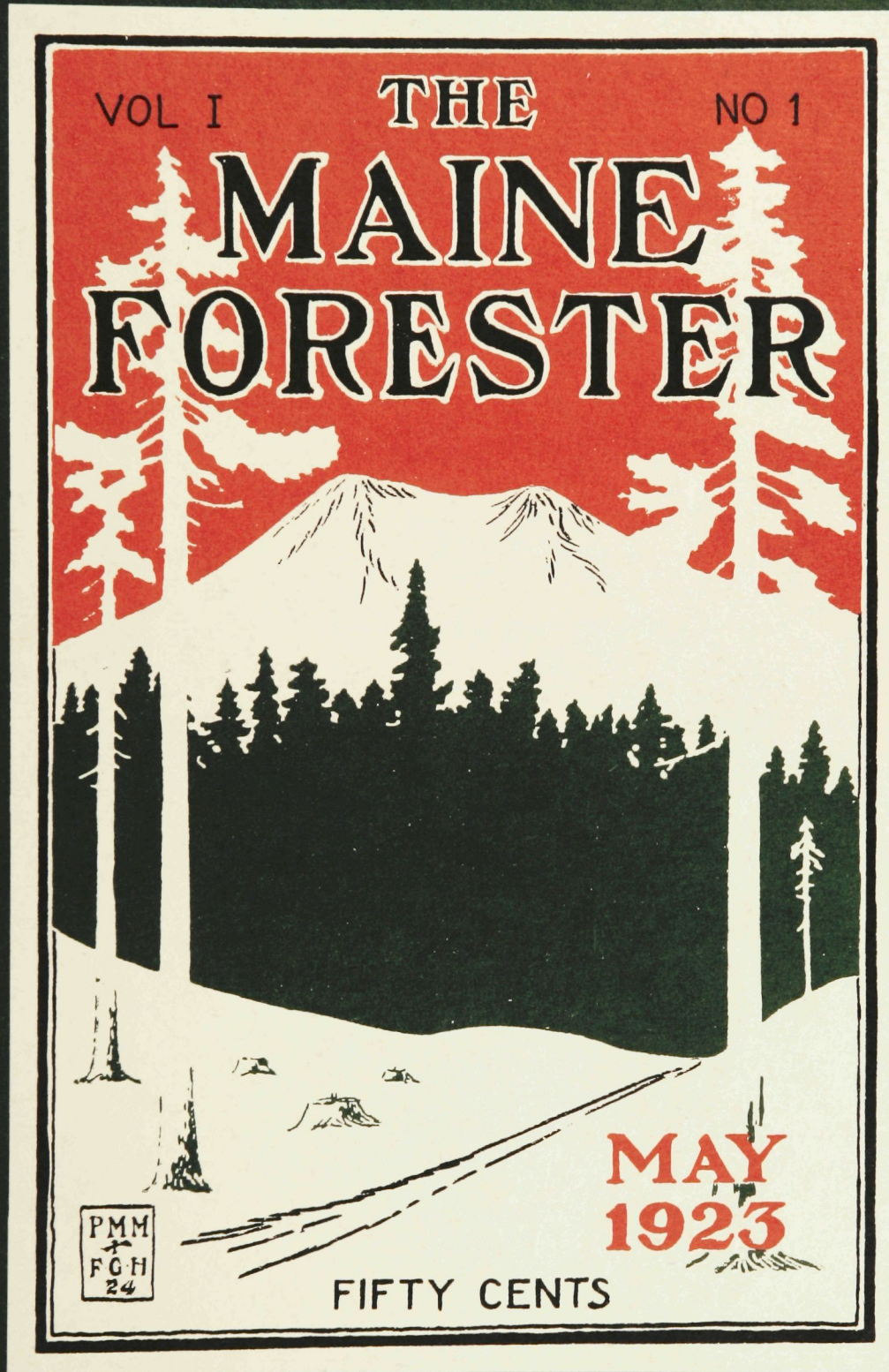


A 70 YEAR TRADITION



1993-1994

THE MAINE FORESTER DEFINING OUR ROOTS



April 27, 1950 Oblique View of Orono Campus - Compliments of James W. Sewall Co., Old Town, ME.

PUBLISHED ANNUALLY BY THE STUDENTS OF THE
DEPT. OF FOREST MANAGEMENT
UNIVERSITY OF MAINE, ORONO

DEDICATION



Ralph H. Griffin
1921 - 1993

Ralph Griffin: a student and colleague pays tribute

I too was one of Ralph's students, first as an undergraduate, and later, I am sure at times to his great dismay, I was one of his graduate students.

In the fall of 1969, I transferred from chemistry at Colby to wildlife at the University of Maine. Right away I began hearing stories about a course called silvics that even we wildlifers had to take. The course had been taught **forever** by a Dr. Griffin. We knew he had been wounded and had been a POW in WWII; the course and the man were both reputed to be as tough as they come. We knew that **somewhere** in that course we would encounter **THE TREE TEST** and then we would all have to spend our Christmas Vacation trying to complete the **SILVICS REPORT**. Ralph later told me that he intentionally designed silvics as a hurdle that anyone wishing to be a forester would have to get past. We wildlifers just kind of got caught up in the current.

Ralph taught all of the labs in his courses himself. We went out in all kinds of weather and measured everything in the woods that would hold still long enough. I will never forget the afternoon in Silvics lab that Kermit Beattie, Dottie Kuziora and I, wildlifers all, were out in Block A-5 of the University Forest trying to map forest stands and not doing very well. We had been at it for a long time when Dr. Griffin came silently out of nowhere in his tin hat and rubber boots, with that old aluminum clipboard hanging at his side. In the hour and a half that followed we learned more about silvics than he had been able to teach us in half a semester of the lectures that he so diligently prepared. When we left that day we had a good map of the stands in Block A-5 and I had an example of how and where foresters do their best teaching. I've been teaching now for 12 years ... I learned from Ralph's example to teach every lab myself and to go out regardless of the weather. When it seems there might be something more important, when the weather turns nasty, or when colleagues suggest that I turn the lab over to a graduate student, I remember three wildlifers making their first stand map and I grab my own tin hat and boots.

Ralph became my major advisor when I decided that I should add



a forestry degree to my resume. We worked together on five, four-hour field labs each week and I learned more about Ralph's dedication to teaching and forestry. For two winters we taught the silviculture labs in the open hardwoods stand along the Stillwater River behind the pole barn. I'd be bundled up like a four-year old at a sledding party but Ralph would come to lab in his same canvas coat, tin hat, and rubber boots. Those boots were patched up with tape and inner tube patches. His stockings showed, his hands were purple and yet he would stand there in the snow with the north wind coming in off the river and discuss each tree that had been marked with each student. After the second winter he decided he might need to get some new boots for the fall. Ralph was dedicated, tough as nails, and frugal.

For my part, I almost made a career out of grad school. Ralph just couldn't understand what was taking me so long; he worked so hard himself and I'd be off every November chasing deer. He did tell me a hunting story though that I wish he could share with you all himself. It says something about his upbringing, his integrity, and in the telling, his sense of humor.

When Ralph was a young fellow he wanted to go hunting in the worst way ... they were poor ... he had a shotgun but couldn't keep a dog. A neighbor lent him a big, deep voiced hound and Ralph went after rabbits. By and by a rabbit came busting out of a thicket with his hind legs going right past his nose and Ralph let fly with his shotgun. Just as he pulled the trigger, that old hound came flying out right behind the rabbit. Ralph missed the rabbit but raked a mess of pellets right across the old dog's back. The dog seemed to take the scratches in his hide in stride but Ralph was crushed. He told me that one of the hardest things he ever did was to lead that tired, happy, but bloody old hound home, climb up the porch and knock on that door. "I'm awfully sorry, ... I shot your dog." Well the neighbor looked at Ralph and he looked at his dog. Then he cut Ralph's apology short ... "If I had a dollar for every time that old dog got too close to the rabbit, we'd both be rich."

Ralph kept after me and finally, after 6-1/2 years, he dragged a thesis out of me. He and Dorothy would have me over in the evenings after work to go over each draft. Ralph was determined, thorough, and incredibly patient. I wouldn't be teaching today if he had given up; I owe Ralph a huge debt that can only be worked off by continuing to take aspiring, young foresters out to learn in all kinds of weather. Ralph used to explain his policy on missing silvics lab to each new batch of students. With only the slightest hint of a twinkle in his eye he'd say, "There's only two things you have to do in this world, come to silvics lab and someday, die". He's gone and done them both. I can only hope to leave this world having done half the job he did as forester and teacher.

Prof. Alan J. Kimball, LPF



I first met Dr. Ralph Griffin in the fall of 1983 when I arrived in Maine to begin my doctoral program. My previous forestry background was primarily limited to the hardwood stands of Ohio, but Dr. Griffin quickly taught me that spruce and fir were also trees in which to take interest.

Dr. Griffin was my mentor, colleague, and friend. He offered sound advice, provided a listening ear to my opinions, and showed interest in my personal development. Our mutual respect for each other grew into a friendship that included my introduction to his family. I was fortunate to witness the closeness he had with his wife Dorothy, their three sons, and grandchildren.

I now reside in New York, but often recall the fond memories of my ten years in Maine. Included in those memories are my experiences working with Dr. Ralph Griffin in the University Forest. It was there amongst the trees and students, where I believe he best shared his knowledge and showed his love for his profession.

Jim Steinman

I appreciate the opportunity to comment on my relationship with the late Dr. Ralph H. Griffin, a man who had a profound effect on my own professional development. I first met Dr. Griffin in June of 1974, when I arrived on the campus of the University of Maine to begin work on my M.S. program. After several early meetings, armed with a wheelbarrow load of reprints, publications, and past theses from other students, I quickly came to the conclusion that I was "in over my head" and could not possibly meet Dr. Griffin's incredibly high standards. In short, I was terrorized! But not being known as a quitter, I hung in there, and it was a decision that changed my life.

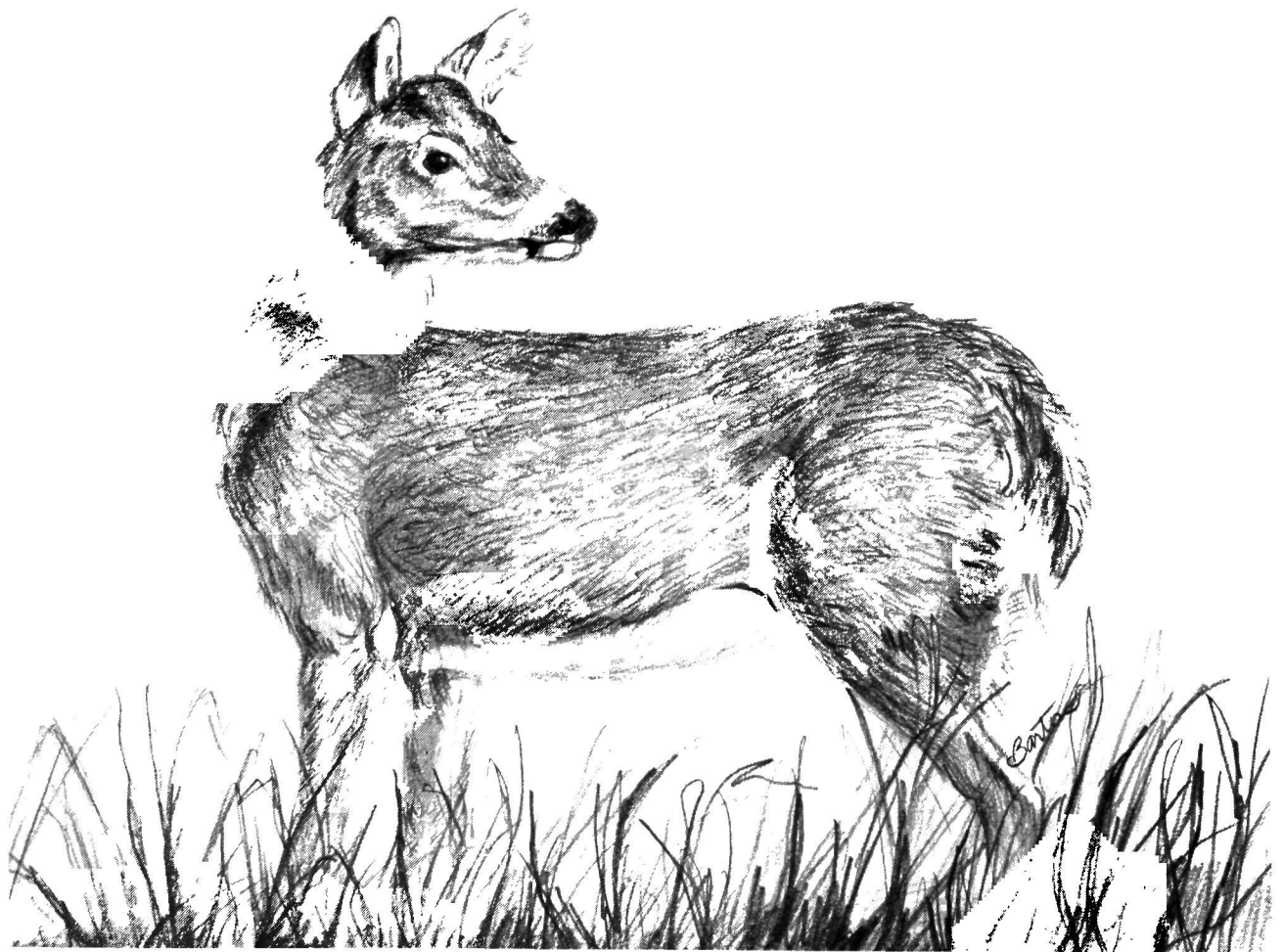
During the course of the next two years, I worked very closely with Dr. Griffin, particularly in the realm of my own research on spruce-fir growth, yield and site quality. I spent two long, hard field seasons working throughout the spruce-fir forest in northern Maine. But each summer, like clock-work, Dr. Griffin would arrive to spend one or two weeks working with us in the field. The interest and dedication he showed to me and my project I have never forgotten, and now that I have my own graduate students to supervise, I too, make it a point to personally visit each one each field season to work along with them.

Beyond the research association, perhaps the strongest memory I have of Dr. Griffin is his incredible commitment to teaching. Although not a teaching assistant (in those days that was Al

Kimball's job!), I often helped out on lab exercises on the School Forest. Also, no one associated with Dr. Griffin could escape the marathon grading sessions after each frightful exam. Although computer-graded exams were very common then we never stooped that low! I'm sure the undergraduate students of the day would be surprised to know how much of an interest Dr. Griffin took in their work. He carefully considered each and every student and their grades, and I'm sure he knew and cared a lot more about each student than they ever realized. I remember distinctly one day when Dr. Griffin called me in to look at a particularly well-prepared paper by a certain female student. He was obviously startled about the quality of the paper because he had decided that this student probably wouldn't be very successful. "Well, Jim," he finally admitted, "maybe this girl will make a forester after all!" I might mention that "this girl" did indeed make a very fine forester, rising quickly to a position of prominence in one of Maine's largest paper companies!

In my mind, I have always viewed Dr. Griffin as a second-generation American silviculturist. Educated during the 1930's and 1940's, he had an opportunity to study under some of the foremost forestry educators who developed the field of American forestry. The fact that I, in turn, had the opportunity to study under Dr. Griffin somehow ties me directly to that hallowed lineage. My association with Dr. Griffin was kept up over the years, usually meeting annually at the Silviculture Instructors Tour, or perhaps an SAF meeting. Now that he is gone, the association remains through the knowledge and work ethic that he imparted to me, in the forest of northern Maine, so many years ago.

James E. Johnson
Associate Professor of Forestry
and Extension Project Leader -
Natural Resources



IN THE SPIRIT OF FRIENDSHIP

Thomas J. Carcolan

Dan Borge

Melissa Lynn Haw

Shawn C. Cady

Franklin Leavitt

Jeff Thompson

Ross Battlett

Cindy Bosch

Gina Pelletier

Salares Stone

Jeffrey Topley

David DeBruin

Coby

Roger Byler

Katherine Weber

Darrell Smith

Rick Seckig

Louis Moun

GARY CARPENTIER

Craig P. Stephenson

Kelley A. Brackley

Donna M. Cady

Gregory Ford

Neil Brackley

Doc Brown

Buck & John Coffey

Bruce Watersma

Michael Tibbetts, a friend to many of us in the Department of Forestry and elsewhere, was diagnosed this past year with Lymphoma cancer that was spotted near his heart. Since the diagnosis he has gone through a bone marrow transplant, many grueling sessions of chemotherapy, not to mention several months of near solitary confinement while his white blood cell count returned to normal following the treatments. He continues radiation treatments with the hopes of a full recovery soon.

Mike's battle with cancer, at the young age of 21, has caused many of us to realize the importance of friendship. Friendship is something that we often take for granted, when in reality, it's a precious privilege, that is not realized until the moment that it becomes threatened. Often it has been said that if you can count all your true friends on the fingers of one hand, you will die a lucky person. Without a doubt, Mike Tibbetts is one of those people that will be considered a true friend by many.

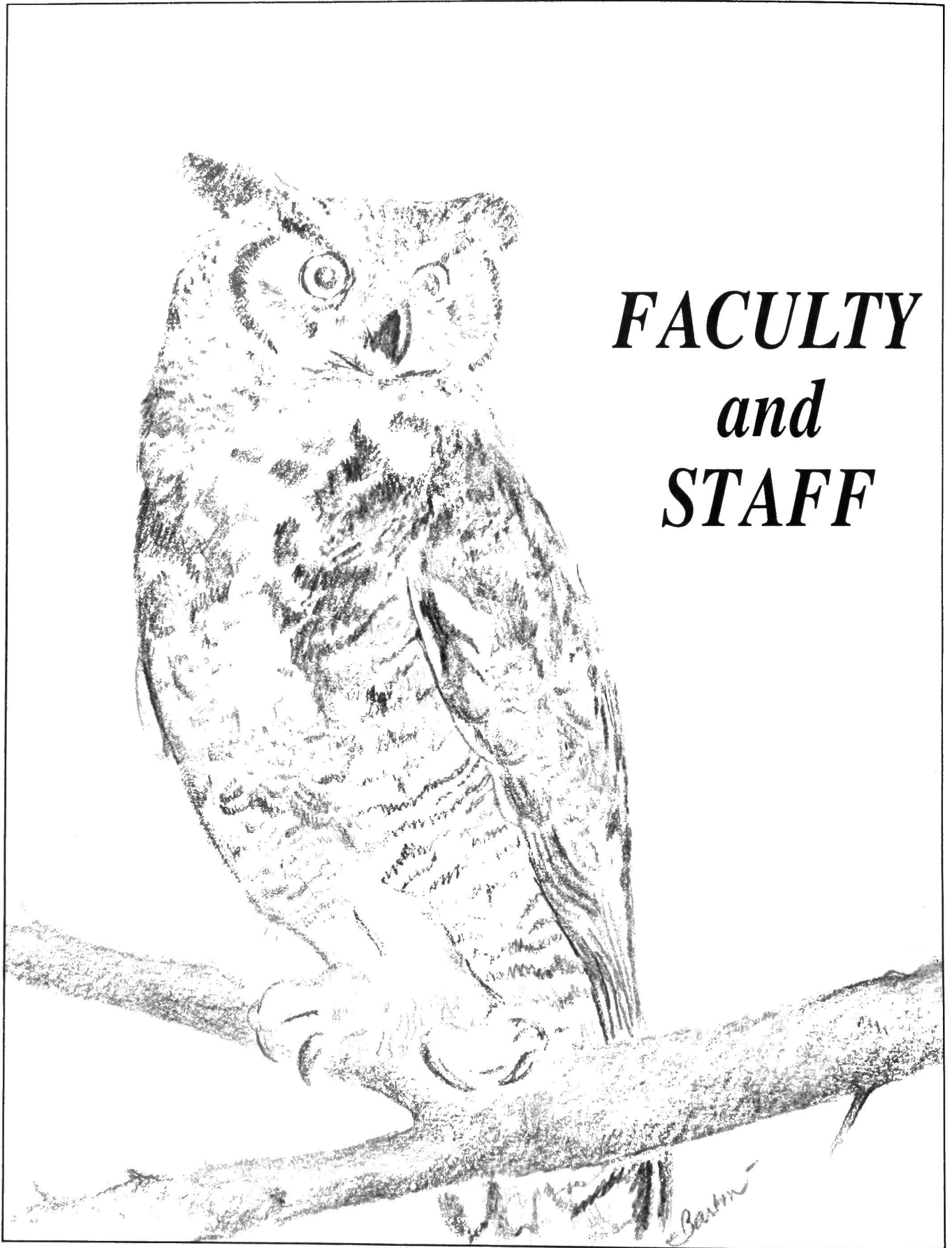
Tibbs, we're all pulling for you! On behalf of all who have signed, and those who were unable to, we wish you well in your speedy recovery!

Scott D. Hall

Sandy Carey

Tony Hargy

Brenda Calkins



***FACULTY
and
STAFF***

GREETINGS FROM THE DEANS

The University of Maine has had a long and proud tradition of training professional foresters. We are ranked among the top ten forestry programs in the United States and have the longest continuously accredited professional forestry program in the United States. We are proud of these traditions and will do everything in our power to insure that we maintain and improve on them in the future.

While many similar programs in the U.S. are now converting their programs to more 'environmental studies program', it is our intent here at Maine to continue to provide the very best professional and academic training for practicing foresters. We continue to see a demand for well trained professional foresters to manage our forest lands for industry, government and other land owners who will manage for all forest values in the future. The University of Maine sees this area as a niche of excellence for us and for the future. We will aggressively seek to recruit students who are interested in professional forestry to come here and go through our programs.

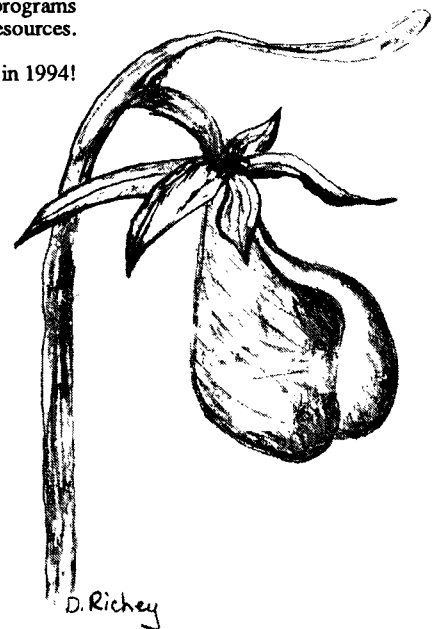
The student population in the College of Natural Resources, Forestry and Agriculture is about 925 undergraduates and 200 graduate students. Forestry remains our largest degree program with the Natural Resources, Wildlife Ecology, and Animal and Veterinary Sciences programs also having large student numbers.

In November 1993, our Bachelor of Science and Master of Science degree programs in Forestry and Forest Engineering were reaccruited by the Society of American Foresters (SAF). Our Master of Forestry Program was accredited by the SAF for the first time. Our Wood Science and Technology undergraduate degree program is also now fully accredited by the Society of Wood Science and Technology in cooperation with SAF.

Our scholarship programs continue to grow, and provide financial recognition and support for high-achieving and deserving students. The College was the beneficiary of a substantial endowment by the Cutting Family this past year which will help our future students. We are fortunate that our alumni and friends of the College have been so generous over the years that our scholarship programs are now among the largest on campus.

Our projected enrollments for the upcoming academic year look very good. We anticipate additional growth in our natural resources programs over the next five years resulting from our recognized excellence in education. Our students, faculty and staff have made us who we are today, and their professional successes will help maintain our tradition of excellence as one of the strongest programs at the University of Maine and nationally in the natural resources.

Best wishes for success, prosperity and personal happiness in 1994!
Bruce Wiersma, Katherine Weber and Don Stimpson.



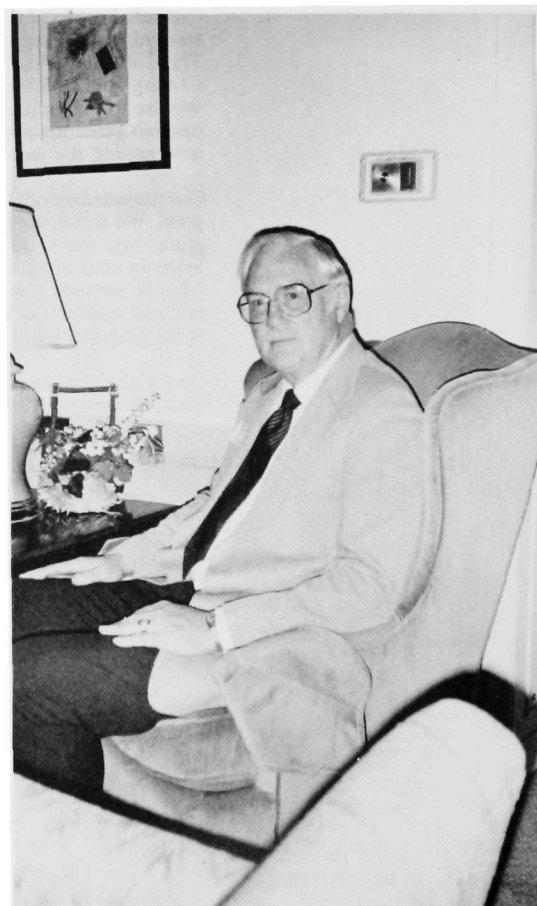
ADMINISTRATION



DEAN BRUCE WIERSMA



ASSISTANT DEAN KATHERINE L. WEBER



ASSISTANT DEAN DON STIMPSON

ADMINISTRATIVE STAFF



L-R: Brenda Astbury, Elenor Heinz, Helen Belyea, Cindy Paschal, Nora Ackley, Delores Stone, Regina Pelletier.

Missing: Maxine Horne, Shirley Moulton



RECREATION AND PARK MANAGEMENT



FLOYD L. NEWBY, Ph.D.
Professor of Forest Resources



JOANNE F. TYNON
*Assistant Professor
of Forest Resources*

FOREST ECOSYSTEM SCIENCES



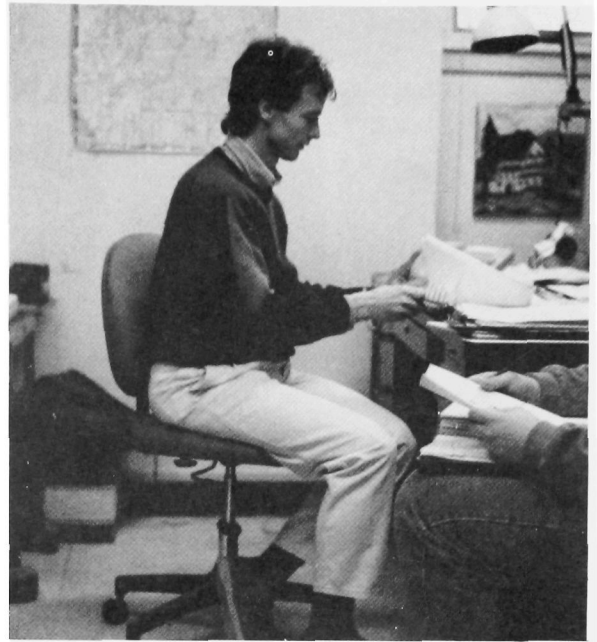
ALLEN S. WHITE, Ph.D.
*Associate Professor
of Forest Resources*



L-R: Richard Jagels, Ph.D, *Professor of Forest Biology*, Robert Seymour, Ph.D, *Professor of Forest Resources*, Michael Greenwood, Ph.D., *Professor of Forest Resources*



KATHERINE CARTER, Ph.D.
*Associate Professor of Forest
Resources*



WILLIAM LIVINGSTON, Ph.D.
*Associate Professor of Forest Resources
and Coop. Assoc. Prof. Botany and Plant Pathology*

WILDLIFE

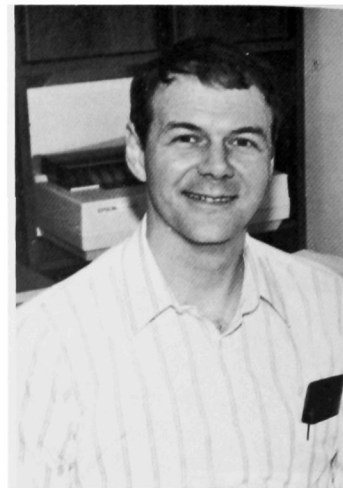


L-R: Malcom Hunter, Ph.D.; Frederick Servello, Ph.D.; Tom Hodgman, Catherine Elliot, Ph.D.; Daniel Harrison, Ph.D.; James Gilbert, Ph.D.

FOREST MANAGEMENT



THOMAS CORCORAN, Ph.D.
Chair, Dept. of Forest Management
Professor of Forest Resources



ROBERT RICE, Ph.D.
Assistant Professor
of Wood Science



LOUIS MORIN
Instructor, Forest Resources



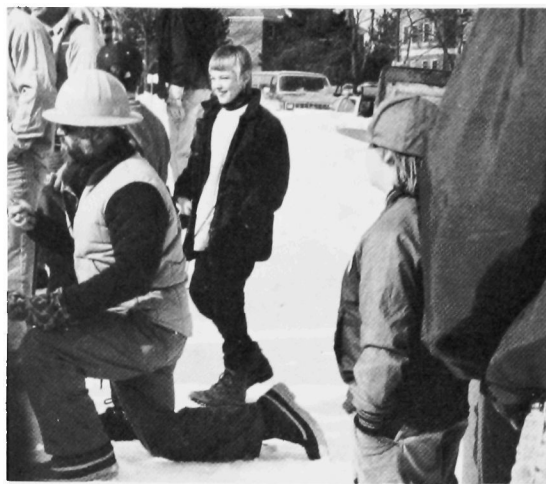
BARRY GOODELL, Ph.D.
Associate Professor
of Wood Technology



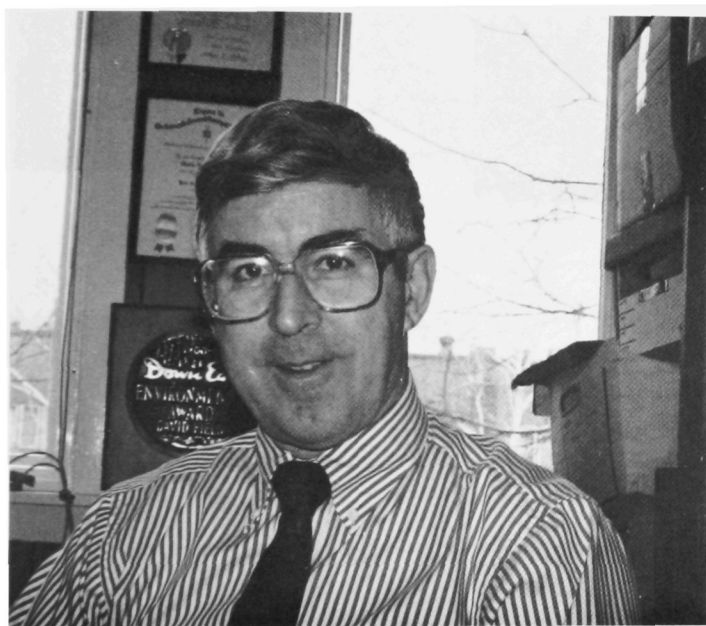
THOMAS BRANN, Ph.D.
Professor of Forest
Resources & Engineering



STEVEN SADER, Ph.D.
*Associate Professor
of Forest Resources*



ALAN KIMBAL
*Associate Professor
of Forest Technology*



DAVID FIELD, Ph.D.
*Professor of Forest Policy
and Forest Resources*



STEVEN SHALER, Ph.D.
*Associate Professor
of Wood Science
and Technology*



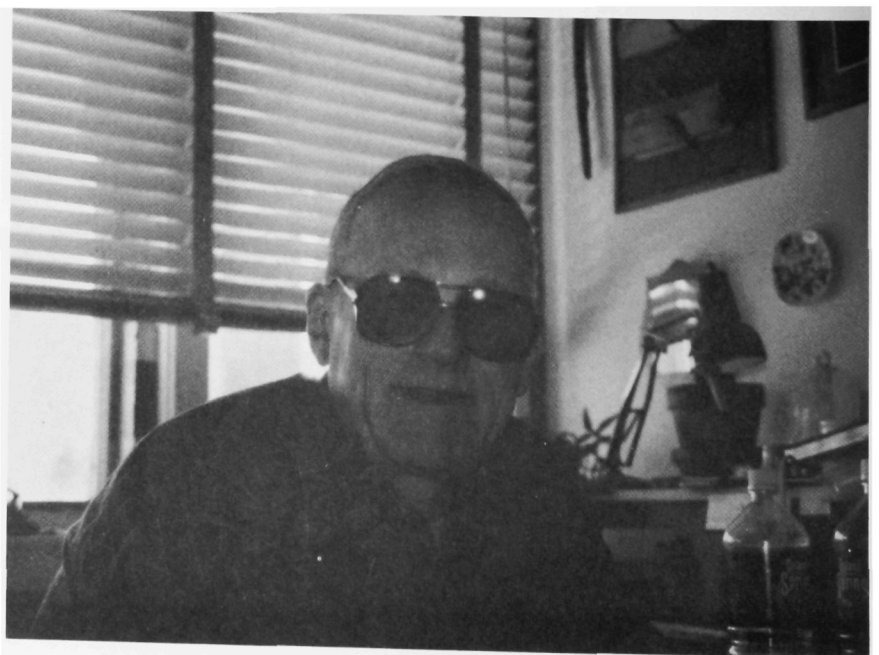
CHARLES SIMPSON
Forest Superintendent

THE COOPERATIVE FORESTRY RESEARCH UNIT

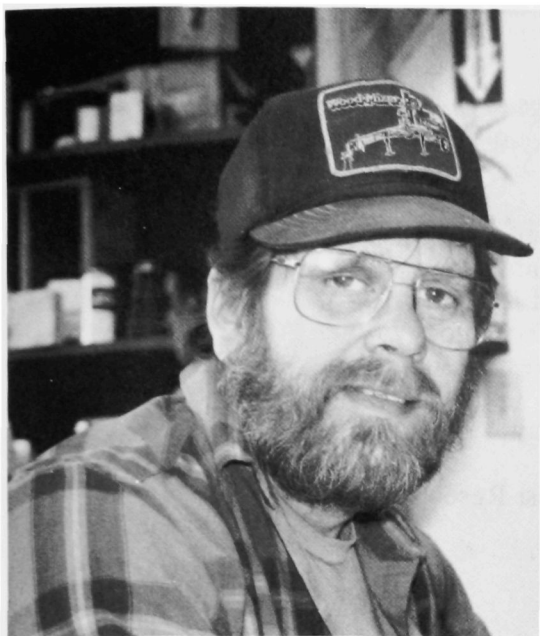


Left to Right:
Rick Dionne, Ronald Lemin, William
Ostrofsky, Ph.D, *Associate Research
Professor*, Russell Briggs, Ph.D., *Assist-
ant Research Professor*, Peter Caron

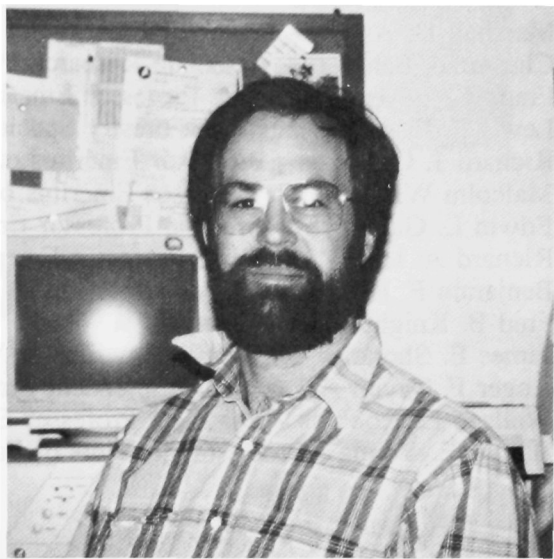
MAXWELL L. McCORMACK, JR., Ph.D.
Research Professor



SUPPORT STAFF



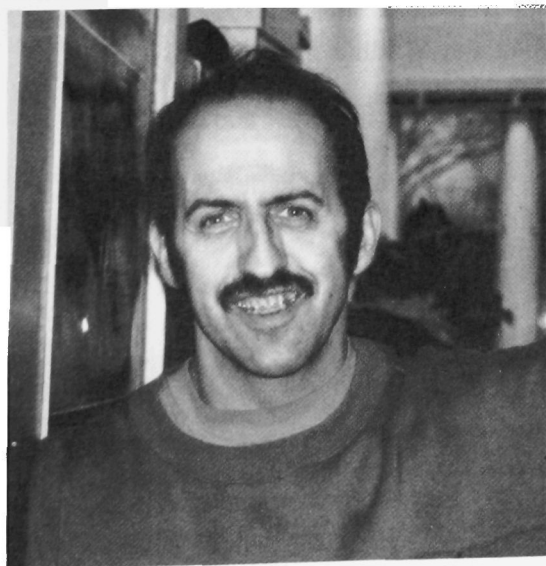
KIM ADLER
Technician



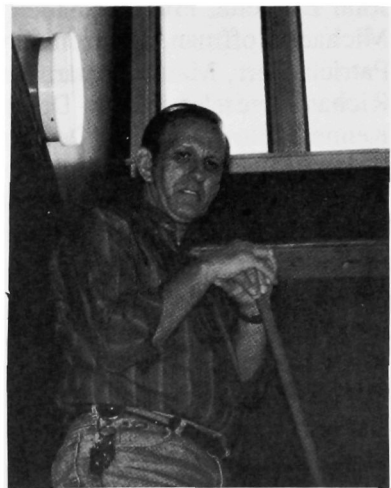
JOBIE CARLISLE



ROBERT DUBAY
Custodial Staff



ARTHUR JOAQUIN
Custodial Staff



PAUL BERTRAND
Custodial Staff

PROFESSORS EMERITUS

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Chester F. Banasiak - Associate Research Professor Emeritus of Wildlife
Frank K. Beyer - Associate Professor Emeritus of Forestry
Lewis P. Bissell Extension Forestry Specialist Emeritus
Richard J. Campana Professor Emeritus of Forest Pathology
Malcolm W. Coulter Professor Emeritus of Wildlife Resources
Edwin L. Giddings Associate Professor Emeritus of Forest Resources
Richard A. Hale Associate Professor Emeritus of Wood Technology
Benjamin F. Hoffman - Associate Professor Emeritus of Forest Resources
Fred B. Knight - Dean Emeritus
James E. Shottafer - Professor Emeritus of Wood Technology
Roger F. Taylor Forest Superintendent Emeritus
Wallace C. Robbins Associate Professor Emeritus of Forest Resources
Harold E. Young - Professor Emeritus of Forest Resources

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Richard Dressler, Maine Department of Inland Fisheries & Wildlife
Kenneth Elowe, Maine Department of Inland Fisheries & Wildlife
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Juliet Markowsky, Maine Audubon Society
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Mark McCollaugh, Maine Department of Inland Fisheries & Wildlife
Allan J. O'Connell, U.S. Park Service
Dale S. Solomon, Research Forester, USFS
Bret P. Vicary, James W. Sewall Co.
Bradford S. Wellman, Attorney, Pingree Associates (retired)

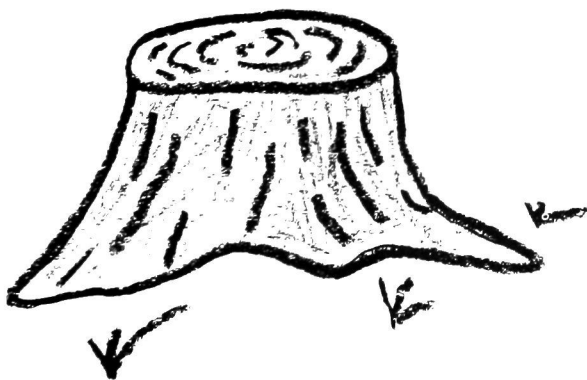
TAPPING THE ROOTS OF TIME



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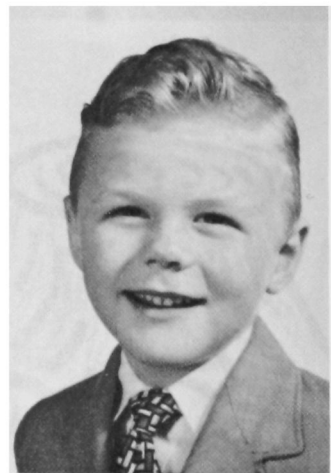
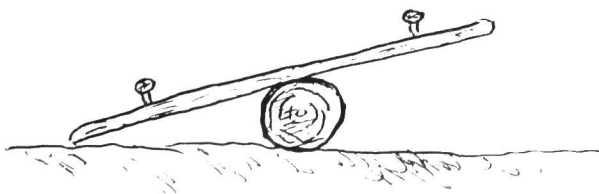
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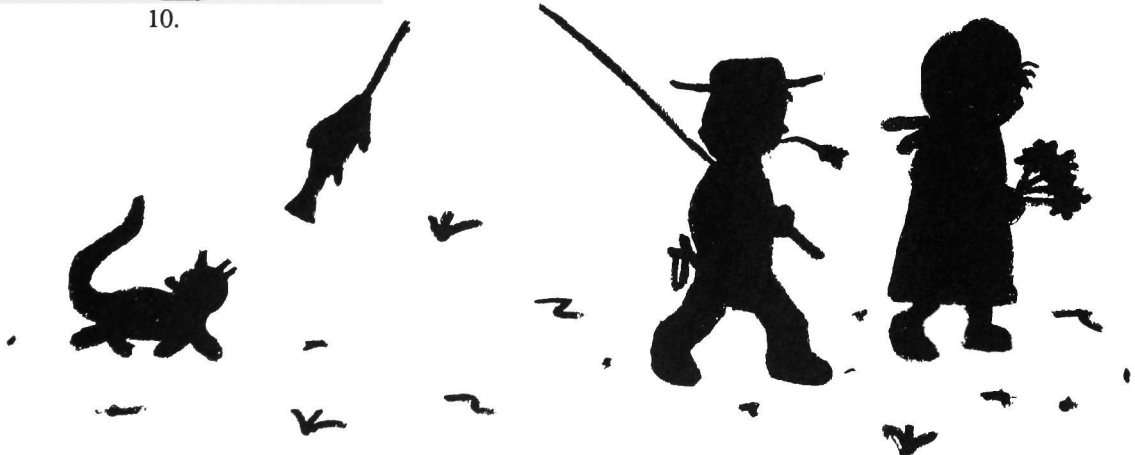
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10.

ANSWERS:

1. Richard Jagels
2. Bruce Wiersma
3. Katherine Carter
4. Jeff McBurnie
5. Regina Pelletier
and Janice Gifford
6. Stephen Mark
7. Robert Rice
8. David Field
9. Alan S. White
10. Floyd Newby



FORESTRY -- A PUBLIC TRUST

By Dan Gilmore

Forest management originated in Europe during the middle ages to improve the habitat for game species on feudal estates. As the human population increased and wood became a scarce commodity, forest management practices in Europe became oriented to wood production. Forestry began as a science with *private trust* (game management) which later evolved into a *public trust* (wood production).

When the science of forestry was first brought to North America in the early 1900s, timber harvesting practices were exploitive and little attention was given to long-term forest management or the ecological consequences of extensive clear-cutting. Vast areas of forests were also being destroyed from forest fires ignited by the coal-fired locomotives used on the railroads that criss-crossed the country. Exotic tree diseases such as white pine blister rust, chestnut blight and Dutch elm disease were also taking their toll on the North American forests. Thus, early forest management practices in North America focused on forest protection. In the early 1960s, educational forest fire prevention programs such as the Smokey Bear Campaign were very successful as were some tree disease control programs. Foresters were often viewed by society as protectors of the forest and a *public trust* was placed in the forestry profession to protect our nations forests. Forest resource management involves more than forest protection, however, and as a profession foresters have been slow to educate society on the value of other sound forest management practices.



In some regions, society has "protected" itself from forest mismanagement through legislation. One of the first pieces of legislation enacted in the northeastern United States to regulate timber harvesting activity was the Adirondack Park Agency (APA) Act in New York State. The Adirondack Park encompasses 6 million acres of approximately equal amounts of privately-owned and state-owned land in the northeastern portion of New York. The New York State constitution mandates that the state-owned lands be maintained as "forever wild". During the early-1970s, recreational, development, and commercial enterprises threatened the wilderness character of the Adirondack Park. The mechanization of timber harvesting practices during this time period was making clear-cutting economically attractive. When regulations were written to implement the APA Act the people of the State of New York perceived a very real threat to the wilderness character of the Adirondack Park. Only a small portion of the original APA regulations addressed the timber harvesting issue: clear-cuts were limited to a size of 50 acres unless a clear-cutting permit was obtained from the APA. The majority of the original APA regulations were written to constrain development and not to regulate timber harvesting. Because of this, there were numerous "loopholes" in the clear-cutting regulations.

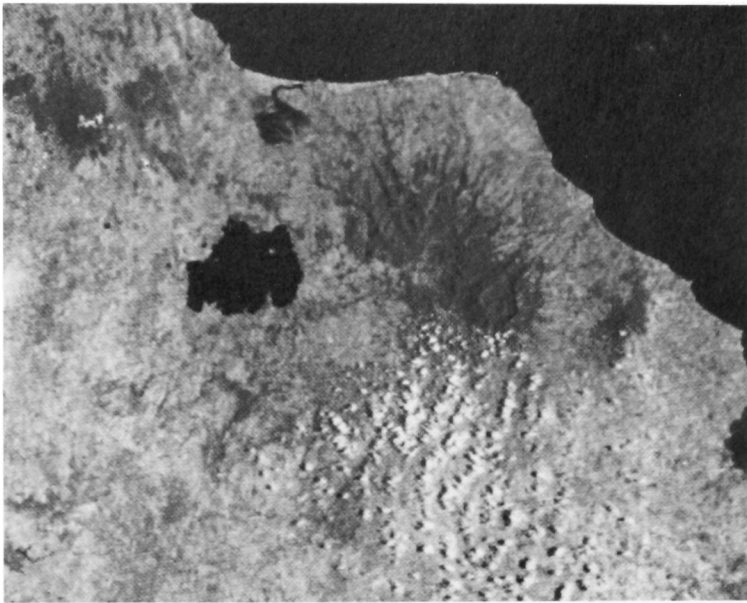
When I began my career in forestry during the mid-1970s as a student at Paul Smith's College located in the northern Adirondacks, these "loopholes" were being exploited by the forest industry. For example, a narrow strip of high-graded timber was often left between 49 acre clear-cuts. At the time, recent Smitty's graduates described how ineffective and ecologically harmful the APA legislation had

turned out to be. It was not the legislation that was harmful, however, but rather the private landowners (which included forestry companies) who had reacted irresponsibly to well intended legislation. In the early-1980s, when I was employed as a forester, these "loop-holes" had been effectively closed by the APA. Irresponsible timber harvesting, caused through baleful action or tacit acceptance by some forestry companies and foresters not only resulted in more restrictive legislation, but also caused the APA to distrust the forest industry. Forest industry had betrayed a perceived *public trust* to protect the forest.

I quickly learned that as a forester I not only had to sell the merits of good forestry practices to the landowner and the logger, but I also had to sell forestry to the APA and the public at large. In summary, a good percentage of my time as a practicing forester was spent educating landowners, the APA, and the public at large on the merits of good forestry. I sensed that a *public trust* had been violated and it had to be restored.

Society has never viewed the forest as a "wood factory" and now demands increasingly more benefits from the forest including wild-life habitats, recreation areas, wilderness areas, and forest preserves. The role of the forester has evolved significantly since forestry became a formal discipline: from game managers, to tree farmers, to resource managers, and finally to educators. The future of the forestry profession now depends upon our ability to educate society, on our ability to provide and maintain the many benefits derived from the forest, and a *public trust*.





Los Tuxtlas, Guatemala - 1990 TM Data



Swainson's Warbler - Guatemala 1993
First Report of Species in Country



Hummingbird in Guatemala

MAPPING MIGRANT BIRD HABITAT

I'm a graduate student in the College of Natural Resources, Forestry and Agriculture, and Department of Forest Management. I have been here at the University of Maine for a year organizing a Ph.D. project with Dr. Steve Sader. As those of you who know Dr. Sader will surmise, I am working with remote sensing and Geographic Information Systems (GIS). These days, GIS's are being utilized more and more for projects in natural resource fields. These systems provide us the ability to analyze spatial patterns and to model potential future conditions far more accurately and quickly than manual cartographic methods.

Over the past year, I have been using satellite images, image processing software, and GIS to create habitat maps to assist US National Biological Survey scientists with site location for ongoing studies on Neotropical migrant birds in Guatemala. We are attempting to map changes in land use practices and tie that in with potential affects to bird populations.

My dissertation project is beginning to take shape. I will be using satellite imagery of Maine, along with bird data from the Breeding Bird Survey (BBS), to create habitat maps for Maine land birds. The BBS is a volunteer project started in the late 1960's and consists of over 50 routes here in Maine that are surveyed once a year during the breeding season. These data represent a potential wealth of information due to its longevity and coverage.

Traditional habitat mapping of wildlife species such as birds has been a three part process. First, a habitat map is created based on

vegetation type and structure along with other potentially important aspects of the environment. Second, species use of certain habitats is compiled from the literature and field work. Finally, the two are combined to produce a habitat suitability map for the species of concern. I am proposing removing the first step, which is based in human terms ("habitat type") and instead going directly from bird survey data coupled with raw satellite imagery to map species probability of occurrence. With Bayesian statistics it is possible to use survey data of species presence and absence to predict where a species will occur. The probability of occurrence for each survey point will serve as a "training pattern" in the satellite imagery; spectral signatures associated with a specific probability of occurrence will be classified together. This procedure will use species survey data to classify an entire satellite image into a map which is analogous to a habitat suitability map, without the need to first create a habitat map of the study area.

This project is in its first stage; we are attempting to show a relationship between where a certain species is found and the spectral signature of that location on the satellite imagery. If a relationship is found, the project will move on as planned. If not ... I guess its back to the proverbial drawing boards.

Jeff Hepinstall
Department of Forest Management
University of Maine



Black and White Warbler

The Maine Image Analysis Laboratory SPACE GRANT PROGRAM

The Maine Space Grant Program is affiliated with the Maine Image Analysis Lab under the guidance of the lab director, Dr. Steve Sader. Sarah Clapham on the other hand is the Space Grant training coordinator, and is responsible for the day-to-day operation of the program. With funding from the Maine Science & Technology Foundation and the National Aeronautics & Space Administration, the program provides educational and research opportunities for graduates and undergraduates in the field of applied remote sensing and geographic information systems technologies.

Since its beginning in September of 1991, the program has provided fellowship support for twelve undergraduate students and two graduate students. Undergraduate students are drawn from within the College of Natural Resources, Forestry, and Agriculture, as well as other colleges at the University of Maine.

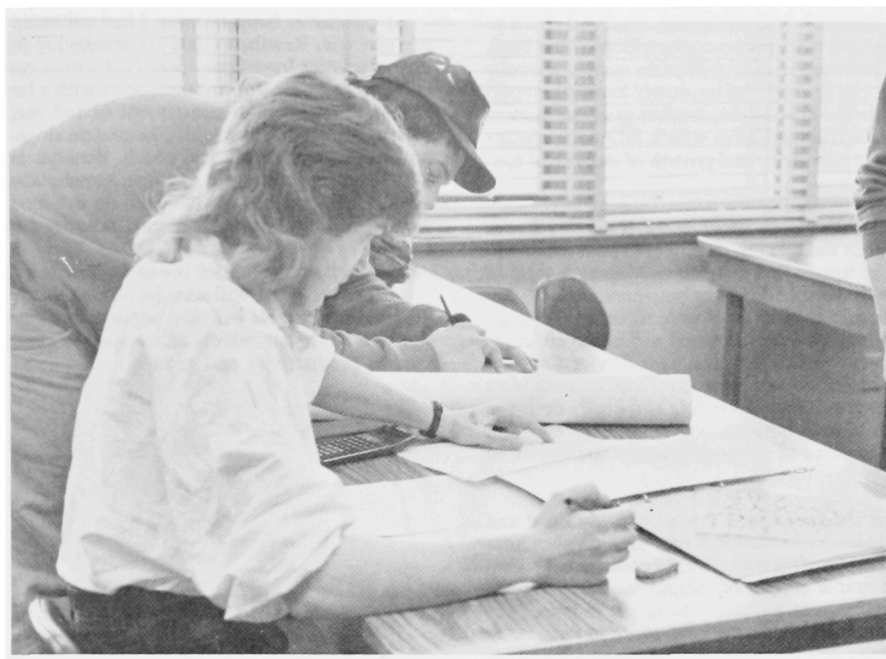
During the summer of 1993, Stacie Grove and Tony Guay (Space Grant undergraduate students) assisted Chris Winne, a research associate in the lab, with satellite land cover classification and change detection analysis of the entire State of Maine. The results of this analysis were delivered to the Maine Forest Service and the Northern Forest Lands Council. John Foster worked with Dr. Sader on forest wetland identification and forest change detection experiments. Ross Bartlett performed photo interpretation of aerial photos used in accuracy evaluation of satellite-based methods for forest wetland detection, developed by Doug Ahl, a former graduate student in the lab.

In August 1993 Suzie Noble, a candidate for the Masters of Science in Forestry, successfully defended her thesis: "Delineation of Riparian Habitats Using Geographic Information Systems". Suzie is now gainfully employed as a GIS Analyst in Colorado.

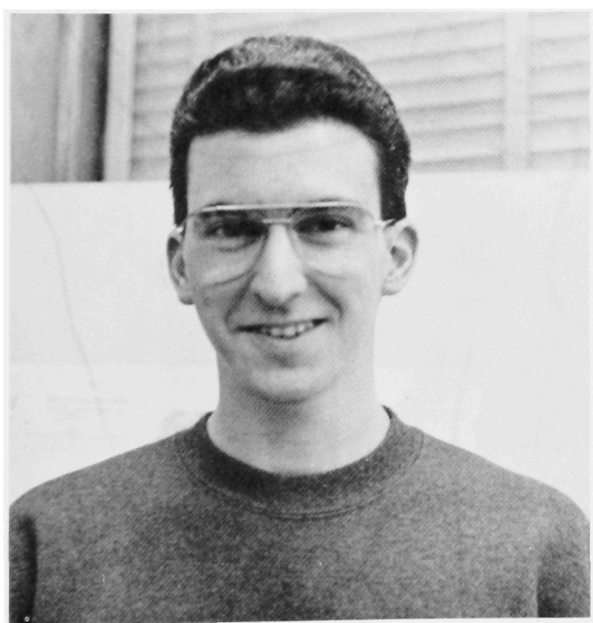


Sarah Clapham





Stacie Grove



Tony Guay

This past fall, undergraduate students gained valuable experience by working closely with graduate students. The students performed such tasks as: satellite image processing (classification, multi-date change detection, and GIS integration), spatial data input (digitizing and GPS), creating and plotting maps, as well as various laboratory maintenance duties. In November, Space Grant students prepared an exhibit for the Second Annual Integrating Spatial Information Systems Conference, highlighting both their training and research efforts. The conference was well attended by graduate and undergraduate students from the Orono campus.

In an attempt to conform with the goals set forth at its conception, the Space Grant Program offers many exciting opportunities for students to gain hands-on experience with remote sensing and GIS technologies.

WHAT DO GRADUATE STUDENTS REALLY DO?

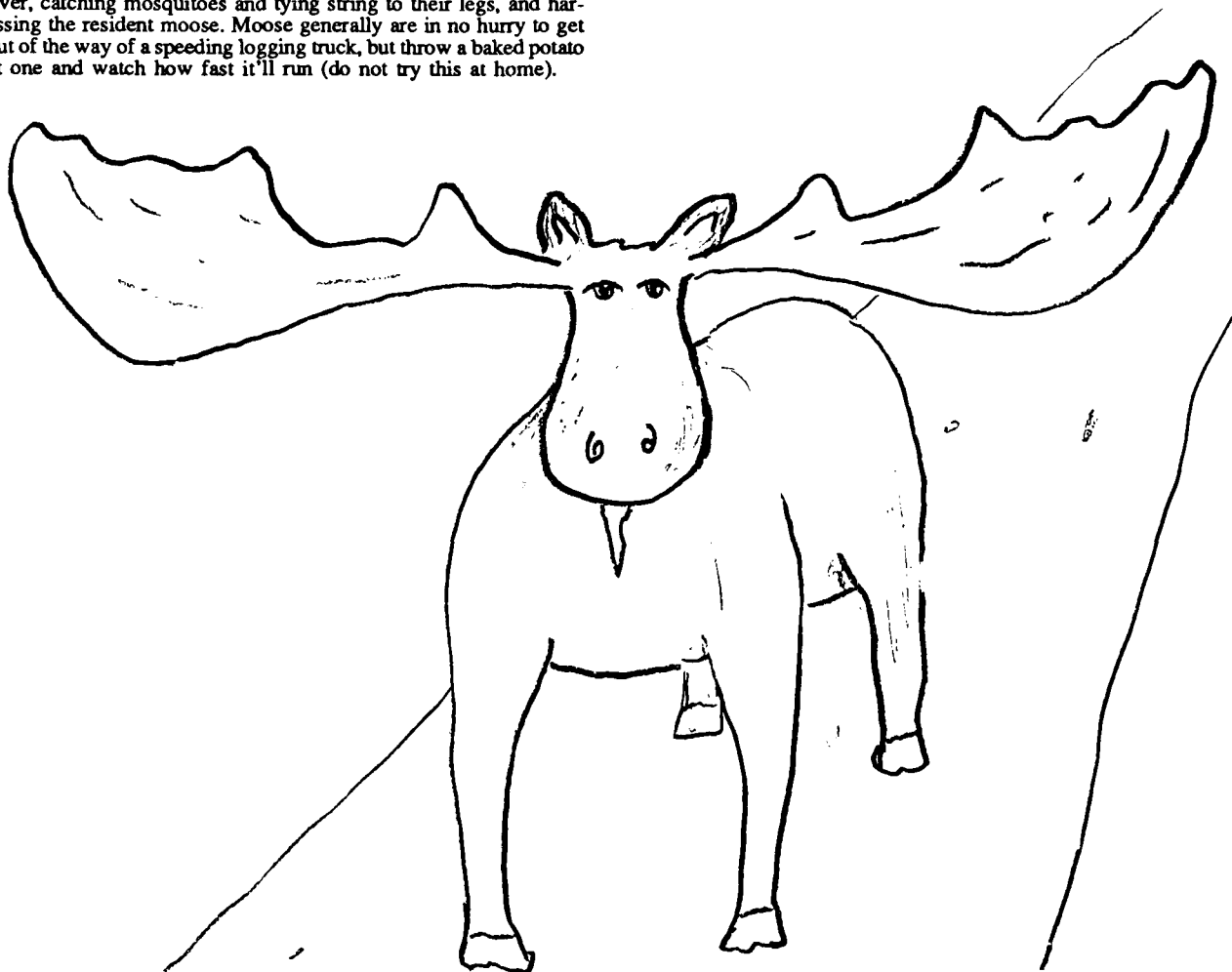
The objective of my research is to determine what soil and topographic properties influence tree species composition within hardwood forests. I hope to develop a land classification system whereby tree species composition can be predicted by simply knowing important site characteristics. In the near future, another graduate student will examine whether site characteristics which influence species composition, also affect productivity and growth of individual species.

My past two summers have been spent in the Rangeley Lakes Region collecting research data. Long days were spent establishing plots on a number of mountains in western Maine. A total of 134 1/54th acre plots were established over both summers. Within each plot, species and diameters of all trees were recorded. To attain stand age and site index, heights were measured and increment cores taken from several dominant and codominant trees. Understory herbaceous vegetation was identified and recorded. Three soil pits were dug at each plot. Important soil data, including soil depth, drainage class, texture, and depth of each horizon, was recorded at each pit. Numerous topographic features of the nearby landscape were also noted.

Nightlife while in the field was quite interesting. My crew and I usually stayed in an old trailer located in a very scenic valley near the New Hampshire border. Entertainment usually consisted of taking long walks, reading an ample supply of People magazines previously left at the trailer (if you so happened to forget to pack your own book on Monday morning), an occasional swim in the nearby river, catching mosquitoes and tying string to their legs, and harassing the resident moose. Moose generally are in no hurry to get out of the way of a speeding logging truck, but throw a baked potato at one and watch how fast it'll run (do not try this at home).

By the end of two summers, I had collected enough data to begin my analysis. Results to date are somewhat promising. Certain site characteristics have been identified which appear to influence species composition. For instance, soils with a large component of fine sands support a high component of red maple, white birch, and balsam fir. Well drained soils, located on slopes, support a high component of sugar maple and beech. Benches and coves, which tend to collect nutrients from upslope, consist almost entirely of sugar maple. Ablation tills, soils which do not have lower horizons that were compacted by the glaciers, favor red maple and white ash.

About all that is left for me to do now is a bit more data analysis to write my thesis. I will soon be turning this project over to another graduate student. He will then begin to examine whether or not those site characteristics which affect species composition, also affects species productivity and growth.



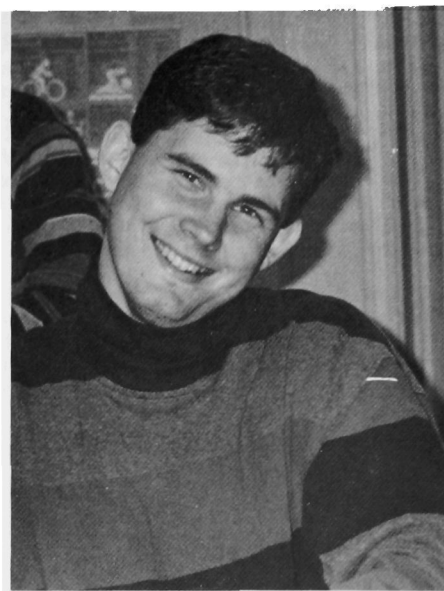
SENIORS



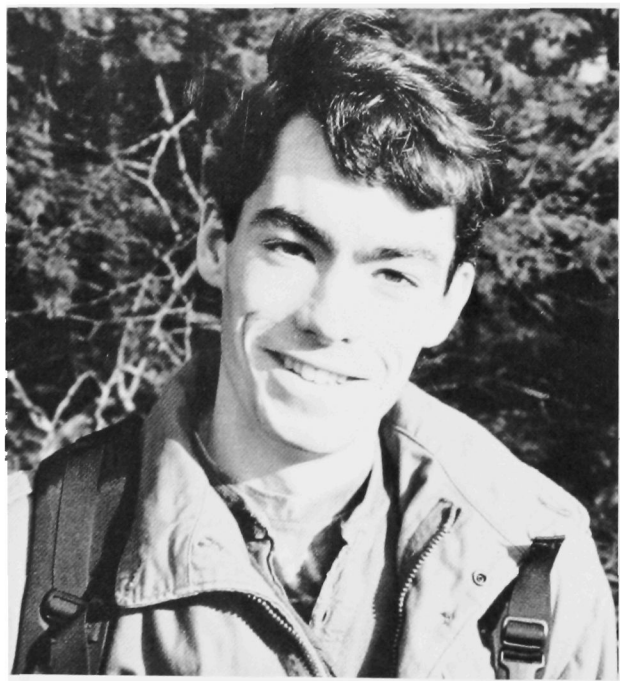
SENIORS



Timothy L. Boyd
Recreation and Park Management



James C. Conrad
Recreation and Park Management

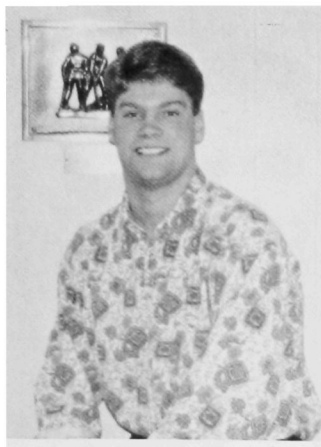


Brennan G. Creehan
Recreation and Park Management



Richard D. Crouse
Forestry

SENIORS



Matthew R. Duprey
Forestry



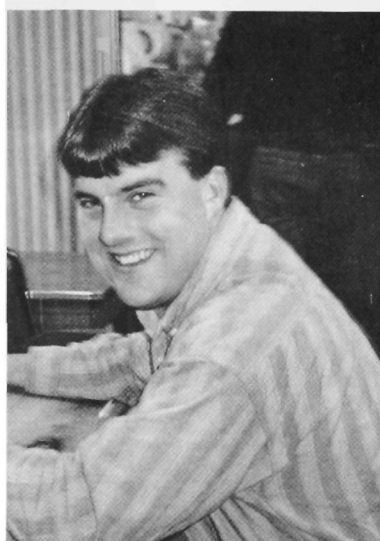
Patrick L. Ellis
Recreation and Park Management



Jim Frohn
Forestry



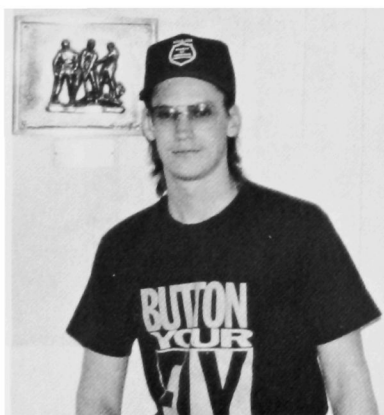
Stacie L. Grove
Wildlife



James C. Hassard
Recreation and Park Management



Michael B. Howie
Forestry



John C. Kirch
Forestry



Julie Meserve
Forestry

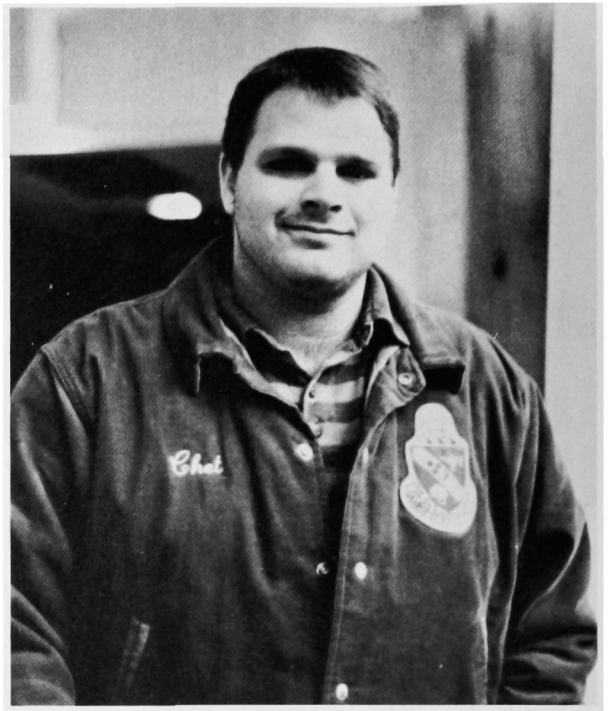


Claire Morissette
Animal Veterinary Sciences

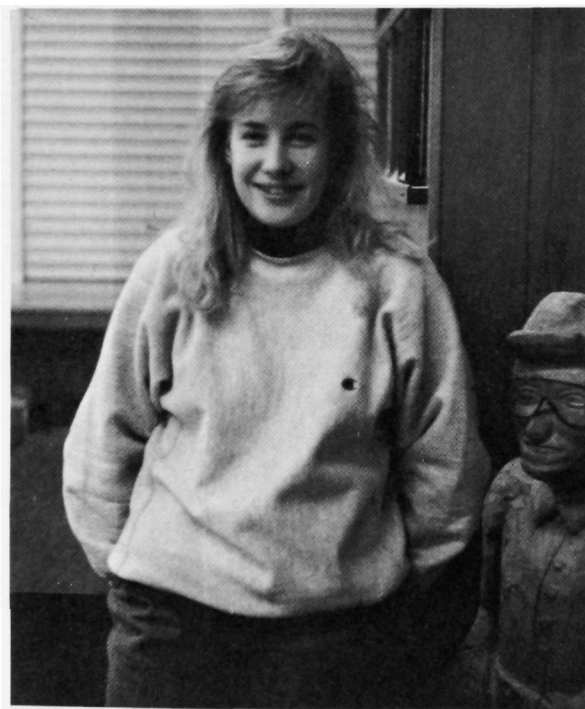
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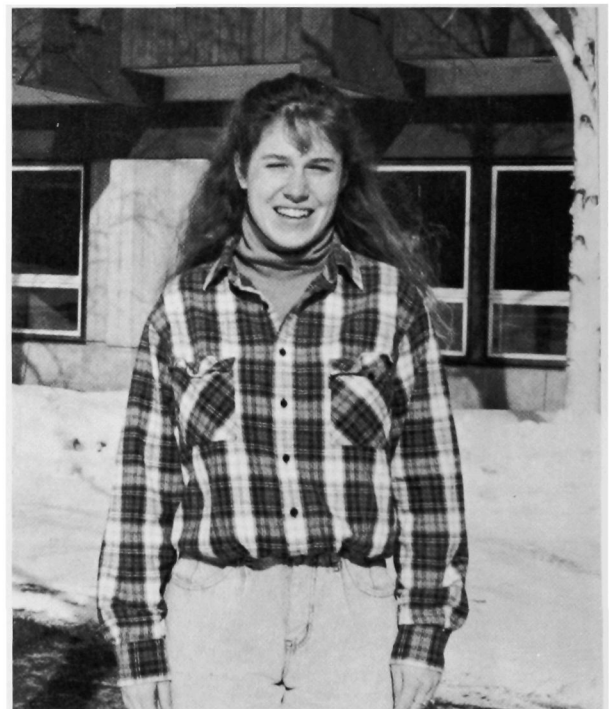
David M. Pierce
Forestry



Chad O'Conner
Forestry



Nicole L. Guilbeault
Wildlife



Christine D. Howe
Wildlife