota Wood Products; as a member of the Board of Trustees of the Lake States Forestry Alliance (appointed as the governor's representative from Minnesota); as a member on the International Council and as North American Region representative on the Executive Board of the International Union of Forestry Research Organizations.

Skok is involved in these many professional committees and boards, which require a huge time commitment, because he genuinely cares about the past and present events which may affect the college. He has done all a person could do to ensure that the College of Natural Resources is an outstanding natural resources school and its students succeed in their scholastic and professional endeavors.

Skok does more than just the "big things" a dean is expected to do. He does the little things, too. And it is the little things that reflect his sincere concern for the students of the College of Natural Resources. For example, he was instrumental in providing the vision, as well as an enormous amount of time and energy, to make the Natural Resources Administration Building (NRAB) a reality. NRAB provides wonderful meeting facilities and areas for student interaction, discussion and studying; a well-equipped and beautifully furnished forestry library; and one of the best equipped instructional computer laboratories on campus.

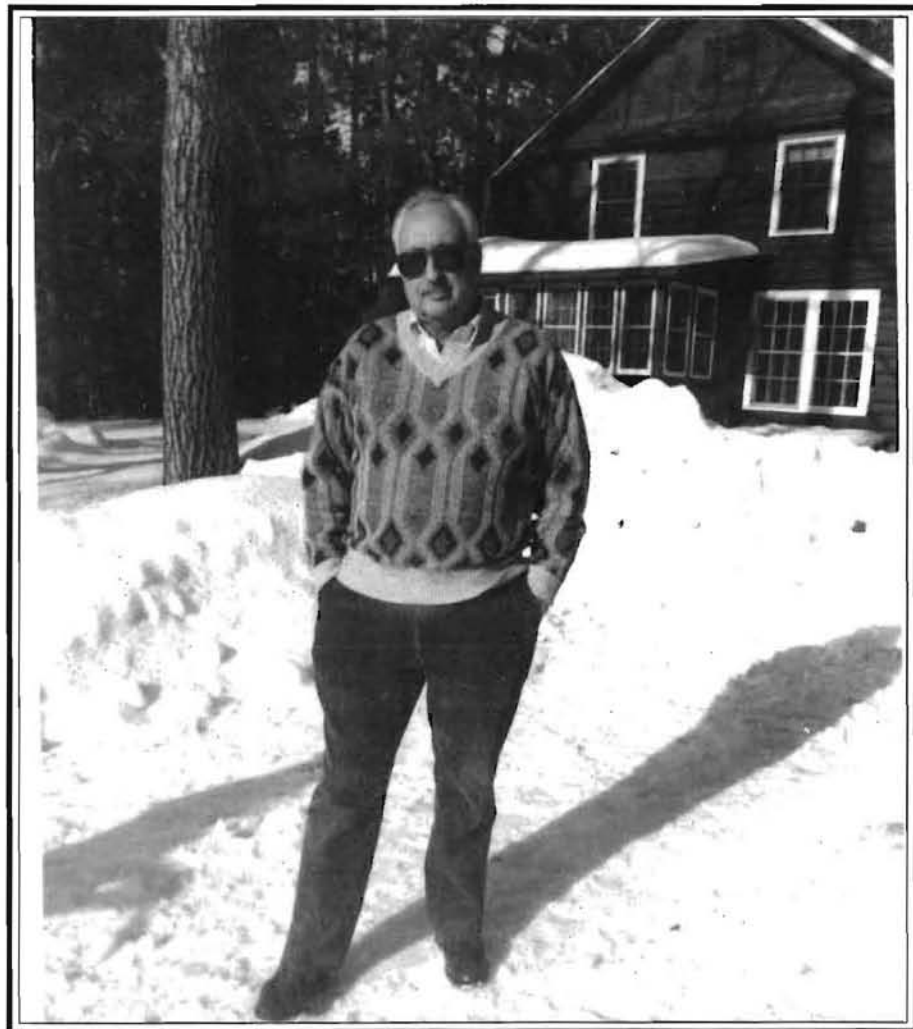
Skok was thoughtful enough to direct a good portion of the money generated by the Dayton Kirkham endowment fund to undergraduate student activities, such as scholarships for high achieving new students, travel and registration reimbursements for students attending professional and local meetings and money for special student activities and events, like Earth Day.

Skok consistently searches for ways to help students who have found themselves with tough financial problems. He has been truly instrumental in attracting scholarship money by his leadership and personality. He has encouraged the Office for Student Affairs to pursue Undergraduate Research Opportunities Program opportunities, develop a tutoring program and implement more student

scholastic standards criteria.

Additionally, Skok is directly responsible for the very strong academic program offered by the college. Skok has the ability to direct and encourage the strong curricula offered by the College of Natural Resources by emphasizing certain areas over others; encouraging the implementation of new programs, such as Natural Resources and Environmental Studies; and emphasizing a more liberal education, including writing and speaking courses.

Richard Skok has devoted his entire career to the College of Natural Resources, University of Minnesota. He has provided extraordinary leadership in so many ways. The dedication of the 1993 *Gopher Peavey* is one small way we acknowledge Skok's many contributions and express our thanks.



RICHARD SKOK: On his way to retirement.

DEPARTMENT REPORTS



by Ira Adelman, Professor & Department Head

FISHERIES AND WILDLIFE

Perhaps the most notable event of the year was University President Nils Hasselmo's visit to the department voting staff meeting this past December. I invited him when he expressed an interest in meeting our faculty and staff. Among other comments, he mentioned he was pleased with the quality of our students and pleased that staff and students were both represented on the voting staff and involved with the faculty as a team in decision making. The direct effects of his visit are hard to predict, but I believe we made a positive impression, and this cannot help but be to our benefit.

The past year was largely one of continuing and improving many of our ongoing activities, rather than undertaking significant new initiatives. We have begun a strategic planning process to plan our activities over approximately the next five years. The plan should be completed this spring, in time for an upcoming external review of the department.

One of our more exciting and frustrating activities for the past year has been working with the consulting engineers and architects to design our new fisheries/aquaculture research facility. Funding for construction of this facility was provided by the State Legislature through the recommendation of the Legislative Commission on Minnesota Resources, along with program accommodation and remodeling funds from the University. The facility will occupy about 9,500 square feet of the old Agricultural Engineering Shops building and should be functional by late summer. The new facility will allow us to undertake many teaching and research activities not feasible in our old laboratory.

There have been no changes among department faculty throughout the year. Dr. Ray Newman, who had been serving in a temporary position, joined the regular tenure-track faculty. He has continued his research along two lines: habitat relationships of stream fishes and identification of potential biological controls of Eurasian water milfoil, which is spreading rapidly into many regional lakes.

Dr. David Smith was promoted from assistant to associate professor, and is continuing his work in Nepal on tigers and the loth bear and is also beginning to undertake research in Thailand on the gaur. These international efforts enrich the department by exposing students and staff to global conservation perspectives. The global perspective is also incorporated into the work of Dr. Yosef Cohen. Although his research focuses on the effect of climate change on plant-wildlife interactions in northern Minnesota forests, the implications of his findings in light of global warming are world-wide. Dr. Mary Henry, Cooperative Research Unit leader, spent a month working in Russia's Lake Baikal region on pollution related problems.

Some other interesting ongoing faculty projects include the following:

- Dr. Peter Sorensen is studying the olfactory sensitivity of sea lamprey to determine if pheromones can be used for biocontrol, rather

than continuing to use poisons to destroy their larvae.

- Dr. Francie Cuthbert is collaborating with the Minnesota DNR to investigate changes in biodiversity of birds in Minnesota forests.
- Dr. Peter Jordan and graduate student, Bill Adair, developed a simplified GIS data base for Superior National Forest to assist the U.S. Forest Service in developing ecosystem management plans.
- Dr. George Spangler is using a new technique in fisheries called biochronology to evaluate the use of freshwater fishes as indicators of their past and present environment.
- Dr. Bruce Vondracek is studying the habitat and community interactions of trout and smallmouth bass to better understand how they might be managed.
- Dr. Mary Henry and Dr. David Anderson are jointly studying the impact of agricultural pesticides on waterfowl and upland birds.
- Dr. Anne Kapuscinski is using DNA fingerprinting techniques to identify offspring from individual matings of smallmouth bass to determine if certain spawning pairs are more successful than others.

The department extension specialists have become involved in some exciting new areas. Dr. Kapuscinski is contributing to development of state and national policies on the use of genetically engineered organisms, as a result of her research on transgenic fishes. Dr. James Kitts has been working on ways to incorporate methods of conflict management and alternative dispute resolution into wildlife management issues.

Our office staff, Jo Schroeder, Roslyn Zippa, Gerda Hagen, Wendy LeMay and Bob Rouillard (Wendy and Bob are new this year) have all been under the pressure of adapting to new University financial and accounting systems. Technical support staff, Jay Maher and Beau Liddell, have their hands full, keeping the laboratories and computers functioning with increased use.

Overall, the department is at an all time high regarding courses taught and funded research projects. It has been a successful year.



by Jim Bowyer, Professor & Department Head

FOREST PRODUCTS

As I sit down to write this annual letter, it seems unbelievable to me that another year has passed already. However, considering the number of changes that have come about, maybe it isn't so hard to believe after all.

The big news, of course, is that Dean Skok has decided to retire, bringing a change in leadership to the College of Natural Resources. The College has thrived under Dick's guidance, and his shoes will be difficult to fill. With the selection of Al Sullivan as our new Dean, I sense a feeling of confidence that we have chosen wisely, and that we are now set to move aggressively into the next century.

Within the Department of Forest Products, 1992 was, well, in many ways just another year. During a period in which good news seemed a rather rare commodity for the University at large, this unit continued to serve large numbers of students, to bring in record levels of external support for research and technology transfer efforts, and to run an extension program equaled by few universities in North America.

If you have never attended a Department of Forest Products Scholarship Banquet, you should

find time to take one in. My observation, as I listen to all the accomplishments and academic credentials of our many scholarship award winners, is that I'm glad that I don't have to compete with these men and women. At the fall banquet, nineteen students received scholarship awards totaling more than \$33,000. The annual program highlights not only the students, but the generosity of the sponsoring firms.

In what has become something of a frequent occurrence, the Cold Climate Housing Center gained yet another honor. This time, the Center was recognized nationally by Renew America for its innovative programs promoting energy efficiency and contributions to an improved regional and national environment. Center Coordinator, Pat Huelman, also received formal recognition in the form of the Legislative Leadership Award from the Conference of Builders and Associates of the Builders Association of Minnesota. You may recall last year's report, in which it was noted that a total shutdown of the Center was a distinct possibility. Although this threat remains, Huelman single-handedly brought the organization back to life. Over the past year, his pursuit of contract funding has enabled the initiation of several exciting new projects, as well as the addition of several new staff. Efforts continue to locate a source of continuing support for this group.

Change continued in the wood mechanics position, which has been occupied by no fewer than four people over the past three years. We were, however, fortunate to recently hire Dr. Tim Larson to fill this position, a move that is expected to bring stability as well as teaching and research excellence to this important slot. Tim recently completed a Ph.D. in Wood Science and Technology with a minor in Mechanical Engineering at the University of Minnesota.

In addition to Larson, several new folks joined the forest products team this year. The wood chemistry research group was strengthened by the addition of Dr. Nugzar Nutsubidze as a Research Associate. Dr. Nutsubidze holds a masters degree and a Ph.D. in organic and bioorganic chemistry from the University of Georgia (Russia) and the Institute of Bioorganic Chemistry (Moscow), respectively.

Also joining the department and its Cold Climate Housing Center were Betty Flannigan, Dirk Kramer and Julie Coopet. Betty began work as a teaching specialist after completing a masters

degree in Applied Design and Visual Communications at the University of Minnesota, College of Human Ecology. Dirk is providing project technical support as a Junior Scientist, while Julie brings special talents to our office management team.

Stimulated by the generous contributions of the forest products marketing and distribution industry within the region, the department created the Forest Products Management Development Institute. Under the leadership of Phil Steklenski, the new institute began operations by conducting two intensive workshops for upper-level managers during the year; the sessions attracted attendees from across the nation and drew high marks from those involved.

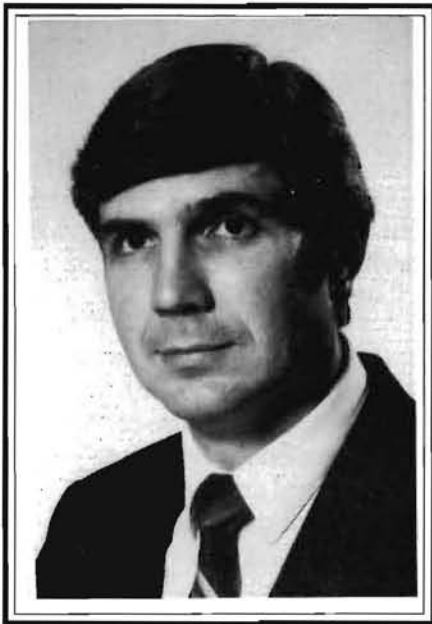
Other than ongoing day-to-day instructional efforts, several other developments deserve comment. In the fall, Mutombo Muvundamina was selected to participate in the highly acclaimed Bush Faculty Development Program On Excellence In Teaching. He already has a number of new ideas, and we expect that his experience will benefit all of the teaching faculty and staff as he shares his new knowledge.

Speaking of new knowledge, some of you will probably be interested to know that all University of Minnesota students now have access to electronic mail and electronically accessed databases. In fact, forest products students this year became the first in the University to use this technology for completing assignments and interacting with instructors outside of class hours. It seems that knowledge of computers and computing are regular requirements for almost everything that students do these days. Bob Seavey, in fact, has been working on interactive computerized teaching modules in the area of wood structure and identification. It will be interesting to see how college-level instruction is delivered a few decades in the future.

As I write this, the juniors are on the road, led by Harlan Peterson, on their annual spring industry tour. Since Harlan took this task over from me a number of years ago, I have noticed these trips always seem to run smoothly, with a notable absence of bus breakdowns and similar calamities which I know some of you remember. This undoubtedly says something about Harlan's meticulous planning.

The Paper Science and Engineering Foundation continued to grow over the past year under the guidance of Bob Rouda. Expansion of the Paper Science and Engineering program remains a priority of the department, and with the help and support of the industry and the Minnesota Department of Natural Resources, progress is being made, even in these lean times.

Though I could go on for another several pages, suffice it to say that the rest of the faculty and staff have been quite active as well. On a daily basis, these folks make their presence felt at the state, regional, national and international level. But then, you'll have to stop by to hear about the rest of the goin's on, direct from the people in the trenches. On behalf of all the gang, including those not mentioned above (Erickson, Gertjansen, Hendricks, Kroll, Mlynar, Milton, Sharkanen, Schmidt, Shasikanth and Wells), feel free to drop in any time to hear for yourself all the new and exciting things that are going on around Kaufert Lab!



by Alan Ek, Professor & Department Head

FOREST RESOURCES

The past year has produced many changes. Three faculty have retired or stepped down, and a number of new appointments have been made.

Enrollment in our classes has continued to climb, research and extension activity are up and there is broader public appreciation of our forest resources and how they are managed.

Dr. Klaus Puettmann joined us as an assistant professor of silviculture on December 1, 1992. Klaus has a Ph.D. from Oregon State University and a diploma in forestry from Albert Ludwigs University in Freiburg, Germany. His background is in plant-plant and plant-environment interactions, statistical applications and modeling in forest ecology and silviculture. Klaus will take over the silviculture instruction and research previously handled by Professor Al Alm.

Al Alm will be leaving on June 30, 1993, after 40 years with the department. He will be on terminal leave and will officially retire in 1995. As many of you know, Al was a popular instructor and a pioneer in the development of regeneration and site preparation techniques, notably containerized seedlings. Al will continue to reside in Cloquet.

Scotty Scholten, Professor and Extension Forester, retired this past year. Scotty was a nationally recognized expert on windbreak and shelterbelt design. He also taught classes at Itasca and classes on farm forestry on the St. Paul campus. Scotty will continue to reside in St. Paul.

Dr. David French, Professor of Forestry and Plant Pathology, also retired June 30, 1992. Dave taught forest pathology and urban forestry. He has advised many students over the years, and his teaching and research contributions to forest pathology are recognized worldwide. Dave resides in St. Paul and can frequently be found around Green Hall.

Gary Johnson joined our faculty in August of 1992 as an Assistant Extension Specialist: Urban and Community Forestry and as an instructor in the area of urban forestry. Gary comes to us from the University of Maryland where he was active in both teaching and consulting in urban and community forestry. He has a Masters degree from Western Illinois University. Gary will take over teaching and advising students in urban forestry.

Dr. Stephen Carlson was appointed Extension Specialist: Natural Resources Youth Development in February of 1992. In this role he

will direct 4-H and youth development programs in natural resources. Additionally, Stephen will participate in the instruction of forest resources and natural resources courses. He has a Ph.D. in park and recreation resources from Michigan State University and will be leading a course in natural resources interpretation and communication, as well as assisting in the college's ethics course.

Cindy Buschena was promoted to assistant scientist effective October 1, 1992 and Marcia Ritterling was promoted to accounts supervisor effective January 1, 1992. Cindy and Clara Schreiber, word processing specialist, were recipients of the College of Natural Resources Outstanding Achievement Award to civil service staff at the recognition reception in December. At a time of declining budgets, but a burgeoning numbers of projects, staff and activity, such service is indeed very important to our continued success.

Student enrollment in Forest Resources, Recreation Resource Management and Urban Forestry is stable, but enrollment in the Natural Resources and Environmental Studies (NRES) major is still rising. Many previously small classes are now quite large and difficult to handle. Consequently, departmental faculty are responding by offering courses more often and developing new courses to satisfy the needs of the new curriculum. The new offerings are successfully reducing the otherwise very large enrollment in traditional courses. Faculty continue to play a large role in the instruction and shaping of the NRES curriculum. This increased student interest in environmental issues also draws non-majors to forestry courses because they see such subject matter as an important part of natural resource management in general. Graduate student enrollment is steady from its high last year.

Faculty and student interest in environmental issues continues to expand. Consequently, we are seeing more topical or issues course offerings in the form of colloquia. Ranking high among these are concerns about biological diversity and ecosystem management.

Faculty effort on the Generic Environmental Impact Statement (GEIS) on Timber Harvesting and Forest Management in Minnesota is winding down. Forest Resources faculty have been heavily involved in developing technical and background materials for the study and in

review of study outputs. In general, this study may serve to shape forest resources and natural resources practices and policy for decades. An early look at the draft GEIS document suggests numerous research needs from forest biology and policy to economics. In particular, we will need to follow various resource characteristics and their management through time more closely than in the past.

Becky Lein, Forest Resources senior, was presented with the Outstanding Forestry Student Award at the Minnesota Timber Producers annual meeting in Duluth. The student chapter of the Society of American Foresters (SAF) placed second in the SAF's Outstanding Student Chapter competition nationally.

Bob Stine, research fellow, and Mel Baughman, associate professor, co-chaired the planning effort for the very successful White Pine Symposium, held in Duluth in mid-September. Attendance for the conference exceeded 600 participants.

Professor Paul Ellefson's new book, *Forest Resources Policy: Process, Participants and Programs*, was recently published by the McGraw-Hill Company as part of the firm's forestry series. Professor Dietmar Rose also has a new book out on forest planning (in German) for an international audience titled *Strategisch Planung Natürlicher Ressourcen am Beispiel der Forstwirtschaft*.

Dr. Jacek Oleksyn joined the department as a visiting scientist for a year to work with Dr. Peter Reich on understanding the response of European and North American tree species to anthropogenic and natural stresses. This research is partially supported under a National Academy of Sciences visiting fellowship award.

Professors Hans Gregersen and Ken Brooks and Research Associate Al Lundgren have been funded by the United States Agency for International Development (USAID) for a major global research and training program on environment and natural resource policy. Hans Gregersen also served on a National Academy of Sciences panel on Tropical Forestry Research - Developing a U.S. Strategy. Associate Professor Jim Perry is a principal investigator and training director for a large multi-year USAID project to provide environmental training for Central Europe.

Both the faculty and staff look forward to the arrival of our new dean, Dr. Al Sullivan. At the same time we would like to express our appreciation to Dean Richard Skok for his lengthy and outstanding leadership in an organizational, professional and individual sense. His service has given us an example to live up to and much to be proud of.

There is more to tell, but I'll encourage you to stop by for that news. You may want to take in one of our many informal seminars or short courses - that will give you a chance to see old friends and tell us what you have been doing.



by John Bell, Assistant Dean

OFFICE FOR STUDENT AFFAIRS

The beginning of the 1992-93 school year found our office with a bit of a different configuration in terms of staffing. Phil Splett, Instructor and Career Opportunities Coordinator, Marni Lucas, Principal Secretary, Kathleen Christ, Office Assistant, and Robert Martin, Student Worker continued in their respective positions. Joining the staff this year were Jon Anderson, Senior Office Assistant and Anne White, Administrative Fellow (Academic Advisor).

Jon Anderson received a bachelor's degree from Macalester College and has previously worked for Bordner Aerials and the Jeane

Thorne Agency. He is the editor of the *College of Natural Resources Prospective Student Newsletter*, advisor to the *Gopher Peavey* staff and the office computer expert. Anne White received her bachelor's degree in Education from the University of Minnesota and is currently working on a graduate degree in Higher Education. She serves as academic advisor to prospective and current College of Natural Resources (CNR) students.

Our fall enrollment, 575 undergraduates, has kept us hopping. The area most affected has been academic advising, where we have seen a definite increase in the demand for our services. The one credit orientation classes offered to all new CNR students during fall quarter has become even more valuable, as the number of our students steadily increases.

We are continuing our involvement with the Common Entry Point role of meeting and advising students on the Minneapolis campus. We have received wonderful support from the College of Liberal Arts (CLA) student support services area. In addition, our staff members offer informational meetings and advising appointments on the Minneapolis campus to CLA and General College (GC) students on a weekly basis throughout the academic year. The additional exposure of our programs has resulted in a marked increase in the number of transfer students from CLA and GC. This is a service we plan to continue.

CNR set a record for the number of students selected for the President's Student Leadership Award this year. The students were Janet Eckhoff, a graduate student in Forest Resources and a finalist for the Donald Zander Award for Outstanding Student Leadership; Erin Sutter, a recipient for the fourth consecutive year, certainly a first for students in this college; Marsha Curtis, Forest Resources; Chad Konickson, Recreation Resource Management; Mary Jackson, graduate student in Forest Resources; Rick Fern, Forest Products; Dana Eubanks, Natural Resources and Environmental Studies and the 1992-93 president of the St. Paul Student Center Board of Governors; Brenda Jones, Natural Resources and Environmental Studies; and Peter Miller, Natural Resources and Environmental Studies.

Erin Sutter, a graduating senior from Bloomington, was selected as the 1992 recipient

of the Dean Freeman medal. The last CNR student chosen for this award was Russ Henley in 1983. The Dean Freeman medal recognizes contributions to student life on the St. Paul campus. This includes taking leadership roles in student activities, such as the Forestry Club and the Student/Faculty Board. The Dean Freeman medal competition includes nominations from the five colleges on the St. Paul campus: Agriculture, Biological Sciences, Human Ecology, Veterinary Medicine and CNR. Erin was recognized at the 1992 spring CNR alumni dinner/program held at the Hilton Hotel. Erin was also the first recipient of the Frank Kaufert Memorial Scholarship and received the St. Paul Student Involvement and Contribution Award. To cap off all her other awards and accomplishments, Erin received an honorable mention on the *USA Today's* Academic All-American Team, an open competition for colleges throughout the country. Erin is the first student to be so recognized.

The Undergraduate Research Opportunities Program has been available for students for the past several years. All full time undergraduate students of the University of Minnesota qualify. Students who are selected undertake a research, scholarly or creative project in collaboration with a faculty member and share the challenges and rewards of academic research. This competitive, merit-based program offers stipends (up to \$800) and/or expense allowances (up to \$250) for a maximum award of \$1050. There are two rounds of competition: April and November. CNR had six student recipients for the April competition and another ten for the November round. The total amount of money associated with these awards was approximately \$16,000.

The college continues to be involved with the field stations at Itasca and Cloquet. During the summer of 1992, 68 students participated in the Itasca program. Fisheries and Wildlife students take the following courses during the Itasca program: Fisheries and Wildlife Field Techniques and Important Plants in Fisheries and Wildlife Habitats. Forest Resources, Urban Forestry and Natural Resources and Environmental

Studies students study Minnesota Plants, Northern Forest Ecosystems and Field Forest Measurements. This fall's Cloquet Session found 27 Forest Resource majors in attendance.

As part of the Natural Resources and Environmental Studies curriculum, students are required to complete a course titled "Experience and Training in a Field Setting," which is essentially an internship. The internship opportunities have broadened dramatically under the guidance and direction of Phil Splett, who is an instructor and Career Opportunities Coordinator in the college. Phil coordinates the internships and arranges for each participating student to offer a presentation of his/her experiences. Some examples of student experiences include CNR students working for the U.S. Fisheries and Wildlife Service in Alaska; students working on energy programs; students working for the I.A.S.A. on a proposal for the state legislature; and students working with wasteland rehabilitation in the east African nation of Kenya. These internships are quite impressive assignments.

Ms. Janet Larson, who was a degree program advisor in the college, resigned as of January 15, 1993 to accept a new position. Janet earned her bachelor's degree in Urban Forestry and graduated from CNR with high distinction in 1990. Janet's primary duty in the office was advising current and prospective students interested in natural resources. She also headed up the orientation/registration programs for new CNR students and was the advisor to the *Gopher Peavey* staff. Janet's new position is consulting arborist for the Rainbow Treecare Company in St. Louis Park. She will work in the areas of technical expertise, continuing education, advertising and more. Janet did a fine job for the office and the college, and she will be missed. We wish Janet every success in her new venture.

Finally, if you are ever in the area, please feel free to drop in to see us. You are always welcome. My very best wishes go out to you.

PHOTO ESSAYS

ADOPT-A-RIVER



Did you FEEL somethin'?



Just trashin' through.



Beauty among trash.



Say Mark, where's the rest of the car?

FORESTER'S DAY



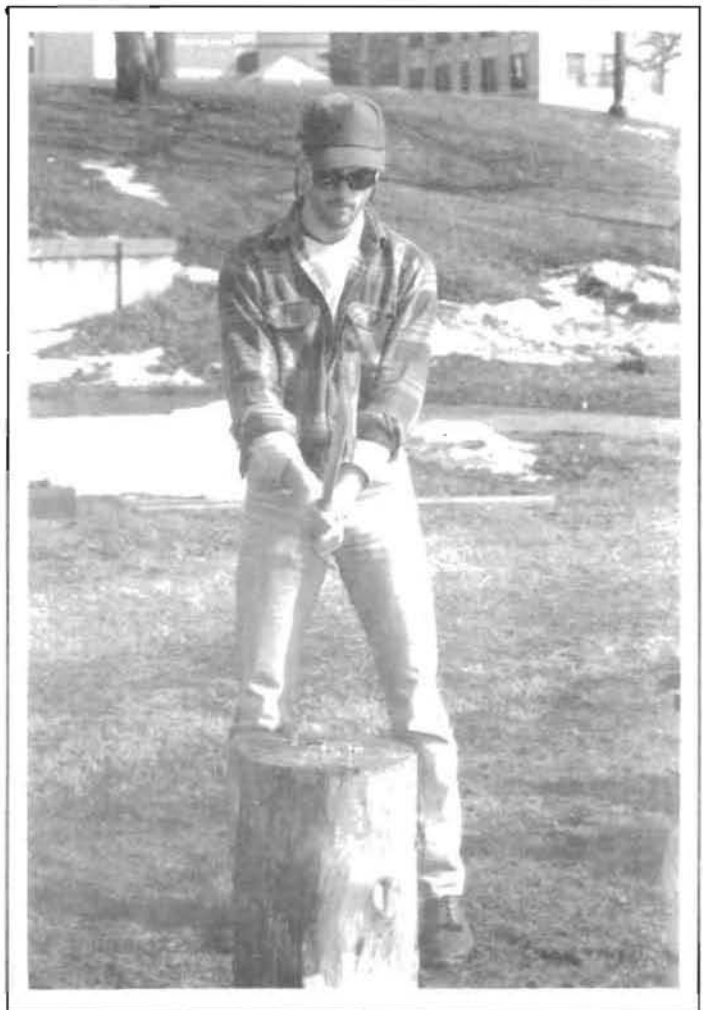
Forestry Day essentials.



1992-93 Forestry Day participants.



Joe, your supposed to spit the chew, not the saliva.



Little to the left, Brian.



PULL !!



Argh !!



Throw!



Two.



One.



Kathleen pulls off another one.



A sucessful 4-person ski. "Left ... Right ... Left."

FEATURES

TEN YEARS OF ADVENTUROUS TRAVEL BY DOGTEAM & CANOE

by John Pierce

The other day while I was in the dean's office hoping to get a slip signed, I began talking about my experiences in Ely, Minnesota, and soon I was relating tales of adventures others thought worthy of being retold for the *Gopher Peavey*.

I'll begin my story in Ely, where over a ten year period I had many jobs including carpenter, busdriver and mukluks (native footwear) salesman. But of all these jobs, I'd have to list my favorite occupation as a guide. I guided for YMCA Camp Widjiwagan, the Voyageur Outward Bound School and other private ventures, including two canoeing/kayaking trips of 43 and 71 days on rivers in the Canadian arctic and the inside passage of British Columbia and Alaska. During the winters I worked as an instructor for a high adventure boy scout base and for the Northwoods Resource Center. I also worked as a ski and dogsled instructor for Outward Bound. In the fall of 1987, I began working for Will Steger's 1990 Trans-Antarctic Expedition as a dogtrainer and sled builder.

Steger's dogs, which he raises and breeds over a 20 year period, are frieght dogs he calls polar huskies. The dogs are large and as strong as 4-wheel drive tractors. They're a mix of Alaskan, McKenzie, Greenland Husky and Canadian Eskimo dog.

The first winter of dog training at the homestead (Steger's place), consisted of hauling sledloads of lumber, cement, sand, gas and firewood for about two miles over lakes and portages because there were no roads. These loads, for ten to twelve dog teams, often approached 1,500 to 2,000 pounds. During this winter we also built sleds and put together the logistics for a 1,600 mile south to north traverse of Greenland that Steger and his international crew did during the spring of 1988.

During the winter of 1988-89, a road was put in to the homestead, making the hauling of supplies by dogteam obsolete. So we went to the U.S. Forest Service with a proposal to haul latrines into the Boundry Waters Canoe Area Wilderness (BWCAW). We proposed to deliver as many latrines as they could supply us with, wherever they wanted them. This turned out to be a great event for all involved. The dogs were put to the test, being on trail everyday, pulling their typical heavy loads, and we mushers enjoyed numerous traverses of the BWCAW. By seasons end we had mushed in 357 latrines.

The winter of 1989-90, *ABC Sports* put together four prime time specials as the Tran-Antarctic Expedition crossed Antarctica. For these specials I was hired as a technical consultant for ABC Studios in New York. They rolled out the red carpet, including a limosine ride from the airport to the Mayflower Hotel, right on Central Park. All I did for five days was answer questions, redesign a few props and hit the town when the sun went down.

During this period I was also involved in educational programs put on by Trans-Antarctica. I gave slideshow presentations, complete with props and dogs, for schools and companies in Minnesota, Wisconsin, Kansas and cities all over the east coast. As a spin off of this educational program, I started a dogsled and skiing/ winter camping business called Northern Light Expeditions. On these trips our equipment and style of travel closely modeled Steger's expeditions, which appealed to the many people who joined us for three to ten day trips in the BWCAW that winter.

In the spring of 1990, I was asked to meet the expedition upon completion of their 3,700 mile traverse to act as a logistics coordinator and dog handler. This trip took me all the way around the world, with a large jog to the south on a Russian scientific vessel which deposited me on the coast of Antarctica at the Russian base of Mirnny. I spent about three weeks in Mirnny, until we got things wrapped up and the dogs on board. Soon we were on another voyage, this time to Perth, Australia, then to Sydney and



JOHN PIERCE exchanging shades with a friend.

finally to Honalulu, where we put the dogs in a large refrigerator at the airport while we caught some rays at Waikiki Beach before heading back to Minnesota for the trip's end.

Trans-Antarctica was over, yet Steger was already planning his next expedition. This one is called "The Arctic Project", which entails a dogsled journey from Siberia to the North Pole and south to Alaska. In the winter of 1990-91, myself and a friend named Jim Musielewicz completed the first year of dog training for this expedition. We ran the dogs 2,300 miles from Ely, Minnesota to Yellowknife, the capital of the Northwest Territories in Canada. This trip took us over the 5th, 7th, 11th, and 14th largest lakes in North America and also put us in touch with the incredibly warm hospitality of the Canadian north.

Needless to say, I'm now back in school here at the University of Minnesota, which is quite a different lifestyle, but the adjustment has gone well. Just recently, with the help of my advisor, Dorothy Anderson, I've found a way to combine

my adventuring with academics. Spring quarter I will be mushing for Steger again, 250 miles along Hudsons Bay from Eskimo Point to Churchill, Manitoba. While on this trip I'll be studying Recreation Resource Management (my major), and the possible impact new aboriginal land claims may have on tourism in the area. Who says you can't have your cake and eat it too?

Looking to the future, I hope to create more opportunities for combining adventure and travel with educational pursuits. In fact, at this time with the help of Russian friends in St. Petersburg, we're putting together a summer canoe and backpack expedition in the Siberian Arctic. Last summer I travelled to the Lake Baykal region of Siberia on a 28 day kayak/backpack trip which was a big success for all involved. I hope to keep my Russian contacts busy with this new trip in 1994. I'd welcome any interested canoeists out there, if you think you might like to dip a paddle in Siberian waters.

Happy Trails!

ALUMNI SPOTLIGHT:

JILL JACOBY

Coordinator, St. Louis River Watch Program

by Bev Carlson

Jill Jacoby, a 1991 College of Natural Resources alumnus, is currently coordinating the St. Louis River Watch Program for the Water Quality Division of the Minnesota Pollution Control Agency in Duluth, Minnesota. Both Jacoby's educational and professional experiences serve as a good example for College of Natural Resources students.

Before attending the College of Natural Resources, Jacoby earned a bachelor of science degree from Pennsylvania State University in Agricultural Education with an emphasis in Environmental Education and a minor in Horticulture. While attending the College of Natural Resources she earned a masters degree in Forest Resources with an emphasis in Water Quality and a minor in Ecology.

While working on her masters degree, Jacoby researched the differences between created and natural wetlands and the effect on dragonflies with Dr. Jim Perry. As a student she worked for the American Lung Association, coordinating outdoor camping and bicycling fund raising events, and for the City of Shoreview as an alternative transportation coordinator creating bike trails and promoting the installation of bike racks on buses.

Currently Jacoby is the St. Louis River Watch Program Coordinator in Duluth. She has held this position since October 1991. Her work on the St. Louis River Watch Program focuses on both education and water quality, and she is excited about the program and its activities.

The River Watch Program monitors approximately 75 miles of water and meadow-



JILL JACOBY (left) checked out the contents of a net sample collected by students.

lands in the St. Louis River area of the Duluth/Superior region. "The St. Louis River has a long history of environmental degradation," says Jacoby, which has included high levels of fecal coliform, beach closings, fish kills, fish consumption advisories and toxic contamination from a variety of industrial sources.

The lower St. Louis River has been identified as one of the 43 Areas of Concern in the Great Lakes Region. Due to this designation a Remedial Action Plan is being formulated by a Citizen's Advisory Committee and administered by the Minnesota Pollution Control Agency and the Wisconsin Department of Natural Resources. The Remedial Action Plan (RAP) focuses on the reduction and remediation of pollution levels in the Area of Concern.

"The St. Louis River Watch is the education arm of the RAP," says Jacoby, "It teaches students about the river in a variety of innovative ways. The primary emphasis is to work with school teachers and students to incorporate River Watch concepts into existing course curriculum."

The River Watch Jacoby coordinates is a citizen based water quality monitoring program. Students from 13 different schools participate. The water quality activities include:

- Water chemistry tests and surveys of the benthic macroinvertebrate community to obtain information on water quality.
- Sediment studies to determine the toxicity of aquatic organisms.

Other river watch activities include:

- The development of a sediment testing center.
- The development of computer bulletin boards to communicate river data.
- Participation in a St. Louis Frog Watch program to locate wetland areas and identify breeding frog populations.
- The production of radio features about the St. Louis River in conjunction with Duluth Public Radio (KUMD), University of Minnesota, Duluth campus.

"The most exciting part of the St. Louis River Watch program is that it is empowering for students," says Jacoby. "They are directly involved in real meaningful research ... the benthic survey and the frog watch are the first comprehensive studies of their kind."

Jacoby says she feels lucky to have found such exciting work following graduation. She believes her masters degree gave her a valuable edge and the ability to be competitive when searching for employment. Jacoby advises that students seek a diverse education, stating that diversity "allows for more options," citing her experience in both alternative transportation and water quality as an example. She also advises that students "have fun with the learning process while in school."

SPONSOR SPOTLIGHT:

POTLATCH CORPORATION

by Bev Carlson

Potlatch Corporation was founded in 1903 in Potlatch, Idaho. This diversified forest products company uses its 1.5 million acres of company owned timberland in Arkansas, Idaho and Minnesota to convert wood fiber into two main product lines: bleached fiber and wood products.

The bleached fiber product line includes bleached kraft pulp, paperboard and packaging, printing papers and consumer tissue; the wood products line includes lumber, plywood, oriented strandboard, particleboard and wood specialties.

Potlatch came to Minnesota when the Northwest Paper Company, which was founded in 1898 in Cloquet, merged with Potlatch Forests, Inc. in 1964 and became a division of Potlatch Corporation. Potlatch currently has two divisions in Minnesota: Northwest Paper Division and Minnesota Wood Products Division.

The Northwest Paper Division, located in Cloquet and Brainerd, produces premium coated printing papers used in annual reports, posters and high-quality specialty magazines. The Minnesota Wood Products Division, located in Bemidji, Cook, Grand Rapids and Cloquet, produces oriented strandboard and lumber (administrative offices and nursery/greenhouse are located in Cloquet).

Potlatch's Minnesota forests account for 316,000 acres of the 1.5 million acres owned. The Minnesota forests include species such as aspen, jack pine, red pine and balsam fir.

Tree planting and regeneration are important to Potlatch. Every year their tree nursery and greenhouse grow 2.5 million tree seedlings and about one million are planted on company land in Minnesota. The remaining seedlings are sold to government agencies, counties, other industries and private groups. A total of 40,431 acres of company land in Minnesota was planted from 1970-90. Potlatch plants red pine, jack pine, white spruce and black spruce; they also plant some hybrid larch, hybrid aspen and scotch pine.

Potlatch employs 7400 people, 2540 of whom are employed in the Minnesota divisions. Potlatch employs about 30 forestry-related positions, including area forest managers, area foresters, forestry assistants, forestry technicians, a nursery

superintendent, an operating forester, private forest management foresters, a woodlands manager, a land agent, a land recorder and an inventory analyst. Potlatch foresters are responsible for follow-up regeneration surveys when trees reach two years, survival/problem checks, stocking and any necessary replanting when trees reach five years.

Potlatch has supported the publication of the *Gopher Peavey* through advertisements for a number of years. The company is an advocate of higher education and responsibility for the environment. They have a long-standing relationship with the University of Minnesota's Forestry Department and the Paper Science and Engineering Department, and they employ a number of College of Natural Resources graduates.

The *Gopher Peavey* would like to thank Potlatch Corporation for its contributions to industry and its continued support of the *Gopher Peavey*.

FACULTY SPOTLIGHT:

DR. JAMES BOWYER Professor & Department Head

by John Gerlach & Bev Carlson

Who can think of a faculty member that not only has the ability, but also finds the time to run 30-40 miles a week? Are most of you coming up blank? One person who finds the time to enjoy long distance running along with the responsibilities of being an active professor and the Forest Products Department Head is Dr. Jim Bowyer. The 1993 *Gopher Peavey* would like to recognize Dr. Bowyer and his accomplishments, as well as enlighten those people around campus who might not recognize the face.

Bowyer grew up in Tulsa, Oklahoma. He received his bachelors degree in Forest Management from Oklahoma State in 1964. During the summers from 1960 to 1964, Bowyer was a forestry aid for the U.S. Forest Service. He worked in the Black Hills National Forest in Sundance, Wyoming and in the Arapaho Na-

tional Forest in Kremmling, Colorado.

In 1966 Bowyer received his masters degree in Forest Products from Michigan State University, and began work toward a doctorate degree there before joining the Navy. A brief stint at the Forest Sciences Laboratory in Princeton, West Virginia preceded entry into Officer Candidate School. Three years of shipboard duty in the Western-Pacific followed.

Upon completing his military service, Bowyer came to the University of Minnesota in December, 1969, after accepting an instructor position with the Department of Forest Products. He remained in this position for three years while completing his Ph.D. in Wood Science and Technology.

Since 1984 Bowyer has held the position of Professor and Head of the Department of Forest Products. He is also the Director of the Minne-

sota Cold Climate Housing Center.

Bowyer has been a Agricultural Experiment Station research project leader since working in areas related to diffusion of forest products technology, process economics, and market assessment.

Bowyer is also frequently employed as a consultant. He takes on projects dealing with industrial and legal problems related to wood products manufacturing and performance. These projects number 15-20 annually.

In addition to his many other responsibilities, Bowyer is also active in many professional organizations. Bowyer will become President of the Forest Products Society this June.

The list of Bowyer's presentations, published books and articles is impressively extensive. He is co-author of the leading wood science textbook in North America and a frequent contributor to *World Book Encyclopedia*. In his articles he addresses topics from forest products use and responsible environmentalism to population

dynamics. His many presentations and publications show his dedication to the field of forest products.

On the personal side, Bowyer says he is a "fair-weather fisherman" (60-80 degrees, without rain), and a long distance runner, as mentioned earlier. Bowyer also enjoys recreational travel, in addition to an abundance of job-related travel. He says he likes the diversity of the University of Minnesota, but more so "the best of both worlds" on the St. Paul campus. He notes that the College of Natural Resources is one of the very best colleges nationwide.

From having numerous articles published to being a "fair weather fisherman", Dr. Bowyer is quite an exceptional individual. He feels strongly about environmental issues and plans to stay closely involved with them. As for the future, he admits "It's too early to tell." Undoubtedly, thus far Dr. Bowyer deserves this shine in the spotlight. Let us only hope that more of you will be lucky enough to cross his path someday, be it on one of his long distance runs or just a walk on campus.



DR. JIM BOWYER, shining in the faculty spotlight.

1992 - 1993 IN REVIEW

Excerpts From Actual Newspaper Headlines

by Paul Wilkens

WHAT'S IN & WHAT'S OUT

What's In

- University of Minnesota Gopher license plates, only \$9.95 more than regular plates but add \$25 in contributions toward a scholarship
- Dennis Green, Viking new head coach leads us very close to the Super Bowl his first year
- Single mothers, sparked by Dan Quayle's "family values" and the TV show Murphy Brown
- Jay Leno, new Tonight Show host
- Light Rail Transit on 35E, latest proposal to control congestion on Minnesota's worst traffic headache
- Cheers board game

What's Out

- Second hand smoke, EPA accepts report that says it causes cancer, this allows for more smoke-free zones
- Mike Ditka, fired after eleven years coaching Chicago's "da Bears"
- Superman, the man of steel meets his match and D.C. Comics kills him off before Christmas 1992
- Johnny Carson, a sad goodbye to his loyal fans as he retires from late night TV
- Cheers, this is their last season, can you say, "syndication?"



We paid for this?

WINNERS AND LOSERS

Winners

- President Bill Clinton and Vice President Al Gore
- Hazel O'Leary, former Northern States Power head is now the United States Energy Secretary
- Our environment, "Minnesota trees in great shape," says DNR, Wisconsin's active eagle nests at 424, double that of a year ago
- Ann Bancroft and the American Women's Trans-Artic Expedition, reaching the South Pole January 14, 1993
- College graduates, latest census states that those with a college diploma earn on average an extra \$1039 per month
- Cross Pointe Paper Corporation, local company supplies recycled paper for President Clinton's 37,000 Inaugural invitations
- MTC, passes all Federal tests with scores above nations average
- Saturn automobiles, the great demand for the new sporty economy car leaves a three month waiting list
- "Young" Elvis stamp
- David Letterman, moves to CBS for MORE money, last show on NBC June 25, 1993
- NBC (how can they be winners after losing Letterman?), network still owns "Latenight with ..." title and many of the famous gags and tricks
- Beauty and the Beast, Disney animation Block Buster

Losers

- George Bush and Dan Quayle
- H. Ross Perot, (see ya in '96)
- Our environment, OIL, OIL, OIL !!
 - January 25, 1993: Danish super tanker carrying 11 million gallons of oil collides with empty oil tanker and catches fire, unknown amount of lost oil
 - January 5, 1993: Tanker Braer stalls near Shetland Island because of salt water in the fuel, abandoned by the crew, it drifts into a rocky shore ripping it into three sections, all 25 million gallons of oil were dumped in the sea
 - December 3, 1992: Greek tanker, Aegean Sea, dumped 23 million gallons of light crude in the ocean near north west Spain
- Sears Roebuck catalog, part of Sears downsizing after falling behind #1 Walmart and #2 Kmart in retail sales
- "Old" Elvis stamp
- Sinead O'Connor, ripped an 8x10 color photo of the Pope on Saturday Night Live
- Batman Returns, sequel that didn't live up to the original

FIELD SESSIONS

CLOQUET:

A BREAK FROM THE NORMAL ROUTINE

by Paul Dickson

Question: "Is forestry black and white?" Well, if you go through college with no hands on experience, the answer would seem to be "Yes, forestry is black and white." But those in forestry who have some practical experience in the field know the answers are hardly ever straight from the textbook, and they are far from black and white.

The Cloquet field session allows students to gain hands on experience in the field of forestry and to learn that forestry is not a black and white profession. At Cloquet one begins to learn to interact with their surroundings in order to find working solutions. You begin to find that two individuals working on the same problem might develop quite different solutions, but each solution will work just as well.

The Cloquet field session requires that students to break the chain of memorizing, theory and conceptualization and to practice what they have learned in the classroom. Students are allowed to run through the woods, get smacked in the face by a few branches and fall on their keister a few times, to get a real feeling what forestry is all about.

At Cloquet students are not bombarded with four to six subjects at a time. Instead, they are allowed to concentrate on one subject at a time. When the first class is done, the test is taken on Friday and everyone can enjoy the weekend before starting the next class on Monday. Taking one subject at a time allows students to allocate their time according to the completion of the lone project (although student time seems to also be allocated in other directions. Namely, places like the "Museum", "River's Inn" or some other local bar where cold frosty or maybe red spice drinks are served). There were a variety of subjects covered at Cloquet, including recreation, silviculture, harvesting, hydrology, aerial photography,

inventory, wildlife, soils and surveying.

The Cloquet Forestry Center land in itself was an experience. The 3000 plus acres were filled with forest experiments, going back to the turn of the century. A stand of old growth pine is found on this land which is a beautiful sight. Bikers, horse backers and walkers also have plenty to rejoice about with the large numbers of trails and scenery to explore.

The students at Cloquet also experienced things which are not taught in the classroom. When 28 people live, eat, sleep, "shit, shower and shave" in the same place for eight weeks together, they tend to get to know each other. Some bonds were formed that will probably last a lifetime.

There are other items which will probably be ingrained in this year's attendees memories: How to tip over a Bronco II and tip it back on to its wheels with a skidder.... What time in the morning would somebody make it back to the Center, and all for a well made Bloody Mary..... When giving a presentation never make the gesture of pulling something out of the air.... What an unnamed person looked like on the last night... and "I don't know how much more she can handle, Captain." I'm sure that there are other thoughts ingrained in the minds of this year's "Cloquetters", but they are just too numerous to name.

All in all, Cloquet students are given the opportunity to break from the textbook world of college and to explore and answer on their own (with the help of professionals) the purpose of their soon to be profession.

ITASCA

MY ITASCA EXPERIENCE

by Rick Hopson

Finally, a moment of free time that is all mine. I've been very busy lately keeping up on my plant lists. *Eupatorium maculatum* (Joe pye weed) *Quercus rubra* (red oak), *Pteridium aquilinum* (eastern bracken fern), and many other strange Latin names have kept my brain buzzing.

All the schoolwork leaves my mind, as I bicycle past a stand of *Pinus resinosa* (red pine) and *Quercus rubra* (red oak). The trail is quiet. Labor day has come and gone, taking with it most of the Itasca visitors. Freedom abounds, as I head forward towards the Mississippi Headwaters.

I quietly ponder stopping for a view of the meek Mississippi, but decide to push on. It has just finished raining and I expect to get wet before the trip is finished, but I do not care. The smell is wonderful, unique to a fresh rain in the forest ecosystem. Tires whiz on the wet pavement, the sun peeks through a hole in the clouds - then is gone, a large drop falls from an ancient white pine and lands on my head. I am very happy.

The trip itself is uneventful; no cars to worry

about, not even another person to remind me that I am not alone. Only a few deer scattering ahead of me as I pass on by. It's just what the doctor ordered, the prescription for stress. Each mile takes a little tension with it, as my breathing labors, my legs become tired and my bottom slightly sore, a vitality grows from within. The more tired I become the more energy I gain. One of those wonderful quirks of nature, where usage sharpens rather than detracts.

I pull into the University of Minnesota Itasca Biological Station just after dusk to the sight of a Great Horned owl lumbering off into the night. A campfire is already started and I decide to put off the homework until tomorrow. The plants will still be there, and so will I.



The Forester's Tan



The trails weren't good enough for these two bikers.



The basic essentials: compass, clipboard, mechanical pencil, aerial photos and COFFEE!



"Phil, are you sure this is a red pine?"

THE TRAVERSE

by Gail Stienman

The day began much like all the other days at Itasca, cloudy and gray. But today was a special day. Today we planned our traverse.

The stand was thick with hazel - a close friend by the end of the adventure. Approaching the journey's end, I heard a loud clap of thunder. Luckily, I was standing under a 100 foot red pine. Wait a minute. That's not lucky.

I was wearing my bright yellow raincoat, which could be seen for miles. That yellow raincoat was my salvation. Someone saw me, and we decided to find our way out together. It's surprising how fast a storm can motivate you to move quickly through six-foot hazel.

Although we started out dry and finished very wet, we did make it out. Today I can look back and say "lets do it again!"



"We're goin' critter catchin'."



"Giving" out grades.



Vertebrate Ecology



"Mmm ... Joe, what ya got in there?"

SUMMER JOB EXPERIENCE

KUNDE COMPANY

by Kimberly Wallin

This summer was a delight compared to last summer. I'll refresh your memory: the City of Bloomington, vinyl seats, long-long bike rides, 95 degree days with 100 percent humidity. Remember?

This summer was a much better experience. I was surrounded by very different people, attitudes and events. Each day I learned new things about the Urban Forestry profession. My fellow employees were helpful, personable, patient and knowledgeable (along with having great personalities - "Rollin', rollin', rollin', now my butt is swollen...." Interesting, huh?).

Working for Kunde Company was not only fun, but it also demanded many different responsibilities. The company offered some diverse and interesting projects. I was able, for the first time in my undergraduate summer job experience, to apply many things I learned in the classroom.

I often worked as a tree inspector for various cities around the metro area, such as North Oaks, Montomedi, Blaine, Coon Rapids and Wyoming. Each day was different, and I had the opportunity to work with many different people and tap into their knowledge about natural resources and urban forestry.

Towards the end of the summer, I spent time learning about the vibratory plow used in oak wilt control. In addition, I worked on tree preservation plans for cities interested in building on wooded land.

I am still employed with Kunde Company and am currently working on inventorying the cities of Ramsey and Savage. I am not having quite as much fun as I had this summer, but then again, who would have guessed I would ever use anything I learned in Tom Burks' inventory class.

LIFE IN BUSH ALASKA 1992

by John Gerlach

Picture yourself in rural Alaska; it's late at night and you're walking home. The moonlight glistens on the Naknek River, as it gently rises with the tide of Bristol Bay. You walk alone, but enjoy the peace and quiet. The air is brisk, and the residents of the small fishing village are nestled in their homes asleep.

You're at ease until you come across signs of a bear. Unarmed and apprehensive, you keep walking. In the back of your head you know the chance of encountering a bear is high. Would you remember the correct things to do in an encounter situation?

Your thoughts are interrupted by reality, as you pass an evergreen tree and meet a brown grizzly bear scavenging for a late-night snack. You freeze with the bone-chilling realization that you, a possible snack, have now encountered that bear.

What do you do? Run? Play dead? No, you remain calm and do what you have been taught to do. A direct "Hey bear" slowly escapes your mouth and echoes in your head. The bear starts to come closer. Your heart races faster. Another "Hey bear" brings it to a stop 10-15 yards from you. You remain calm on the exterior, but your legs feel rubbery. The bear lifts its head and takes one last sniff before darting into the brush with lightning speed. You take a deep breath and listen, only to hear silence. The bear is gone for now.

This probably sounds like the adventures of Grizzly Adams, but it's actually an experience I had while completing an internship with the U.S. Fisheries and Wildlife Service in Alaska this past summer. My encounter with the bear was only one of many unforgettable experiences.

My adventure started on May 21st when I arrived in King Salmon, a true bush-Alaskan community, 300 miles southwest of Anchorage

on the base of the Alaskan Peninsula. The morning after my arrival I was certified as a designated brown bear shooter and flown by helicopter to a field camp another 90 miles to the southwest.

Unfortunately, my summer wasn't all bears and helicopters. I did spend my fair share of time in a visitor center in King Salmon. During my three and a half month stay, I was able to work on duck-bird and bear-stream surveys, an oil contamination experiment, as well as some general refuge maintenance/clean-up. One of the most rewarding experiences was participating in an on-going study, analyzing the effect the Exxon Valdez spill had on the murre (a seabird, for those of you who are not ornithologists) in 1989.

Life was quite different in rural Alaska - from the 20 hours of daylight to the prices (\$7/box of Cheerios, \$5.50/bag of Doritos, and \$34/case of Miller, just to name a few). Though it was different, I think I adjusted pretty quick. I didn't cut my hair or shave - the true Alaskan look - the entire time. I even took on a night job at the airport and experienced the true feeling of working like an Alaskan in the summer - they never stop - at least May through October.

Now as I flip through my photo album and look back at the whole experience, I realize I not only received college credit for the experience, but also a plethora of memories and friends.

A VIABLE OPTION FOR TERMITE CONTROL

by Anthony Laplante

There has been concern lately about the effort to reduce the use of "termiticides", such as Dursban and Pryfon 6. Typically, these chemicals are applied via spraying techniques to the entire perimeters of termite infested complexes.

As an intern, I assisted a graduate student with the development of the "Terminator". The Terminator is a hand-held battery powered electronics unit, designated to aid the process of locating termite infestations.

This development is important because a more effective detection process allows one to get to the source of the problem faster. When an exact problem area is located, less spray is needed to successfully rid the area of termites.

You are probably asking yourself how a hand-held instrument detects the termites. The termite activity in the wood is detected with audio sensors set at a frequency equivalent to that of the termites. The presence is indicated by both a visual display and an audible indication.

I enjoyed working as an intern on the project, and I hope it has success in reducing the quantity of sprays used and becomes an option for future termite control.

WINTER JOB EXPERIENCE



"I got some light pruning to do."

CLUBS & ORGANIZATIONS

SOCIETY OF AMERICAN FORESTERS

by Rick Klevorn

During the 1992-93 school year, the University of Minnesota Society of American Foresters (SAF) Student Chapter continued to be active and visible in the College of Natural Resources. Once infrequent chapter events are now regular. Student participation continues to grow. Participation in SAF chapter activities by members of other student organizations also continues to rise.

Tree planting at the Cloquet Forestry Center during spring quarter is now in its third year. A dozen or so students manage to plant a couple thousand seedlings the first Saturday in May. Plantings are at various sites throughout the Center, as coordinated by the Cloquet forest manager.

The ominous response to the Adopt-A-River project has most chapter members looking forward to the return to Cannon River for this year's clean-up. The weekend includes camping Friday night and a full day on the river Saturday. The work is made fun, and a good time is had by all. Last year some alum were spotted in the group

A timber stand improvement project was organized in January. Twenty members showed up at the Forest Resource Center in Lanesboro for a weekend of business and pleasure. The business was a day of black walnut release, and the pleasure was the remainder of the weekend. This project is sure to become a yearly event.

A number of chapter members were involved in the organization of the state spring meeting. SAF's state chair enlisted our chapter members for registration and speaker introductions.

There has been renewed interest in the student mentoring program. The state membership chair is actively working to help students connect with

mentors. The interest is encouraging, but the actual connections are few.

Increasing awareness of involvement activities continues to be the best new member recruitment tool. Even as the list of chapter activities grows, involvement in organizations outside the University is encouraged.

In recognition of our efforts, the chapter was awarded second place in the SAF National Outstanding Student Chapter Award competition. Not bad.

FISHERIES & WILDLIFE CLUB

by Dean Paron

The Fisheries and Wildlife Club here at University of Minnesota is the Student Chapter of the Minnesota Wildlife Society. The club has been very busy and participated in many interesting activities this year.

Different speakers have given a variety of lectures for the club. Lecture topics have ranged from discussion of the personal experiences of an Overseas Drift Net Observer to discussion of an environmental lobbyist's view on how to become politically active.

During January, the club held elections for the 1992-93 officers. The new officers are the following:

Dean Paron	President
Eric Spadgenske	Vice-President
Gary Nohrenberg	Secretary
Julie Wermerskirshen	Treasurer
Rob Engberg	Environmental Education Outreach Program (EEOP) Coordinator

During February, the Fisheries and Wildlife club participated in a volunteer project with the U.S.

Forest Service in Chippewa National Forest. Sixteen club members spent a weekend helping the Marcell District biologist maintain wildlife openings and install 50 nesting boxes for owls, bats and songbirds. The project was successful and the club received \$150 from the U.S. Forest Service in appreciation for a job well done.

During April and May, the club plans to work with the Twin Cities Chapter of the Izaak Walton League, restoring eight acres of wetland. The club will provide advice and the necessary manpower to restore a degraded coldwater stream in Bloomington. For Earth Day, the club will again participate with the Izaak Walton League, providing a day of learning for school children. The children will take nature tours, attend demonstrations on fishing, plant prairie grasses and wildflowers and put up woodduck boxes. The club will also help Camp St. Croix, an environmental learning center located in Hudson, Wisconsin, with another educational program for school children.

Seventeen Fisheries and Wildlife Club members also plan to travel to Ortonville, Michigan for this year's Fisheries and Wildlife Conclave, the weekend of April 2-4. The quiz bowl team is hoping to improve its finish from the previous year. During the 1992 Fisheries and Wildlife Conclave, the quiz bowl team (Brian Collins, Darin Magnuson, Dean Paron and Eric Spadgenske) beat the defending champions, Stevens Point, in the semi-finals. But the team suffered a narrow, heart-breaking defeat by one question to Michigan State in the championship round. A wide spectrum of fisheries and wildlife experts are scheduled to speak this year on subjects from threatened and endangered turtles and the restoration of rivers to the removal of hydrodams. Club members also plan to visit the Shiawassee National Refuge and do some horseback riding over the weekend.

A few Fisheries and Wildlife club members attended the annual meeting of the Wildlife Society, held at Cragun's resort in Brainerd this year. The parent society gave the club a \$250 donation to help cover the expenses of the Conclave trip. Eric Spadgenske received the Student Conservationist of the Year Award from the Wildlife Society for his work in the wildlife field and his involvement in the Fisheries and Wildlife Club.

The Fisheries and Wildlife Club is also involved in the Environmental Education Outreach Program

(EEOP). The EEOP is a program that gives college students the opportunity to give environmental presentations for first through twelfth grade students attending local schools. The EEOP is currently trying to rebuild and is looking for more members and increased participation to become as successful as it has been in the past.

The Fisheries and Wildlife Club meets twice a month. Anyone interested in fisheries, wildlife or natural resources is encouraged to attend a meeting and become a member.

ENVIRONMENTAL STUDIES CLUB

by Mary Gliniany

The Environmental Studies Club (ESC) at the University of Minnesota is a student organization dedicated to furthering environmental education both within and outside the University system.

The club provides a forum for students to discuss current issues in natural resource fields. It gives students a chance to become active within the College of Natural Resources and also provides networking opportunities with some of the major "green" organizations in the state.

One way ESC students become involved is through the Adopt-A-River Program, which the club co-sponsors with the Student Chapter of the Society of American Foresters. Students participating in this program have adopted a three mile stretch of the Cannon River in Southern Minnesota. ESC members donate two days a year to cleaning the river and its banks.

Many ESC members also choose to become active in environmental education. The Kimberly A. Paulsen Outreach Program is a vehicle through which students teach local communities about environmental issues. During the school year, students have given presentations at over ten elementary schools. Children have been taught about issues ranging from water quality and endangered species to the effects of South American deforestation on Minnesota's songbirds. ESC students also

participated in the judging of St. Jeromes Elementary's science fair in St. Paul.

Through the donation of time and money, the club also played a key part in setting up the Kimberly A. Paulsen Memorial Scholarship to be given to qualified students in Natural Resources and Environmental Studies (NRES).

The Environmental Studies Club at the University of Minnesota is a vital resource for NRES students. The club allows students to further their own environmental education, along with that of the environmental students of the future.

RECREATION RESOURCE MANAGEMENT CLUB

by Tim Schleicher

During the 1992-93 school year, the Recreation Resource Management (RRM) Club's membership continued to grow and become more active in the College of Natural Resources. Some of the RRM Club's activities are discussed here, going back to the Spring of 1992.

In April of 1992, the RRM Club made its annual trip to Chippewa National Forest. We made arrangements to camp at Stony Point National Forest Campground on Leech Lake, and since it had not yet opened for the season, we had the whole campground to ourselves.

We set up camp and took off to rediscover our "adopted" five-mile section of the North Country National Scenic Trail. Sure enough, it was exactly where we left it last year, but certainly not in the same condition. So, we spent the sunny spring Saturday afternoon hiking the length of the trail, picking up litter and clearing downed trees and branches.

After a late night around the campfire, we woke early to meet with Pete Griffin, Public Assistant for Chippewa National Forest. A rekindled fire and a few cups of coffee were all we needed for an interesting discussion with Mr. Griffin. We talked and asked questions about all kinds of topics regarding national forests, recreation and natural resources.

Fall quarter began with many new RRM students

joining the RRM Club. We picked up on the successes of the previous year and organized ourselves to sell sweatshirts and hats with an embroidered "College of Natural Resources" design.

In February, the RRM Club made a trip to Wild River State Park. We toured the facility and met with Chuck Kartak, Park Manager. Mr. Kartak gave us a manager's perspective of the Minnesota State Park system and discussed some of the issues that he deals with daily. He also provided us with information on obtaining state park internships, park worker and park management positions. During our visit a number of students did some cross-country skiing.

This year, the RRM Club has also begun to hold regularly scheduled "Discussion Sessions", which will be alternated with the club's regular business meetings and will give members an opportunity to discuss current resource-based recreation issues outside of the classroom setting.

RRM Club Officers (1992-93):

Tim Schleicher	President
Chad Storley	Vice President
Chad Pierskalla	Secretary
Chad Konickson	Treasurer
Gary Geer	Sergeant-At-Arms
Dr. Dorothy Anderson	Faculty Advisor

TAPPI/PIMA PARTICIPATES IN BOY SCOUT JAMBORALL

by Dave Schaeffer

This year the TAPPI/PIMA Student Chapter participated in the 1992 Boy Scout Jamborall. The Jamborall is an assembly of professional groups, associations and governmental divisions who come together to give scouts a better understanding of the world around them. This year's Jamborall was held October 10th and 11th at Harriet Island in St. Paul, Minnesota. Those attending the Jamborall included Cubscouts, Weebelos, Boy Scouts and their families.

At the Jamborall, Paper Science and Engineering students Doug Cobb, Kim England, Jim Gregory, Ben Hohman, Dave Schaeffer and Paul Wilkens



(Left to Right) Dave Schaeffer, Kim Englund, Doug Cobb

gave scouts a hands-on look at making paper. The students guided scouts through the process.

The scouts used a dilute mixture of pulp and a deckel box (a screen stretched across a frame) to form the sheet. Softwood pulp was provided by the College of Natural Resources. The water was gradually removed from the mixture, forming a postcard sized piece of paper each scout could take home. Participating in this exercise fulfilled one of the scout requirements for a pulp and

paper merit badge.

The University of Minnesota TAPPI/PIMA Student Chapter gives Paper Science and Engineering students the opportunity to develop their management and technical skills for a future career in the paper industry. Student chapter activities include national and local meetings, management and technical seminars, campus and college activities, paper mill tours and social functions.

A WINTER ENVIRONMENTAL BACKPACKERS CLUB ADVENTURE

by Cris Kelly

*There is a forest in my dreams
 where the natural is not personified,
 but where the person is seen as natural;
 where there is no shame in trusting animal instincts;
 where the snow, the soil, and the sky have merged together
 like the unconscious with the conscious;
 where wind through the bare hardwoods and the pines that bear needles
 is alone with one's breath as it whispers something so personal,
 so undefined, as to give the impression that there is only nothingness here;
 only life that is resting.
 Perhaps there is a forest not given to us,
 as much as we are given to it.*

On Friday, January 15, 1993, at six o'clock (or was it seven o'clock), we all boarded the vehicle which would transport us five hundred miles north to Menogyn, a camp just one lake away from the Boundary Waters Canoe Area Wilderness (BWCANW), five hundred miles from the

streets and structures of the cities.

We were all excited. For some, it was a getaway from the hustle and bustle, for others it was a chance to enjoy a weekend of cross-country skiing, snowshoeing or just being outside with a

wonderful group of people who enjoy the same kind of activities. Still for other folks, it was a weekend to seek solidarity in the woods. And of course, there were those hoping for all of the above.

Saturday morning there was a 20 km ski expedition to Rose Falls, whereupon you could look across the river into Quetico. To the same destination was a journey on snowshoes. Those not participating in either activity stayed behind to begin construction on the quinsy huts or do whatever their hearts desired. Quinsy huts are little snow houses used by the courageous (and the properly prepared) who choose to sleep outside on winter nights without a tent.

Saturday night vegetarian lasagna was prepared in style by two master chefs brought in from Duluth. Dinner music was provided on guitar as the group sang "American Pie" in a most inventive fashion. After dinner, Bear Skin Lake was the focus of chilling attention. A chainsaw was used to cut a large hole in the thick ice, allowing people to jump into the icy waters. They actually did it!

Sunday came, (the "quinsy-goers" survived) and we knew we only had a few precious hours left to enjoy the magnificent scenery. We spent the day squeezing in as much as possible. One group organized themselves and skied to a scenic overlook. Many other smaller groups did their own thing: a snowshoe group here, a ski group there, and those who just wanted to spend the time with themselves, curled up to a good book.

When the time came to bid Menogyn farewell, my mind was already filled with memories. On the drive home (with the exception of a near bladder tragedy), each mile marker set further in stone the memory of a weekend of peace and adventure; of escape and discovery.

1992 FORESTER'S CONCLAVE

by Doug "Old Bearing Tree" Hecker

FORESTER (for'ister) n. 1) a person trained in forestry, 2) a person in charge of a forest or trees, 3) a person or animal that lives in a forest, 4) a family of metallic green or velvety-black moths.

CONCLAVE (kan'klav') n. 1) a room which may be locked, a) the private meeting of the cardinals to elect a pope, b) the cardinals collectively, 2) any private or secret meeting, 3) any large conference or convention.

My curiosity got the best of me as I sat down to write this article on the 1992 Forester's Conclave. I decided to look up a couple of terms in the 3rd College Edition of Webster's New World Dictionary. I got a chuckle out of the definitions of a forester (a person or animal who lives in the forest) and conclave (a private meeting of the cardinals to elect a pope).

The 41st annual Midwestern Forester's Conclave was hosted by Purdue University, located just west of Lafayette, Indiana, October 16-18, 1992. Thirteen of us gathered in the gym parking lot before sunrise Friday morning, as flakes of snow and blustery cold Minnesota October weather greeted us. We left at 7:00 a.m. sharp, not a minute later.

"Ole' Log Jammer" Mark Caspers, Bruce "The Timber Beast" Cox, "Big Chips" Shirley Fowler, Mike "Links" Johnson, Chad "Tabackie" Konickson, Dan "I'm a Forester" Klocek, Dennis "Give Me Another Pig's Eye" McDougal, "Bloody Hands" Paul Mowrey, Eric "Pevee" Olson, "Coach" John Payne, Eric "Bolt" Roers, Kimberly "Smilely" Wallin, and myself rented two fifteen passenger vans for the eleven hour trip down to the land of Dan Quayle.

A little after an hour on the road, our large caravan of two vans hit a swiss cheese hole on I-94 in Wisconsin and forever remained apart for trip down to Lafayette. This was not a part of the master plan. After nearly eight hours on the road, we hit another dimension, "The Friday Afternoon Rush Hour in Chi-Town (Chicago)."

Besides experiencing stop-and-go heavy traffic, there was the inevitable road construction, which

only made matters worse. I've never seen seven seat belts snapped on so fast! "Click! Click! ... Click! ... Click! ... Click! Click! Click!" Luckily, with a skillful driver at the helm (who shall remain anonymous), we zagged and ziggled safely through the city to the other side.

Saturday morning came bright and early, and breakfast was served. Soon after, people began to gather out by the cants, where the bucking was to be held. A few contestants were getting in their last minute techniques on log-rolling, with pevees in hand.

Overall, there were 17 events - a full day's competition. It was pretty wild. Our contingent, though one of the smaller ones, was spirited and competitive. Some true legends were created during the course of the day. We did Minnesota proud, and had a lot of fun doing it, too.

Some of the memorable events were the two-man and lady buck events. There was determination and intense expression on the participant's faces when they sliced through a green 12 x 12 or 9 x 9 inch piece of wood (Eric O. & Dan, Eric R. and Chad, Kimberly & Shirley, Doug & Bruce).

The log roll, where Shirley and Kimberly rolled one heavy log for us into a fourth place finish, earned us one of our two points. It might be added that they were in first place for the longest time. Good job, Shirley and Kimberly!

The tree grafting was one of the host's special events. Participants slip into a support harness, attach some fancy spikes to their boots, attempt to climb a 16 inch diameter/40 plus foot bole, ring some cans at the top and come back down. Our own Kimberly Wallin was the first lady determined, and I mean determined, to knock those cans off the bole. Bruce and Shirley were successful in rattling them. All three made it back down safely to the ground in one piece, to live and tell about it ... true tree-huggers!

There was also the speed chop: a timed event where the participant takes a short handled axe and attempts to chop through a one foot square rectangle block of wood, while standing on top, without losing a foot or a leg. Bruce "The Timber Beast" Cox and "Bloody Hands" Paul Mowery attempted, and successfully finished with their pride in tact, chopping through a block of wood.

Traditionally, an event for the gentlemen, a new

barrier was broken, and the legend of Shirley "Big Chips" Fowler was born. A feisty, spirited, determined woman from Minnesota, for the first time, competed in the speed chop, with the support from her coach, Eric Rogers, and her fellow teammates, cheering and encouraging her onward ... chanting "Shirley! Shirley! Big Chips! Big Chips! You can do it!", over and over. Shirley eventually completed the task, even placing ahead of one of the guys (Note: one from another school). Congratulations, Shirley, and good job!

Well, you might ask where our other point came from. A shocker to all of us, it came from our own Mark Caspers in the log burling event. This was another special host event where contestants "try" to climb on a twelve foot log floating in



Kimberly Wallin braves her fear of heights.

water and literally run on water. With Mark's steady determination, he managed a dramatic fourth place finish in this event. Our hats are off to you, Mark! No one knew about this surprising feat until it was announced at the award ceremony later that evening.

Mike "Links" Johnson tied for fourth in the chain throw early in the morning, but unfortunately in the runoff, he came in a close fifth in the competition.

An awards banquet, dance and kegger finished out the day.

It was great to see the enthusiasm we had to go out and participate in events and have a good time, regardless of the challenge, obstacles or placement. It was pretty impressive showing, and you all deserve a pat on the back for making the trip and having some fun.

ANNOUNCING THE 1993 FORESTER'S CONCLAVE

The Forestry Club is proud to announce the 42nd annual Midwestern Forester's Conclave to be hosted by the University of Minnesota, October 22-24, 1993, at the University of Minnesota Itasca Biological Station, in Itasca State Park (north of Park Rapids, Minnesota).

The day and a half event starts Friday, October 22nd, with registration, a "bomb" fire, and a captains meeting. The competition will take place all day Saturday. An awards banquet and dance will follow later in the evening.

Approximately seven to ten schools (about 200 students, faculty and alumni) are expected to take part in the festivities.

Co-Chairing the 1993 Forester's Conclave are Chad Konickson and Rick Klevorn. Kimberly Wallin will chair the prize committee, Molly McGilip the awards committee and Doug Hecker the events committee. We invite students and faculty to get involved in helping put on a successful bash and competition.

For those who haven't had the opportunity to attend a conclave before, it's a chance to go out and have some fun (and I mean have some fun!) with students from the upper midwest, as well as to get to know fellow students from the College of Natural Resources. It's a great time, loads of fun and a memorable college experience. See you up at Itasca!

GRADUATING SENIORS



Joseph Batkiewicz
Paper Science and Engineering
Activities: TAPPI/PIMA



Bruce Benner
Forest Resources
Activities: Intramural hockey
"There weren't any jobs when I started seven years ago, and there still aren't!"



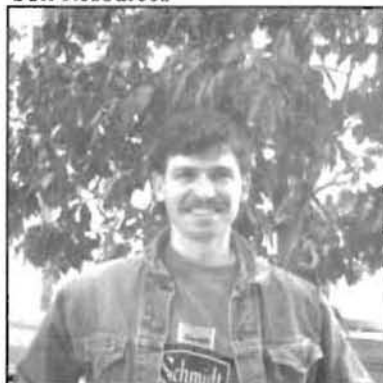
John Bilotta
NRES
Activities: ES Club, Soil/Water Conservation Society
Works for MN Board of Water/Soil Resources



Andrew Bluhm
Forest Resources
Scholarships: Dayton-Kirkham and Kenneth E. Winsness



Jay Clapp
NRES
Activities: ES Club



Bruce Cox
Forest Resources
Activities: Forestry Club, SAF, Xi Sigma Pi
"I will soon be gone."



Paul Dickson
Forest Resources
Activities: Forestry Club, SAF, Gopher Peavey
Scholarships: Forestry Club
1993 GOPHER PEAVEY



Michael Dillon
Forest Products
Activities: Forestry Club, FP Society
"Notice the back hand spring OVER the crevasse."



Lisa Fay
NRES
Activities: Mom, school, work



Paul Franklin
 NRES
 Area of concentration in water resources
 Activities: Forestry Club



Gary Geer
 Recreation Resource Management
 Minor in Forest Resources
 Activities: RRM Club



Mary Gliniany
 NRES
 Activities: ES Club, U of MN Environmental Summit, MN Earth Day Network, Student Faculty Board "One person can make a difference!!"



James Gregory
 Paper Science and Engineering
 Activities: TAPPI/PIMA president
 Senior Resident Assistant,
 Comstock Hall



Sarah Henriksen
 NRES
 Activities: U of MN Varsity Women's Crew, SAF, ES Club



Michael Hass
 Forest Resources
 Minor in Hydrology



Rick Hopson
 NRES
 Activities: ES Club, Fisheries and Wildlife Club,
 Environmental Backpackers Club



Michael Johnson
 Forest Resources
 Activities: F-Day, Cloquet "It all started in Itasca, Beth, Conclave, and the tail goes on ..."



Brenda Jones
 NRES
 Activities: Xi Sigma Pi, ES Club,
Gopher Peavey, CNR Student Faculty Board



Elizabeth "Beth" Jones
 NRES
 Activities: Delta Gamma sorority,
Gopher Peavey, Student Faculty
 Board, Xi Sigma Pi
 "Walk tall or don't walk at all."



Bob Klages
 NRES
 Activities: ES Club
 "Be responsible for your actions."



Kerri Knop
 NRES
 Minor in Forest Resources
 Activities: ES Club, Xi Sigma Pi



Jeff Korte
 NRES



Tina Krie
 NRES
 Activities: Forestry Club,
 ES Club, *Gopher Peavey*
 "ONLY YOU can prevent forest
 fires (In remembrance of Smokey
 the Bear)."



Stacy Krohn
 NRES
 Activities: Habitat for Humanity



Dennis McDougall
 Forest Resources



Deb Moritz
 Forest Resources
 Activities: Forestry Club, SAF



Paul Mowrey
 Forest Resources
 Activities: Forestry Club, SAF



Peter Miller
 NRES
 Minor in Forest Resources
 Received H. Schmitz Student
 Leadership Award
 Activities: ES Club, SAF,
 Soil Judging team



Jill Nibe
 Fisheries and Wildlife
 Minor in Biology
 Activities: AOU, The Raptor
 Center



Ken Nyquist
 NRES
 Minor in Forest Resources
 Activities: ES Club
 Scholarships: Donald Finzy
 Memorial



Shannon O'Malley
 Fisheries & Wildlife
 Activities: Marching Band
 "The best part of the F & W
 program is the Itasca session. It's
 a great experience."



Deanna Peterson
 NRES
 Received Dayton-Kirkham High
 Achievement Scholarship in 1990



Eric Roers
 Forest Resources
 Activities: Forestry Club, SAF,
 Xi Sigma Pi, U of MN Emergency
 Medical Response Team,
 Adopt-A-River Program, Cloquet
 tree planting



David Schaeffer
 Paper Science and Engineering
 Activities: Public Relations
 Officer, TAPPI/PIMA



Jean Sieben-Brown
 NRES
 Minor in Forestry
 Activities: Forestry Club, SAF,
 Xi Sigma Pi, Student Faculty
 Board



Christine Silker
 NRES
 Activities: RRM Club, SAF,
 Xi Sigma Pi
 Received DNR Natural Resource
 Mgmt & Federated Garden Clubs
 Scholarships, and others



Douglas Turner

NRES

Activities: Mens Basketball Mgr.
Received Basketball Student
Manager Scholarship

"I hope I get a good job and make
this earth a better place."



Darin Tucholke

NRES

Concentrations in soil science &
forest resources

Enjoys ice/rock climbing
Wants to pursue American
Mountain Guide Certification



Debra "Debe" Walchuk

NRES

Minor in Forestry

Activities: Soil Judging
(1st Place in regionals)

GRADUATING SENIORS NOT PICTURED

Jason Albrecht

RRM

Thomas Bednar

NRES

Thomas Boysen

Forest Products

Stacey Bulera

NRES

Patrick Bundy

Forest Resources

Douglas Cobb

Forest Products

John Colby

NRES

Brian Collins

Fisheries & Wildlife

Mark Dalton

NRES

Linette Damer

NRES

Gerald Decker

Forest Resources

Steven Erickson

NRES

Kimberly Errigo

NRES

Dana Eubanks

NRES

Patrick Fagerlee

Forest Products Marketing

Marni Falk

NRES

Doug Franke

Fisheries & Wildlife

GRADUATING SENIORS NOT PICTURED (CONT.)

Thomas Gearhart
Urban Forestry

Barbara Griffith
NRES

Chad Gunnerson
NRES

Gina Haffie
NRES

Paul Hansen
Fisheries & Wildlife

Chris Hildrum
Forest Resources

Cheri Hirt
Forest Products

Donald Kackman
NRES

Lisa Kemnitz
Fisheries & Wildlife

Rick Klevorn
Forest Resources

Laura Kline
NRES

John Kloster
Forest Resources

Edward Kray
NRES

Pam Larson
Forest Resources

Timothy Lauth
Forest Resources

Warren Lehman
Forest Products

Joel Lemberg
Forest Resources

Michael Lien
NRES

Dean Lundblad
RRM

Kenny Lunsetter
Urban Forestry

Thomas MacDonald
Forest Products

Patrick Malecha
Fisheries & Wildlife

Michael Malling
Fisheries & Wildlife

Kimberly McHugh
Fisheries & Wildlife

Jason Meyer
Forest Resources

Michael Moen
Fisheries & Wildlife

David Mussell
NRES

John Oakley
Forest Products

Kurt Olsen
Forest Products

Jeffery Orgon
Fisheries & Wildlife

Steven Oswald
Fisheries & Wildlife

Craig Paukert
Fisheries & Wildlife

Julie Peltier
Forest Resources

Michael Petrich
Forest Resources

Edward Rain
Urban Forestry

Michael Rice
Fisheries & Wildlife

Jody Robillard
NRES

Omid Samadani
Forest Products

Jeffery Schultz
Urban Forestry

Ryan Snyder
Forest Resources

Craig Sorley
NRES

Amy Storbakken
NRES

Chad Storley
RRM

Jeffery Tepp
Forest Resources

Scott Thelen
NRES

Paul Tjaden
NRES

Edward Ulmaniec
NRES

FACULTY

FOREST RESOURCES



Dorothy Anderson

Assistant Professor

Conducts research and teaches graduate and undergraduate courses in Recreation Resource Management. Received a Ph.D. in natural resources with an emphasis in human behavior in wildland recreation settings from Colorado State University. Has a master's degree in geography, emphasizing land use planning, and a bachelor's degree in geography, both from the University of Minnesota. Previously worked for the Minnesota Department of Natural Resources as a consultant for the Division of Forestry, Utilization and Marketing Specialists.



Marvin Bauer

Professor and Director, Remote Sensing Laboratory
Teaches "Remote Sensing of Natural Resources", "Advanced Remote Sensing" and "Remote Sensing/Forest Inventory". Research interests include measurements and modeling of the spectral properties of vegetation, and applications of quantitative remote sensing to inventory and monitoring natural resources and environment.



Melvin Baughman

Associate Professor/Extension Specialist

Develops educational materials and programs aimed at improving management of non-industrial private forest lands. Writes extension publications, produces slide sets and video tapes, and organizes conferences and tours on a wide variety of forestry subjects. Research focuses on forest economics and policy studies related to private forest lands.



Charles Blinn

Associate Professor/Extension Specialist
Co-teaches "Forestry Applications of Microcomputers". Major areas of interest include forest management, economics, microcomputer applications in natural resource management and silviculture.



Kenneth Brooks

Professor and Director, Graduate Studies in Forestry
Handles administrative duties as Director of Graduate Studies in Forestry. Teaches "Forest Hydrology", "Range Management" and "Agroforestry: Sustainable Production and Watershed Management." Researches the hydrologic function of peatlands and further development of a hydrologic model of peatlands. Works with the Forestry for Sustainable Development program on the role and importance of watershed management.



Thomas Burk

Associate Professor
Teaches "Natural Resources Inventory", "Forestry Applications of Microcomputer" and "Forestry Biometry". Researches 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 Ellefson

Professor
Professor of Forest Economics and Policy. Author of *Forest Economics and Policy Research: Strategic Directions for the Future*. Researches the evaluation of forestry information flows to state legislative systems and assessment of policy analyst activities in natural resource agencies.



Glenn Furnier

Assistant Professor

Teaches "Introduction to Tree Physiology and Genetics", "Plant Molecular Evolution" and "Forest Resources Seminar". Holds a joint appointment in the Department of Plant Biology. Researches tree genetics and mycorrhizal fungi.



Hans Gregersen

Professor

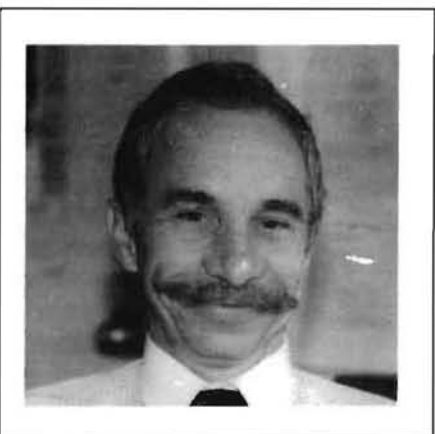
Teaches "Forest Economics and Planning", "Role of Renewable Resources in Developing Countries" and "Economic Analysis of Forestry Projects". Researches forest and economic development of less developed countries, evaluation of forestry research and the process of technological innovation in forestry.



Carl Mohn

Professor

Teaches "Dendrology", "Introductory Tree Physiology and Genetics" and "Forest Genetics". Researches forest tree improvements through selection and breeding.



James Perry

Associate Professor

Director of the Center for Natural Resources Policy Management and Director of Graduate Studies for Water Resources. Has much experience in water quality and environmental management. Presents lectures around the world. Works on the Forest Water Quality Program with experimental manipulation of whole ecosystems such as lakes, streams channels, temporary ponds and coastal tide pools.



Peter Reich

Professor

F.B. Hubanchek, Sr. Endowed Chair in Forest Ecology. Teaches graduate and undergraduate students and conducts research in forest ecology. Research experience includes work with tropical and temperate forest ecosystems. Holds a masters degree in forest ecology from the University of Missouri and a Ph.D. in environmental biology and plant ecology from Cornell University.



Dietmar Rose

Professor

Teaches "Forest Economics and Timber Management Planning", "Quantitative Techniques in Forest Management" and "Role of Renewable Natural Resources in Developing Countries". Leads efforts for coordinating and networking forestry research on an international level. Works with international organizations in the economic assessment of biodiversity.



Philip Splett

Instructor and Career Opportunities Coordinator, Office for Student Affairs. Teaches "Conservation of Natural Resources", "Forest Resources Orientation", "Field Forest Measurements" and "Important Plants in Fisheries and Wildlife Habitats". Provides career information and assistance to students and alumni seeking employment. Coordinates the College of Natural Resources Scholarship and Alumni Relations Programs.



Edward Sucoff

Professor

Teaches "Tree Physiology and Genetics", "Tree Physiology Laboratory", "Forest Ecology" and "Field Ecology" at Itasca. Researches aspects of global warming and the physiology of water stress. Also is involved in the Forest Vegetation Management Program.



Carl Vogt

Instructor and Extension Forester
Teaches "Introduction to Forestry", "Introduction to Minnesota's Natural Resources", "Directed Study-S.E. Minnesota Hardwood Silviculture" and "Forestry for Teachers". Interested in 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. Active in a number of forestry-related organizations and professional societies.

Forest Resources Faculty (Not Pictured)

Gary Johnson
Klaus Puettmann
David Rathke

Teaching specialist

Research Fellows (Not Pictured)

Greg Banks
Wayne Freimund
Dong Kim
Steve Lime
Leigh Vanderklein
Terese Walsh
Dave Walters

Emeritus Faculty (Not Pictured)

Egolf Bakuzis
Henry Hansen
Frank Irving
Vilis Kurmis
Merle Meyer
Scotty Scholten

Research Specialists (Not Pictured)

Ken Cole
Gail McGill
Anne Reich
Jerrilyn Thompson-LaVarre

Research Associates (Not Pictured)

Lee Frelich
Barry Goldfarb
George Honadle
Glenn Howe
Dave Lime
Allen Lundgren
Marc McDill
Jacek Oleksyn
Lloyd Queen
Nels Troelstrup
Henry Webster
Zhi Xu

Tom Nichols

Research Ecologist, NPS

Scientists

*Cindy Burchana, Asst. Scientist
Gary Wychoff, Scientist*

FISHERIES & WILDLIFE



David Andersen

Assistant Professor

Assistant Unit Leader for the Minnesota Cooperative Fish and Wildlife Research Unit. Researches the impact of human activity on wildlife and their habitats and populations, specifically communities of raptorial birds in east-central and southeastern Colorado. Other research includes projects on mule deer, pronghorn, swift fox, breeding avifauna, aquatic vertebrates and macroinvertebrates.



Yosef Cohen

Assistant Professor

Teaches "Wildlife Ecology Management: Planning, Policy and Administration". Involved in ecosystem modeling among aquatic systems.



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 Canadian geese and trumpeter swans and waterfowl ecology in an urban environment.



Francie Cuthbert

Associate Professor

Teaches "Introduction to Fisheries and Wildlife" and is Director of Graduate Studies for the Conservation Biology Program. Research includes behavior, ecology and conservation of nongame birds.



Mary Henry

Associate Professor

Leads a Cooperative Unit in the Department of Fisheries and Wildlife to foster applied research of interest regionally and nationally and to train graduate students in natural resource management. Research interests include aquatic toxicology and fisheries biology.



Peter Jordan

Associate Professor

Teaches an undergraduate course in fish and wildlife habitats and a graduate course in the ecology and management of large mammals. Studies the ecology and management of moose. Researches the integration of moose management with forestry practices in Superior National Forest. Acts as a member of the Board of Directors of the Minnesota Zoo.



Anne Kapuscinski

Associate Professor

Interested in fish genetics and the development of genetically improved lines of fish, aquaculture and conservation biology. Researches the ability of fishing to act as a form of artificial selection, causing significant genetic changes in exploited populations. Serves as Aquaculture Specialist under the Minnesota Extension Service and Sea Grant Extension.



James Kitts

Associate Professor

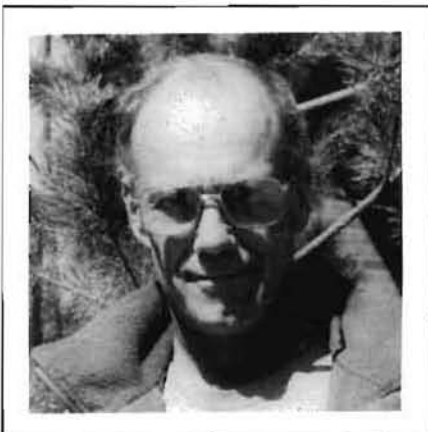
Teaches "Wildlife Management" for non-majors and "Ethics in Natural Resources". Conducts workshops, seminars and field courses in Management of Woodlands for Wildlife. Instructs Master Gardeners, structural pest control operators, food processors and grain elevator operators in control of problem wildlife. Counsels urban and suburban landowners in methods of landscaping and management to attract desirable wildlife.



Raymond Newman

Assistant Professor

Teaches "Fishery and Wildlife Management", "Stream and River Ecology" and assists with "Ethics and Values in Natural Resource Management" and "Fishery and Wildlife Habitats". Research interests focus on stream ecology and feeding relations, with an emphasis on factors affecting trout populations, the effects of human disturbance on stream fish and invertebrates and the potential role of defensive chemicals in aquatic plant use by invertebrates.



David Smith

Assistant Professor

Teaches "Fisheries and Wildlife Orientation" and "Introduction to Fisheries and Wildlife Management". Researches conservation of small wildlife populations.



Peter Sorensen

Assistant Professor

Teaches courses on the physiology and behavior of fish. Researches the relationships between fish physiology and behavior and how these are influenced by the environment. Interested in the senses of smell and taste in fish and determining the identities and roles of fish sex pheromones in reproduction.



George Spangler

Professor

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

Fisheries & Wildlife Faculty (Not Pictured)

Daniel Panshin
Bruce Vondracek

Emeritus Faculty (Not Pictured)

Daniel Frenzel
William Marshall
Thomas Waters

FOREST PRODUCTS



Robert Erickson

Professor

Teaches "Topics in Wood Moisture Relationships". Researches the development of improved processes for the drying of 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.



Roland Gertjansen

Professor

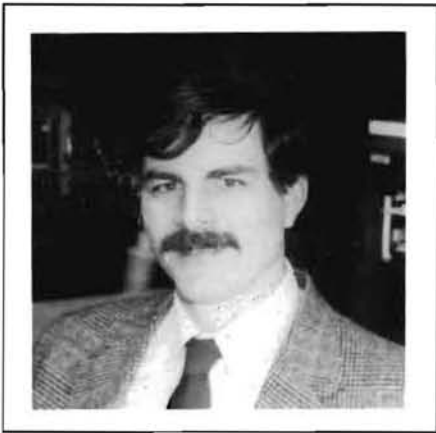
Teaches "Pulp and Paper Technology" and "Wood-Base Panel Technology". Researches wood-base composite products emphasizing the utilization of underutilized species and the performance of wood-based composites in service.



Lewis Hendricks

Professor

Conducts the annual two-week "Lumbermen's Short Course" and annual "Hardwood Lumber Grading Short Course". Authors publications dealing with wood heating, preservation, ice dams, cold climate construction techniques and wood finishing topics. Consults with wood industries and homeowners.



Patrick Huelman

Associate Professor

Coordinates the Cold Climate Housing Center, which is a source of comprehensive information relative to the design and operation of energy-efficient homes. Assists the home building industry to improve dwelling life.



Thomas Milton

Assistant Professor

Designs and implements extension programs and publications for Minnesota's sawmill industry and wood product manufacturers. Co-edits the *Minnesota Forest Products Marketing Bulletin*.



Mutombo Muvundamina

Assistant Professor

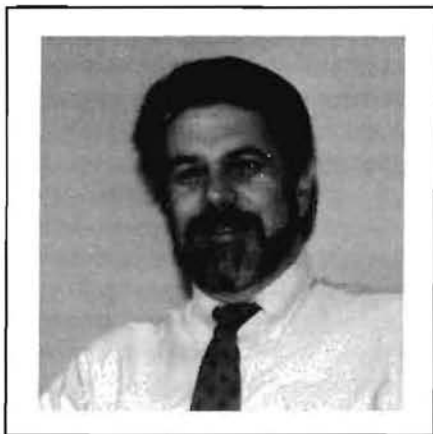
Teaches courses in paper science and engineering and paper recycling. Holds a Ph.D. in fiber and polymer science and a masters degree in chemical engineering from the University of Washington.



Harlan Petersen

Assistant Professor

Teaches "Forest Products Marketing" and the annual "Wood Industry Tours" course. Specializes in extension programs in forest products utilization and marketing with emphasis in the areas of wood drying and wood moisture relationships. Coordinates the undergraduate program in Forest Products Marketing and advises the student chapter of the Forest Products Research Society.



Robert Rouda

Professor

Teaches "Pulp and Paper Process Calculations", "Pulp and Paper Process Operations" and "Paper Engineering Laboratory". Interested in the development and application of modern computer process simulation technology to the improvement of pulp and paper process operations, including the development of computer simulation laboratories for graduate and undergraduate education seminars and workshops for industry.



Simo Sarkanen

Associate Professor

Teaches "Wood Chemistry I", "Wood Chemistry II" and "Adhesion and Adhesives". Researches physicochemical properties of lignin derivatives, biodegradable plastics from byproduct lignins and lignin biodegradation.



Elmer Schmidt

Associate Professor

Teaches "Wood Deterioration", "Undergraduate Seminar", "Methods and Advances in Wood Protection" and "Mushroom ID and Ecology". Researches control and application of fungi in forest products, preservative systems for wood composites, biodegradation of kraft lignin components and evaluation of new wood preservative systems, and biodeterioration in hardwood fuel chips.



Henry Wells

Associate Professor

Specializes in paper science and engineering. Interests include computer simulation in paper science and process control.

Research Associates (Not Pictured)

Bob Kroll
Bob Seavey

Research Fellow (Not Pictured)

Phil Steklenski

CLOQUET



Alvin Alm

Professor
Teaches "Silviculture" and "Senior 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.



Ronald Severs

Scientist and Forest Manager
Responsible for developing forest management programs for the Cloquet Forestry Center and coordinating these programs with research activities at the Center.



Robert Stine

Coordinator, Cloquet Forestry Center/
Research Fellow
Directs the activities of the Minnesota Tree Improvement Cooperative. Works on the genetic improvement of red, jack and white pine and on black and white spruce.

Where are the staff pictures?

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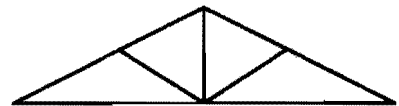


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