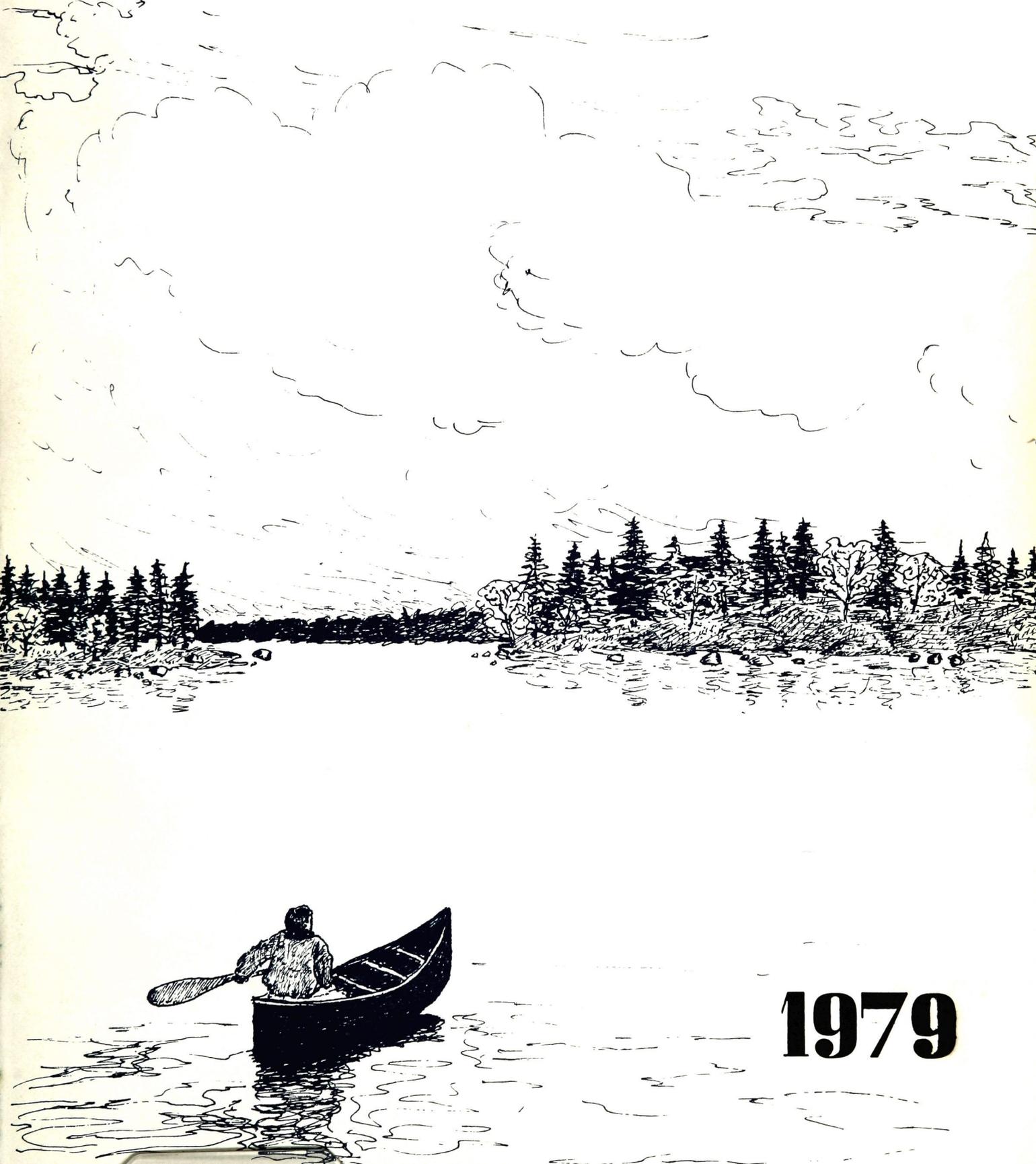


# THE MAINE FORESTER



1979

# A Tradition A Commitment A Workforce

*Richard Fale*

A Tradition of involvement in Maine since 1898 when International Paper Company was founded

A Commitment to Maine, the vastness of her forest resource, her communities and her people.

A Workforce of more than 1,500 dedicated and skilled employees growing with an industry and International Paper.

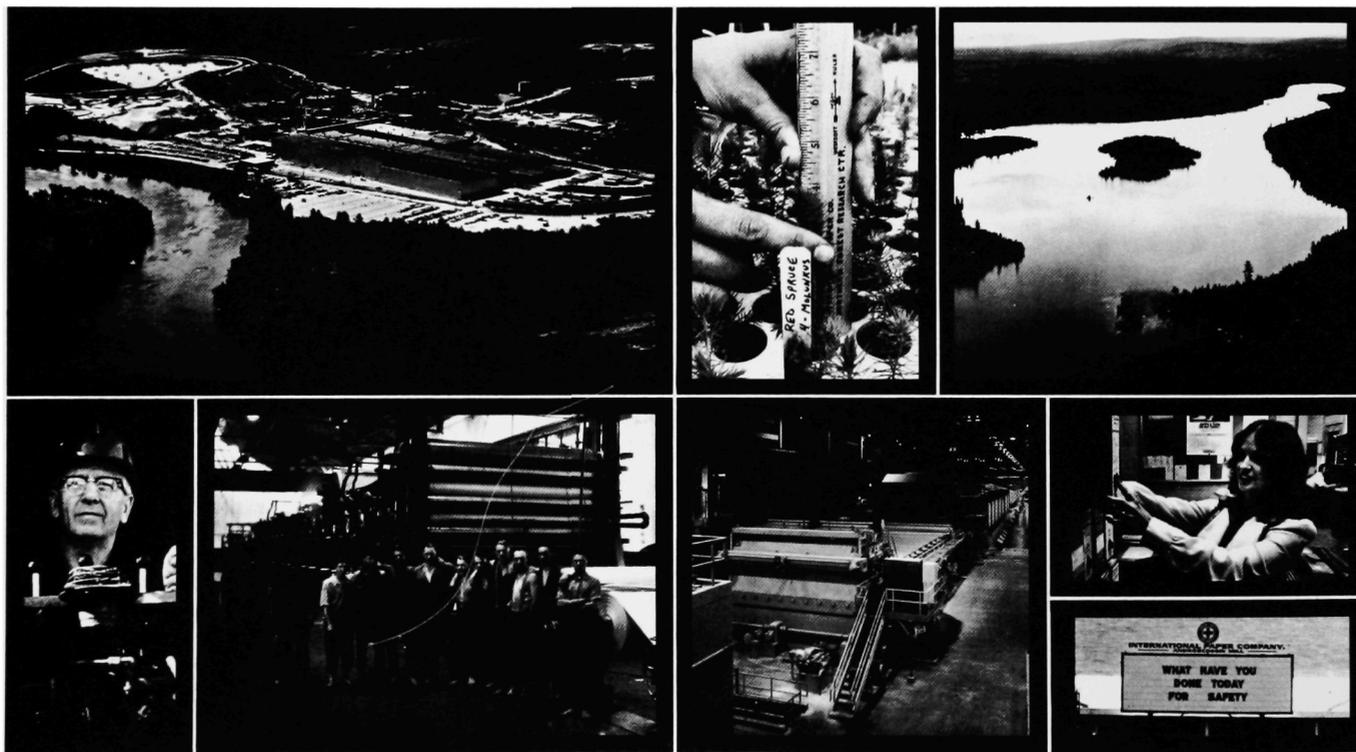
These are vital components upon which International Paper Company's operations in Maine depend.

— The Northern Forest Research Center, recently established in Bangor, to develop and test modern forest management systems and techniques suited to the climate and terrain of Maine's woods.

— IP's Region VI Woodlands Headquarters in Augusta, responsible for the management of more than 1.7 million acres of company-owned forest in the Northeast.

— The massive Androscoggin Mill in Jay, one of the largest fine paper mills in the world, producing nearly half a million tons of light-weight fine papers a year.

Together these facilities represent an investment of more than \$300,000,000 in the last fifteen years alone — strong testimony of the Company's on-going commitment to the compatibility of industrial growth and Maine's environment.



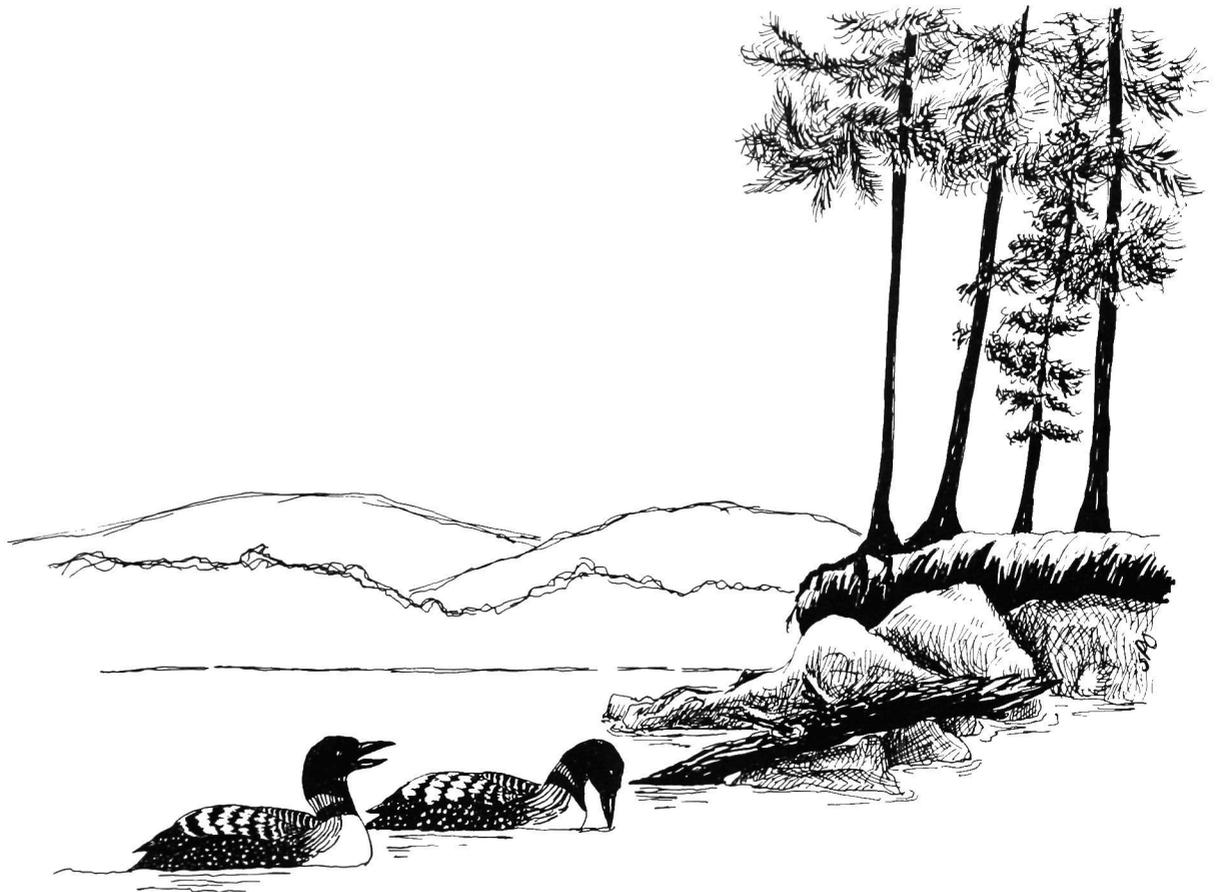
A tradition, a commitment, a workforce. Important elements of IP's past and the foundation of International Paper Company's future in Maine.



**INTERNATIONAL PAPER COMPANY**

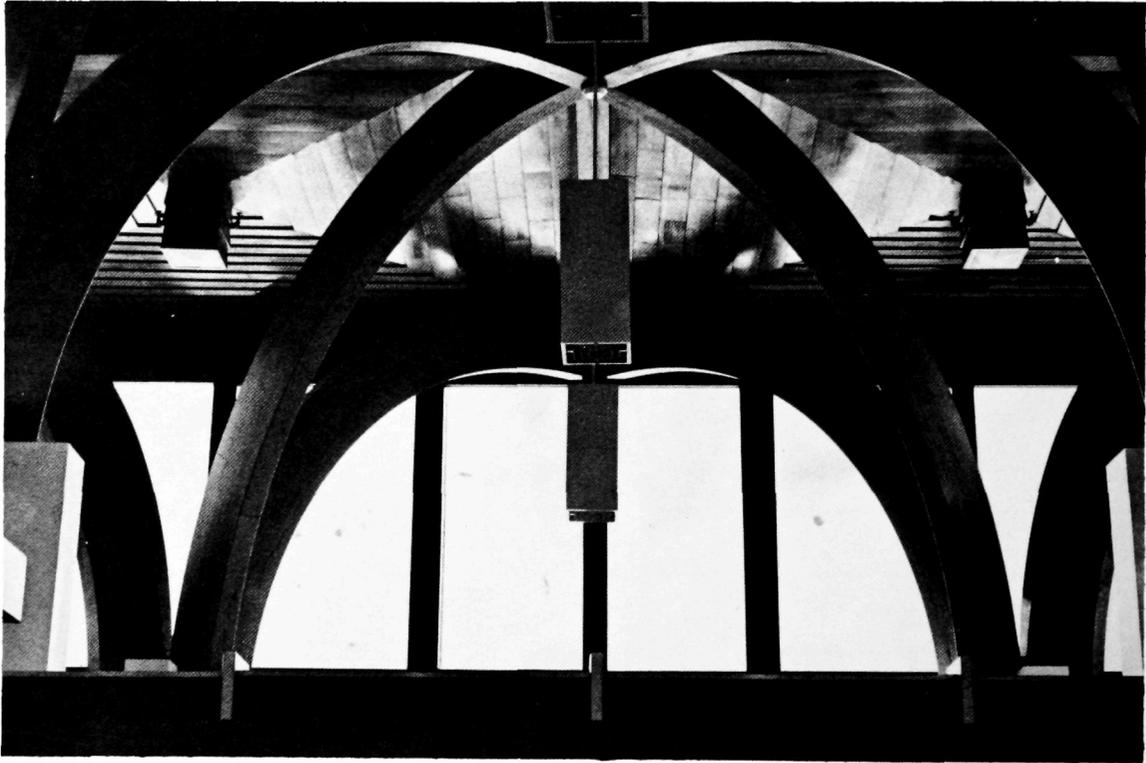
JAY MAINE 04239

# THE MAINE FORESTER



Published Annually By  
THE STUDENTS OF THE  
SCHOOL OF FOREST RESOURCES  
UNIVERSITY OF MAINE

Cover drawing by Peter Dunn



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# DEDICATION

## MR. ROGER F. TAYLOR



It is a special pleasure to write a few words about Roger Taylor. Roger is an example of one of the finest professional foresters I have known. I first met Roger and Mary in 1947 when I was a student at Maine. We lived in the old South Apartments directly above them. Apartments were extremely scarce in Orono for both students and staff. We were all thankful that those plain, drafty old buildings were available.

Roger was born in 1918 in Amherst, Massachusetts and prepared for his career at the Stockbridge School of Agriculture in Massachusetts. Roger came to Maine in 1946 and has participated in about every aspect of the School's field operation since that beginning. He has been a friend to all students and a loyal professional. Roger is active in the Society of American Foresters and he and his wife are regularly in attendance at the national meeting as well as the New England section. He has been a regular attendee at the Eastern Maine Forest Forum since its earliest beginnings.

Roger is always available to help a student or another staff member. Students probably do not realize that he was the University Fire Chief for many years and has given much in other ways to the entire University. The most impressive evidence of his work is in the appearance of the Dwight Demeritt Forest and the qualifications of the students he trained there.

Once before, in 1963, the students dedicated the Maine Forester to Roger Taylor. I believe it is most appropriate that the 1979 volume be again dedicated to him.

Fred Knight

Roger Taylor is one of those people whom everyone likes to call a friend. He is respected by students and faculty, alike. I first met Roger when I was an undergraduate and had the good fortune to work for him on the University Forest. As I look back now, I wonder how he had the patience to explain, time and again, all of the things revolving around the work that was being done: how to safely use the crawler tractor, why an area was being cut the way it was, etc., etc. You were always left with the feeling that his work taught you a good deal about the "real world" and you had fun in the process.

Now, being a faculty member, I still find Roger to have an attitude about life and profession which you have to admire. He still has that same sense of humor and a desire to work with students. All of the faculty appreciate that the University Forest wouldn't be the wonderful teaching and research lab it is today without his dedication to maintaining it that way. Few people are a part of what appears to be an indispensable fiber which makes up an organization. Roger is one of those!

Marshall Ashley

Working for Roger F. Taylor for the last three years has been an experience that will always be with me. Roger's professional attitude is one of the most encouraging in the School of Forest Resources. There is more to be learned from him than simply the skills required to do the work, for Roger is a wealth of information about what forestry used to be like, and is like in Maine. He can also provide insight as to what forestry may well be like in the future.

Roger's patience and understanding when he is teaching someone to use the crawler or loader makes it that much easier to learn. He is such an effective instructor, it's hard to believe he has been doing it with the same enthusiasm for 32 years. I wonder how many times he has said to a cutter, "Well, you could have made a sawlog out of that". Roger has many qualities that make working in the Demeritt and Worthen forests most enjoyable. His dedication and help goes beyond that of his woodwork. As a member of the Woodmans team, I can honestly say we would find it very difficult to exist without Roger's help.

Charles Gadzik

I can remember Roger as a patient field supervisor, teaching students, such as I, the basic skills needed to establish and maintain the transportation system thru the University Forest at UMO. We rocked holes in the spring and plowed snow in the winter and Roger never complained of our crude efforts with machinery but only sought to teach us how to do the job more effectively. Over a period of more than twenty years now, working in forestry, it has been these same skills which time and again have provided a path of communication with a logger or contractor when words won't do but a little bit of practical know-how will. I would hope that the profession of forestry will always retain this balance of scientific education and basic professional skills which men like Roger Taylor do so much to provide.

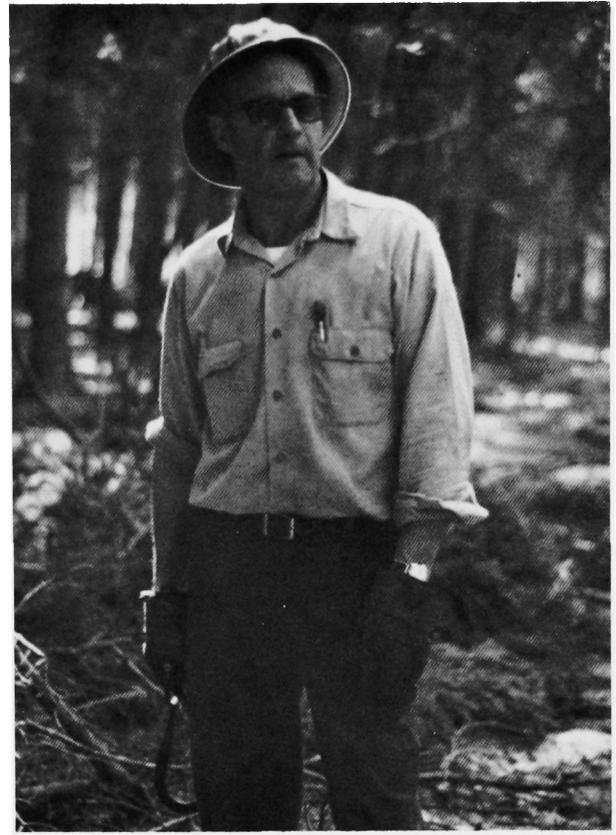
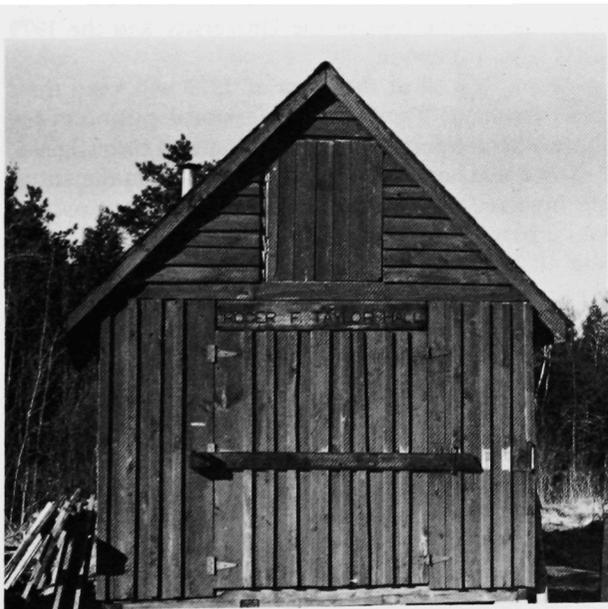
William H. German  
Forester, USFS

Roger Taylor is a significant stimulus to the continuity of respect, ethics, sincerity and practicality among students working on the forest and participating on Woodsmen's Teams. It was reassuring to me to return to Orono after 20+ years and see Roger still functioning effectively and interacting with students.

Classroom courses come and courses go; many are forgotten; but, Roger and his lessons are remembered by everyone with whom he has had contact — remembered well for valuable help, advice and practical learning.

The knowledge and unselfish values we carry through life come from special people who impart a unique combination of knowledge and high principles. We have been extremely fortunate—an outstanding example of one of those rare, special people is Roger Taylor.

Max McCormack



There is no person any more deserving of the honor of having the Maine Forester dedicated to him than Roger Taylor. Roger has, over the years, provided guidance, leadership and training to thousands of Maine students. His integrity and sincerity have endeared him to all and have served as examples of the personal traits that students must emulate if they are to succeed in forestry, or any other vocation.

I first met Roger in the fall of 1955 shortly after attending the two week freshman forestry camp at Princeton. I was a "wet-behind-the-ears", urban person who had a great deal to learn about the woods. Roger's quiet, friendly manner and his great array of practical skills provided an unequalled opportunity for students such as myself to learn about forestry as it really was.

He had . . . and still has . . . a way of taking forestry out of the labs and the textbooks and getting it onto the ground, a skill that is most scarce in the educational systems of today, and one that leads us all to acknowledge that Roger has truly earned the reputation of . . . Teacher/Practitioner.

Thanks Roger . . . from me and from all of the thousands of appreciative foresters who are all trying to keep up to your standards.

Temple Brown  
Acting Director  
Maine Forest Service

# Greetings from the Director



It is a pleasure to make a few comments to the 1979 class and to give best wishes to all the students of the School of Forest Resources. We all can look back on 1978 as the year of our seventy-fifth celebration and a year of accomplishment.

We commenced the fall semester (1978) with some interesting differences to report in our student numbers. Our quota system that was designed to reduce numbers has after three years, had an effect. For the first time in several years both our sophomore and junior classes are smaller than either the freshman or senior classes. Our total number of students is reduced by almost ninety. This has been managed despite the pressure of numbers of applications which are still far beyond the number that can be admitted.

We have responded to accreditation recommendations in several ways.

1. We have requested additional teaching staff. The first would be in the forest policy position.
2. Through the use of quotas we have reduced the total number of students in the School.
3. In the research area, we have organized two additional sections of the faculty for research planning purposes.
4. We have reviewed the curricula and have added the mathematics requirements as recommended as well as other changes.

For the first time in several years, we have had little change in overall staffing. There were no retirements and no resignations of professional staff though there were changes in technologists and technicians. We did fill a position vacated in 1977 when Professor Mendall

retired. Dr. James Sherbourne was selected as the new Unit Leader for the Cooperative Wildlife Research Unit. Late in 1978 Dr. John Litvay accepted a position with the Institute of Paper Chemistry in Appleton, Wisconsin. John will leave the University in the spring (1979).

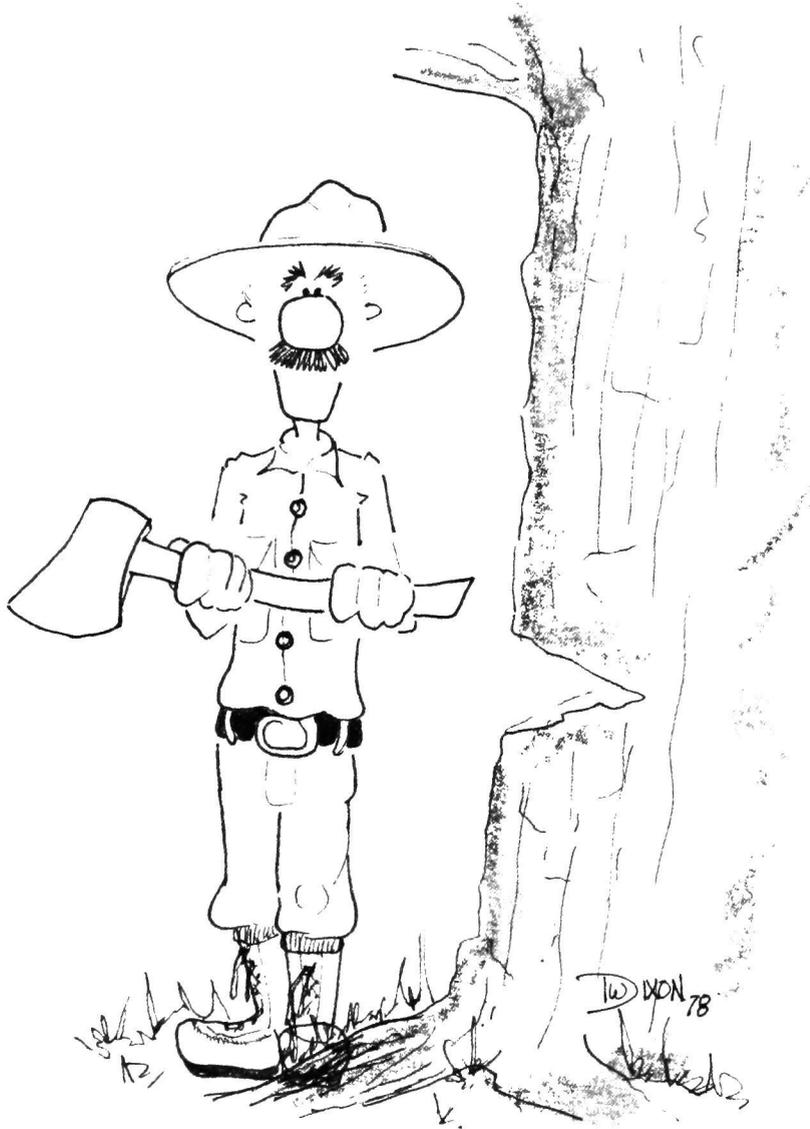
The present students continue to show their outstanding talents whether on our special competitive teams or in other activities. The Wildlife Bowl team again won their contest and remain undefeated. The woodsmen's and woodswomen's teams were also very strong in competition. Scholastically we have had students among the tops in the University and the 1979 class is no exception.

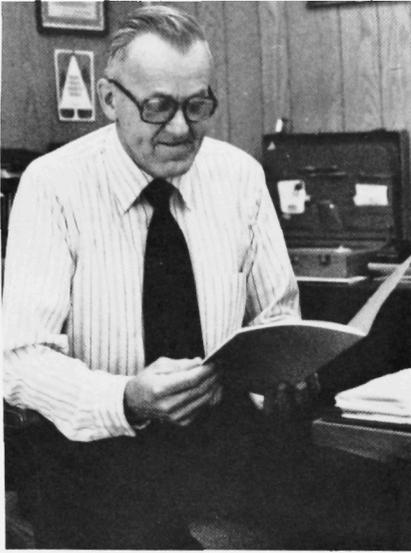
I hope that all of the class of 1979 will keep their goals in mind. There are professional positions for those who are persistent, competent and enthusiastic. I realize that some are not that interested in the struggle involved. That doesn't make those persons any less a part of our expression of affection. I congratulate all of you and wish you the greatest success in your future life. I hope that all of you will look forward to a lifetime of peace and improvement in living conditions for all people.

Sincerely yours,

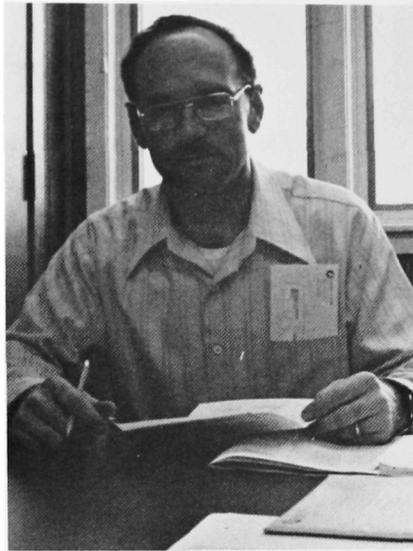
FRED B. KNIGHT  
DIRECTOR

# FACULTY

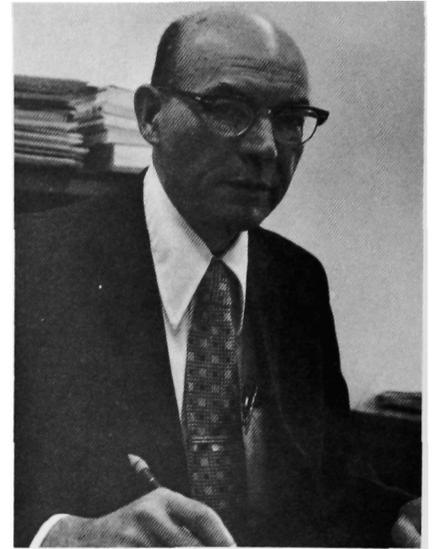




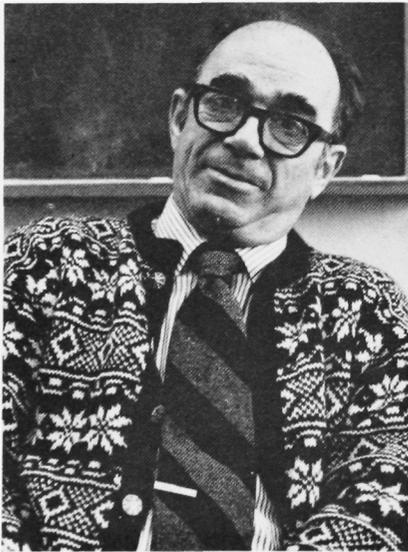
FRED B. KNIGHT  
 Director of the School of  
 Forest Resources  
 Dwight B. Demeritt Prof. of Forestry  
 B.S., Univ. of Maine, 1949  
 M.F., Duke Univ., 1950  
 D.F., Duke Univ., 1956  
 Management Problems  
 Honors Courses



MARSHALL D. ASHLEY  
 Assoc. Director for Administration  
 Prof. of Forestry  
 B.S., Univ. of Maine, 1965  
 M.S., Purdue Univ., 1966  
 Ph.D., Purdue Univ., 1969  
 Photogrammetry and Remote  
 Sensing of Natural Resources  
 Forestry Summer Camp Director



RALPH H. GRIFFIN  
 Prof. of Forestry  
 B.S., Virginia Polytechnic Institute,  
 1943  
 M.F., Yale, 1947  
 D.F., Duke, 1956  
 Silvics-Forest Ecology  
 Silviculture  
 Advanced Silviculture  
 Forest Influences



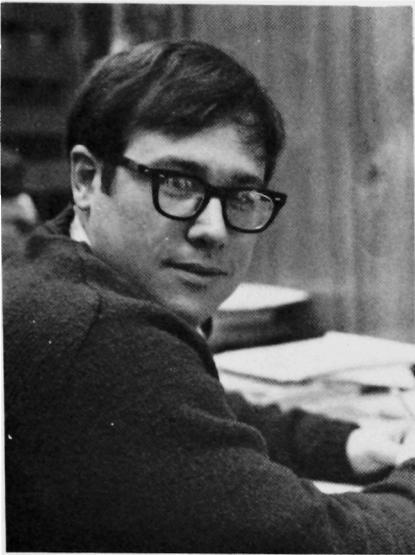
HAROLD E. YOUNG  
 Prof. of Forestry  
 B.S., Univ. of Maine, Forestry, 1937  
 M.F., Duke Univ., Biometrics, 1946  
 Ph.D., Duke Univ., biometrics and  
 Tree Physiology, 1948



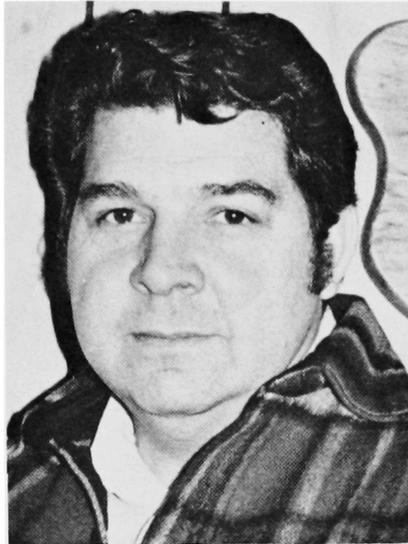
JEAN-LOUIS MORIN  
 B.S., Univ. of Maine, 1976  
 M.S., Univ. of Maine, Forest  
 Remote Sensing, 1978  
 Elementary Plane Surveying  
 Advanced Plan Surveying



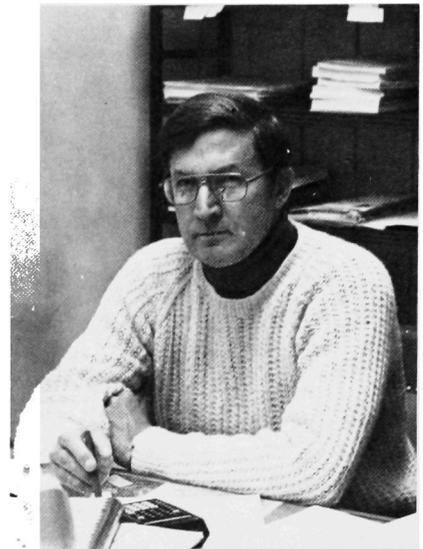
ROBERT KENT SHEPARD  
 Assist. Prof. of Forestry  
 B.S., Univ. of Michigan, Forestry,  
 1963  
 M.S., Duke Univ.,  
 Forest Entomology, 1964  
 Ph.D., Univ. of Michigan,  
 Forest Ecology, 1970  
 Watershed Management  
 Senior Seminar  
 Statistical Inference in  
 Forest Resources Lab



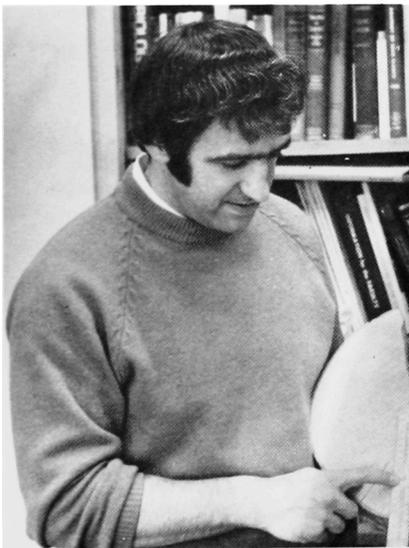
**THOMAS B. BRANN**  
 Assist. Prof. of Forestry  
 B.S., Univ. of New Hampshire  
 M.S., Univ. of New Hampshire  
 Ph.D., Virginia Polytechnic  
 Institute and State University  
 Statistical Inferences in  
 Forest Resources  
 Forest Biometry  
 Forestry Summer Camp



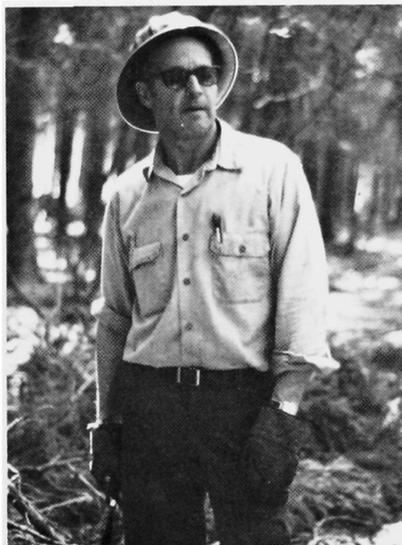
**FLOYD L. NEWBY**  
 Assoc. Prof. of Forestry  
 B.S., Utah State Univ.  
 M.S., Univ. of Michigan, Forest  
 Recreation, 1966  
 Ph.D., Univ. of Michigan,  
 Forest Recreation, 1971  
 Forest Recreation Management  
 Introduction to Forest  
 Resources Lab  
 Recreation and Park Management  
 Forest Policy and Administration



**BENJAMIN F. HOFFMAN**  
 Assoc. Prof. of Forestry  
 B.A., Univ. of Virginia, 1951  
 M.S., Yale Univ.—Forestry, 1957  
 Timber Management  
 Harvesting of Forest Crops  
 Senior Seminar



**DAVID STEVEN CANAVERA**  
 Assist. Prof. of Forestry  
 B.S., Michigan Technological  
 University, Houghton  
 Forest Management  
 M.S., Michigan State University  
 Forest Tree Improvement, 1967  
 Ph.D., Michigan State University  
 Forest Tree Improvement, 1969  
 Forest Planting



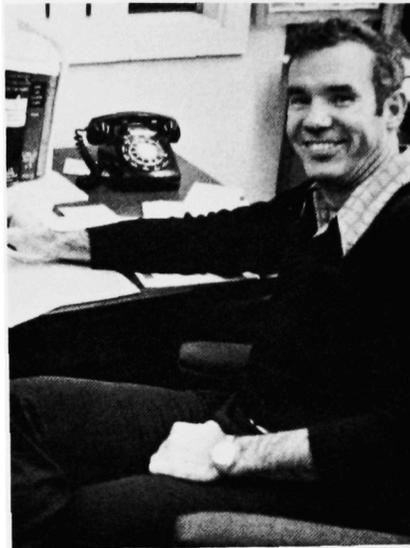
**ROGER F. TAYLOR**  
 Superintendent of Dwight B.  
 Demeritt and Harold W. Worthen  
 Forests  
 Univ. of Massachusetts



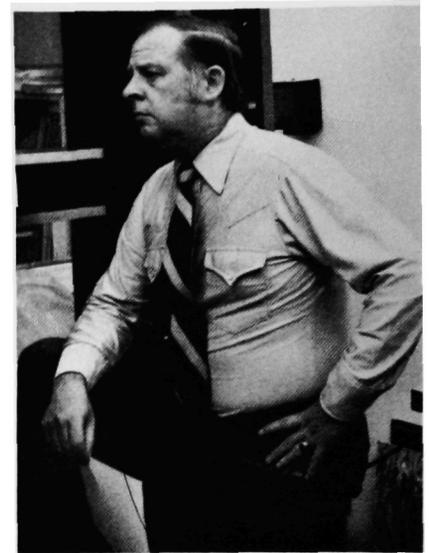
**THOMAS J. CORCORAN**  
 Prof. of Forest Economics  
 B.S., Michigan Technological  
 University, 1955  
 M.S., Purdue Univ., 1960  
 Ph.D., Purdue Univ., 1962  
 Forest Economics  
 Production Analysis in Forestry  
 Planning and Control of Forest  
 Operations  
 Research in Forestry Economics



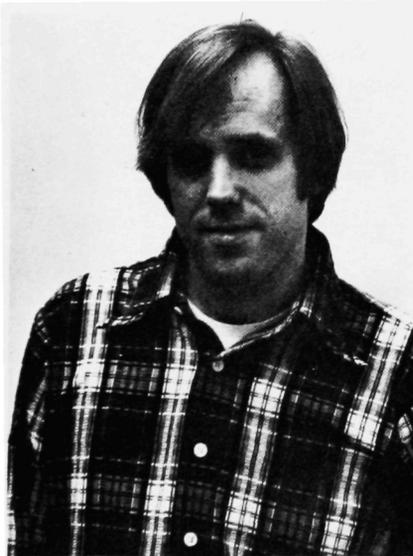
**RICHARD A. HALE**  
 Assoc. Prof. in Wood Technology  
 B.S., Univ. of Maine, 1949  
 M.F., Yale, 1950  
 Primary Wood Processing  
 Wood Preservation and Drying  
 Senior Seminar



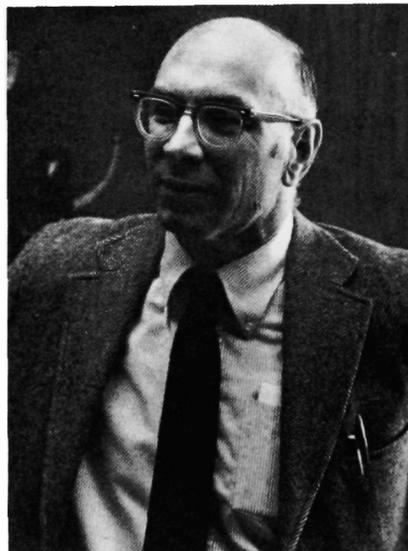
**CRAIG E. SHULER**  
 Assoc. Prof. of Wood Technology  
 B.S., Colorado State Univ., 1960  
 M.S., Colorado State Univ.,  
 Radiation Biology, 1966  
 Ph.D., Colorado State Univ., Wood  
 Science, 1969  
 Wood Technology I  
 Wood Physics  
 Senior Seminar  
 Freshman Seminar  
 Sophomore Seminar



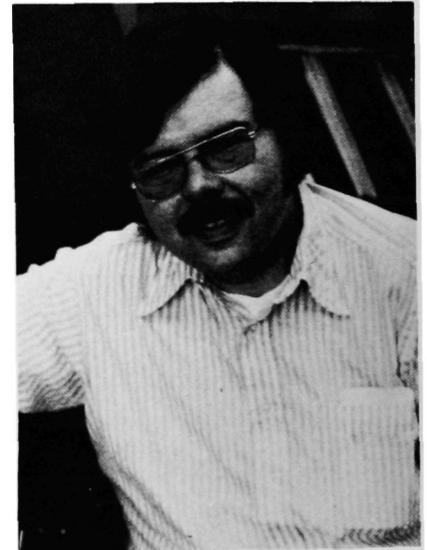
**JAMES E. SHOTTAFER**  
 Prof. of Wood Technology  
 B.S., State Univ. of New York, 1954  
 M.S., State Univ. of New York, 1956  
 Ph.D., Michigan State Univ., 1964  
 Analysis in Forest Utilization  
 Wood Technology II  
 Research Methods in Forest  
 Utilization



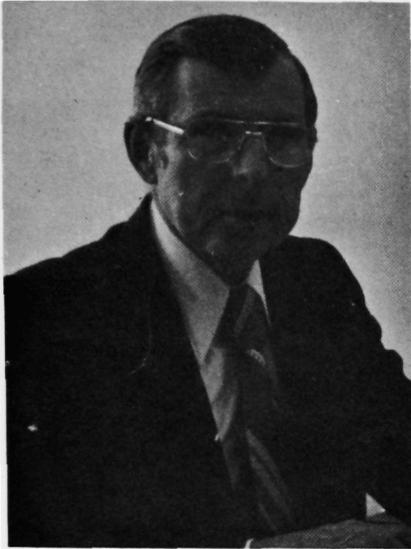
**John D. Litvay**  
 Assistant Professor of Wood Technology  
 B.S., Southern Illinois Univ., 1970  
 M.S., Oregon State Univ., 1973  
 Ph.D., Oregon State Univ., 1976  
 Introduction to Forest Resources Lab  
 Wood Technology Lab  
 Wood Anatomy  
 Research Techniques in Wood Anatomy



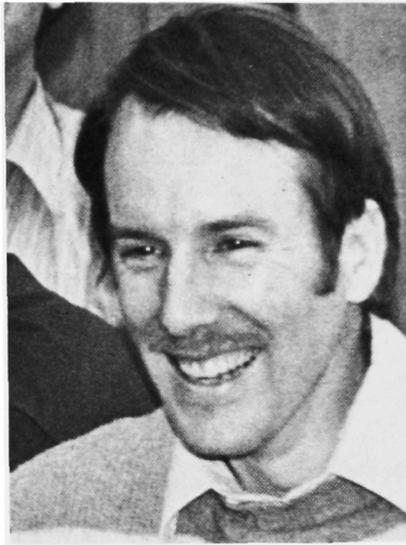
**MARVIN W. BLUMENSTOCK**  
 Forestry Specialist  
 Cooperative Extension Service  
 B.S., Rutgers Univ.  
 Agricultural Sciences, 1957  
 M.S., Yale Univ.  
 Forestry, 1959  
 M.B.A. Univ. of Maine, 1977



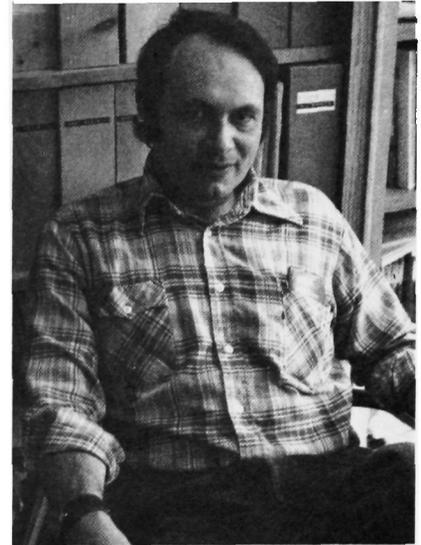
**WILLIAM D. LILLEY**  
 Extension Safety Specialist  
 Cooperative Extension Service  
 B.S., Univ. of Maine, 1970  
 M.S., Univ. of Maine, 1975



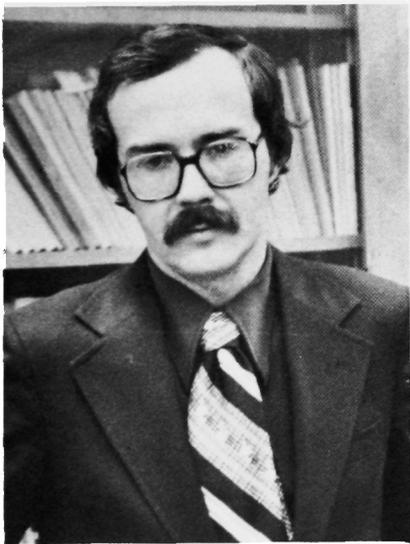
**MALCOLM W. COULTER**  
 Assoc. Director of Wildlife  
 Prof. of Wildlife Resources  
 B.S., Connecticut, 1942  
 M.S., Univ. of Maine, 1948  
 Ph.D., Syracuse, 1966  
 Ecology  
 Senior Seminar  
 Graduate Seminar



**RAY B. OWEN, JR.**  
 Assoc. Prof. of Wildlife  
 B.A., Bowdoin, 1959  
 M.S., Univ. of Illinois, 1966  
 Ph.D., Univ. of Illinois, 1968  
 Ecology  
 Senior Seminar  
 Ecological Energetics



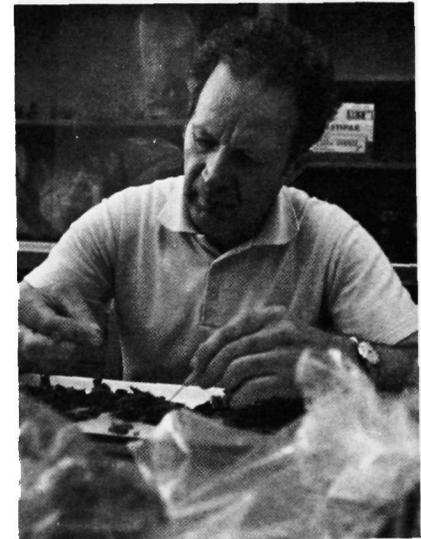
**JAMES R. GILBERT**  
 Assist. Prof. of Wildlife  
 B.S., Colorado State Univ., 1968  
 M.S., Univ. of Minnesota, 1970  
 Ph.D., Univ. of Idaho, 1974  
 Practice of Wildlife Management  
 Senior Seminar  
 Biological Characteristics of Game  
 Birds and Mammals  
 Wildlife Management



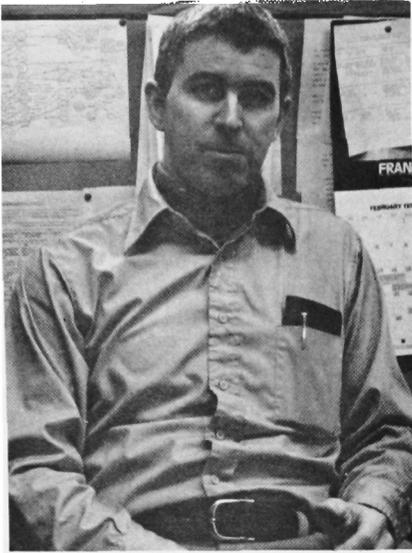
**TERRY A. MAY**  
 Assist. Prof. of Wildlife  
 M.S., Colorado State Univ., 1970  
 Ph.D., Univ. of Colorado, 1975  
 Biological Characteristics of Game  
 Birds and Mammals  
 Director-Wildlife Summer Camp



**CHESTER F. BANASIAK**  
 Assist. Research Prof. of Wildlife  
 B.S., Michigan State University  
 Forestry, 1948  
 M.S., University of Massachusetts  
 Wildlife, 1952  
 Ph.D., University of Maine  
 Forest Resources, 1974



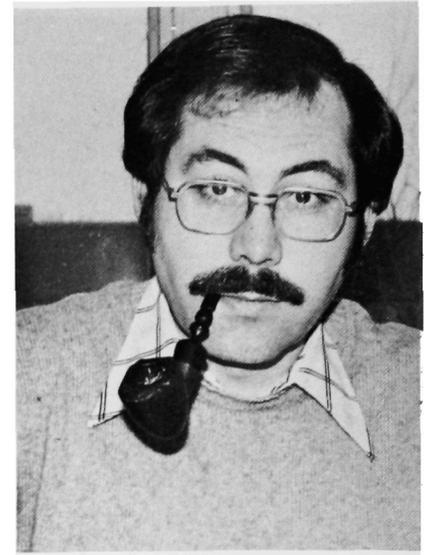
**VOIT B. RICHENS**  
 Assoc. Prof. of Wildlife  
 Acting Leader, Coop. Wildlife  
 Research Unit  
 B.S., Washington State, 1957  
 M.S., Utah State Univ., 1961  
 Ph.D., Utah State Univ., 1967  
 Wildlife Management  
 Wildlife Graduate Seminar



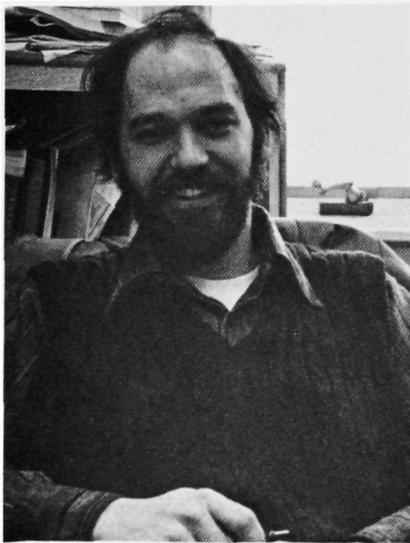
DAVID B. FIELD  
 Assoc. Research Prof.  
 of Forestry  
 Coop. Forestry Research Unit  
 B.S., Univ. of Maine, Forestry  
 M.S., Univ. of Maine, Forestry  
 Ph.D., Purdue University



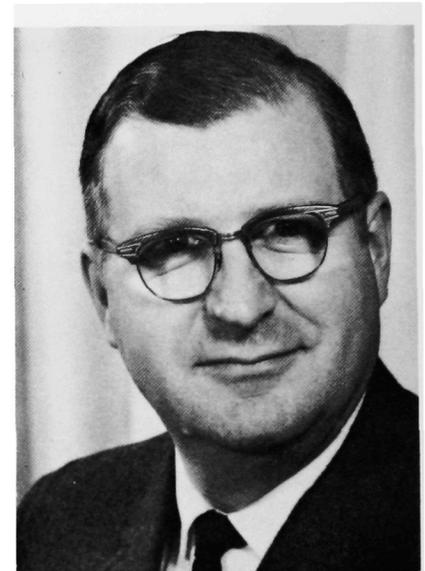
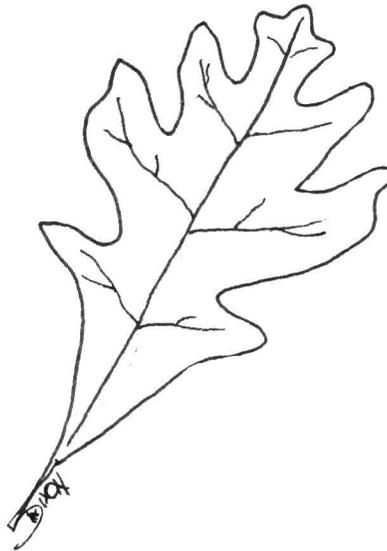
MAXWELL L. MCCORMACK, JR.  
 Research Prof. of Forestry  
 Coop. Forestry Research Unit  
 B.S., Univ. of Maine, 1956  
 M.F., Duke Univ., 1959  
 D.F., Duke Univ., 1963



MARK W. HOUSEWEART  
 Assist. Research Prof. of Forestry  
 Coop. Forestry Research Unit  
 B.S., Kansas State Univ., 1969  
 M.S., Colorado State Univ., 1971  
 Ph.D., Univ. of Minnesota, 1976



CHARLES P. WILLIAMS  
 Assist. Prof. of Forest Technology  
 B.S., Univ. of North Carolina, 1969  
 M.F., North Carolina State Univ.,  
 1972  
 Forest Fire Control  
 Forest Measurements  
 Applied Silviculture  
 Forest Land Management



WALLACE C. ROBBINS  
 Assoc. Prof. of Forest Technology  
 B.S., Univ. of Maine, 1954  
 M.S., Univ. of New Brunswick, 1956  
 Director-Two Year Program  
 Two-Year Summer Camp  
 Intro. to Forest Technology  
 Aerial Photo Interpretation  
 Wood Products Utilization  
 Forest Protection  
 Wood and Tree Identification

## Technicians & Technologists

Paul Messier  
Assistant Forest Technologist  
B.S. Forestry  
University of Maine 1976

Peter Caron  
Assistant Forest Technician  
University of Maine  
Associate Forestry 1974  
B.S. Parks and Recreation 1976

Mary Dyer  
Research Technician  
B.S. Animal & Vet. Science  
University of Maine 1971

Peter Orzech  
Research Technician  
B.S. Forestry  
University of Vermont 1976

Denise A. Brown  
Assistant Wildlife Technologist  
B.S. Wildlife Management  
University of New Hampshire 1978

Ellis B. Sprague  
Assistant Forest Technologist  
New York State Ranger School 1964  
B.S. Forest Management  
University of Vermont 1976

David Sewall  
Assistant Forest Technician  
B.S. Forestry  
University of Maine 1976

Robert K. Lawrence  
Assistant Forest Technologist  
B.S. Biology  
Mid-America Nazarene College 1971  
M.S. Entomology  
University of Arizona 1974

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### Maine Forest Service

James C. Rea  
Forest Resource Analyst  
B.S. Mechanical Engineering  
North Carolina State 1966  
M.S. Forestry  
University of Maine 1976

Kenneth H. Hendren  
Director of Planning  
B.S. Forestry  
University of Maine 1966

Linda Alverson  
Forest Resources Planner  
Eastern Nazarene College  
B.A. 1970

---

### Cooperating Faculty with Joint Appointments

John W. Butzow, Associate Professor of Environmental Education (College of Education)  
Richard J. Campana, Professor of Forest Pathology (Botany & Plant Pathology Dept.)  
John B. Dimond, Professor of Forest Entomology (Department of Entomology)  
Harold C. Gibbs, Professor of Wildlife Resources (Department of Animal and Veterinary Sciences)  
Roland A. Struchtemeyer, Professor of Forest Soils (Dept. of Plant & Soil Sciences)

### Faculty Associates

Barton M. Blum, Project Leader, U.S. Forest Service  
Hewlette S. Crawford, Research Wildlife Biologist, U.S. Forest Service  
Robert M. Frank, Research Forester, U.S. Forest Service  
Lloyd C. Irland, Forest Insect Manager, Maine Forest Service  
Jerry R. Longcore, Biologist, U.S. Fish & Wildlife Service  
Gordon D. Mott, Research Forester, U.S. Forest Service  
Ralph S. Palmer, Retired from New York State Museum & Science Service; Current Lecturer in Zoology Dept., UMO  
Howard E. Spencer, Jr., Leader, Migratory Bird Project, Maine Department of Inland Fisheries and Game  
Charles D. Webb, Manager, Northern Forest Research Center of International Paper Company

### Professors Emeritus

Robert I. Ashman, Professor Emeritus of Forestry

Gregory Baker, Professor Emeritus of Forestry

Frank K. Beyer, Associate Professor Emeritus of Forestry

Lewis P. Bissell, Extension Forestry Specialist Emeritus

Edwin L. Giddings, Associate Professor Emeritus of Forestry

Howard L. Mendall, Professor Emeritus & Leader of Cooperative Wildlife Research Unit

Albert D. Nutting, Director Emeritus

Henry A. Plummer, Associate Professor Emeritus of Forestry

Arthur G. Randall, Associate Professor Emeritus of Forest Technology

## SECRETARIES

Top Row, l to r:

Millicent Harris

Maxine Horne

Nora Ackley

Janice Gifford, Ad. Asst.

Bottom Row, l to r:

Regina Pelletier

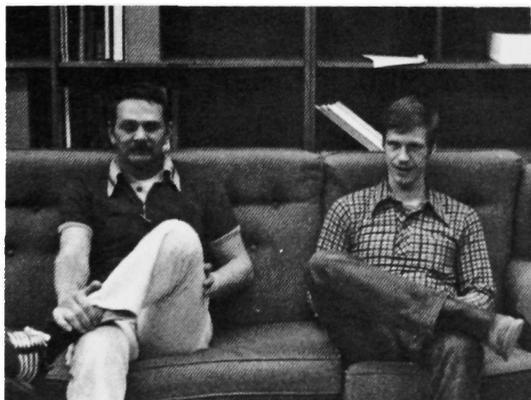
Amy Morin

Cynthia Paschal

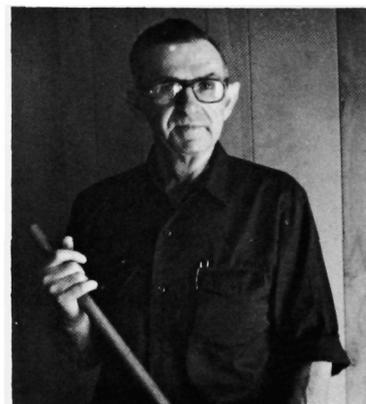
Wanda Grenier



## AND JANITORS



**Dick Robichaud and John Ellis**



**Al Robichaud**

# SPECIAL FEATURES



# The Use of Herbicides in Forestry

By

Michael Newton

Professor of Forest Ecology

Oregon State University

There has been quite a squabble in recent months about the use of herbicides in the forests of Maine. Foresters have recently begun using several herbicidal chemicals to try to reverse the steady trend in degradation of species composition, and are being beset by angry people demanding an immediate halt to all spraying. The paragraphs that follow will provide a brief perspective on the history of herbicide development, world wide, and provide some insight into the nature of forest chemicals, their uses and expectation of benefit and risk.

Herbicides have been around on a very limited scale for a couple of centuries. Common materials such as salt, various oils, arsenic compounds and other substances have been used for a long time where total riddance of vegetation was desired. The discovery of 2,4-D, in 1942, signalled the beginning of a whole new era in farming, because it marked the beginning of selective weed control with inexpensive, non-persistent chemicals.

Ever since man became a farmer in preference to hunting, the grower of crops has had to struggle incessantly with pests. The most important pests of all have been plants. Everyone knows that it is necessary to till, hoe, cultivate or otherwise remove unwanted weeds in order to grow virtually any crop. Weed control is the main reason for tilling today. There are still tens of millions of farmers practicing shifting agriculture in the tropics; they slash, hoe, dig and chop all year round to eke out a subsistence living. Nearly all their labors are for weed control of one kind or another.

Chemical weed control has truly been a bonanza in all crop production. Herbicides mean that the primitive farmer can think about some activity other than twelve hours of toil each day for his one acre of crop. They mean that the modern farmer can increase yields, acreages and reduce erosion.

Herbicides are now used everywhere. In this country, they are used in the production of every crop. They are used to keep rivers and waterways cleaned of various weeds. They keep trees out of power lines and brush away from roadways. They protect desirable tree species from competitive effects of brush in forests. They keep weeds from breaking up pavement. They are used to remove noxious and poisonous plants in pastures, ranges and recreation areas. Over all, 750 million pounds of herbicides are used in the United States, of which about 600+ million are applied to crops, 100 million to non-crop sites such as rights of way, 18 million on ranges and pastures, 2.5 million to water and about 2.5 million to forests.

The average acre of agricultural land receives about two pounds of herbicide per year. The average acre of forest receives about .005 pound. Most forests are never treated. Clearly, forests receive very little herbicide compared to virtually any other place. Yet forests are the focus of many bitter complaints about herbicides. Maine and Oregon are states with relatively little over-all herbicide use, and yet these states are the scenes of some of the most acrimonious disputes.

The complaints about herbicide use are based mostly on the assumption that they are harmful to people and to the general environment. The likelihood that they can or might injure someone may be viewed more easily after considering how they are used, and what sorts of materials they are.

The most common herbicides used in forests are 2,4-D and 2,4,5-T. Small amounts of picloram, atrazine, glyphosate, MSMA and others are in use, too. All are registered for use on food crops. All are in the range of moderately toxic to non-toxic to mammals; the most toxic require about two fluid ounces of the pure concentrate to threaten a human life, placing them in the same category as aspirin, or safer. No skull and crossbones is required on the container.

The herbicides are extremely toxic to *plants* of certain kinds. Some plants are resistant to each of them, however, and they may be used selectively to promote the development of certain species in the process of treating entire plant communities. For this reason, they are of great usefulness to the forester, who has thus far been frustrated in widespread management of species composition. In particular, the aforementioned herbicides may be used to control the woody and herbaceous weed species that compete most severely with spruces, fir and pines without injuring the conifers or actually eradicating any species. The most important for this purpose is 2,4,5-T.

Herbicides may be used for several purposes in forests. Every forester has been indoctrinated in the importance of *site preparation* before planting trees. Traditionally, this has been done poorly, or on too few acres, or has been done with a heavy hand by bulldozing all the residential vegetation and slash into piles. Burning is also popular in some places. The job can be done now with herbicides. Picloram, mixed with 2,4-D or 2,4,5-T will do an excellent job of site preparation without disturbing soil. It only takes about a half-pound of picloram and two pounds of 2,4,-D or 2,4,5-T to control most of the competitors adequately for a new planting. It leaves abundant herbage and browse while controlling the worst competitors. But picloram cannot

be applied over conifers without injury. If some conifers are present, 2,4,5-T is used alone at the rate of 2 to 3 pounds per acre for release. Glyphosate may also be used for site preparation on release, and is now undergoing intensive experimental testing, along with 2,4,5-T and other herbicides, at the Maine Cooperative Forest Research Unit by Dr. Max McCormack.



**The author, Mike Newton, standing between a control plot and one sprayed with Glyphosate.**

Herbicides used for site preparation or release are normally applied by helicopter. These aircraft are highly versatile in distributing the herbicide diluted in 5-10 gallons of oil or water per acre. Because they spray everything below them, they can't be used where some of the sensitive species are too desirable to risk injury. In these situations, other methods are used, or other chemicals are sought with different selectivity.

One of the principal methods other than aerial treatment is injection. Herbicides may be injected in very small amounts into stems of certain hard-to-kill species with good results and complete selectivity. They can also be used where the chemical would be harmful to crop species. Hardwood management, for example, is a natural place to use injection for stand improvement, because helicopters would not normally be selective enough.

But some hardwoods are very tolerant of certain herbicides, and may be managed with aerial applications. Sugar maple and white ash, for example, are highly resistant to 2,4,5-T. I visualize the use of an ash overstory to bring on a white pine shelterwood with little weevil injury as being an example of intensive silvicultural use of herbicides. Planted ash and pine would both tolerate dosages of 2,4,5-T needed for clearing. Such a treatment would make a technically difficult



insect and host management problem become easy while capitalizing on the value of the "nurse" crop. Even-aged ash and maple stands can also be kept clear of beech, red maple and striped maple with the same approach. Glyphosate controls ash, beech and other hardwoods; other herbicides control maple and ash but not beech. There's endless versatility. And each chemical does different things at different seasons, so there's versatility within chemicals, as well.

There are other silvicultural jobs that may be done with herbicides. It is possible to kill merchantable trees before felling to reduce haul weight and power requirements for machining. Trees so treated do not spoil quickly, because the insect vectors of fungi avoid the quick-drying phloem. MSMA or cacodylic acid is used for this purpose, primarily for conifers. Not surprisingly, these herbicides are also effective for controlling certain species of bark beetle. The same treatment of firewood trees greatly enhances their fuel value and reduces cost of handling.

Pre-commercial thinning hasn't really caught on in Maine. It will soon, as the premium on solid-wood products is more generally recognized. Pre-commercial thinning is normally done with a chain saw. The sudden release of a few hundred trees per acre in a stand of several thousand tends to leave the residual stand vulnerable to sunscald, windthrow and snow damage. The stand can be injected instead of felling, however, with the result that the dead trees support the living for a few years. Dead tree also provide the necessary degree of protection from sunscald while live trees respond to release. Chemical thinning is also less costly than saws in stands requiring treatment of up to 1,500 trees per acre. Above that, saws are more efficient.

Herbicides are used in relatively small quantities. They do not persist for long periods, and residues in the environment are of negligible biological importance for most products. Picloram is the one exception, in that there is a slight danger that stream contamination by direct aerial application could cause damage to irrigated potatoes or tobacco. So we recommend that aircraft applying picloram stay at least 100 feet away from water that may be used for irrigating these crops. None of the herbicides can get into water in concentrations high enough to cause injury to fish, aquatic insects or plants or humans that might drink from it. The safety factor for fish is at least 100:1; for all other forms, it is far greater. Also, the herbicides do not bioaccumulate or magnify. So there is not the food chain problem that was observed with organo-chlorine insecticides. And terrestrial wildlife especially birds, is highly tolerant of herbicides at conventional rates used in forests.

What about dioxin? Is there substance to allegations of birth defects and spontaneous abortions as the result of using 2,4,5-T? Dioxin, more generally known as TCDD (2,3,7,8-tetrachlorodibenzo-p-dioxin), is a trace contaminant of 2,4,5-T and a closely related herbicide, silvex. Each *million tons* of 2,4,5-T contains 30 *grams* of TCDD (30 parts per billion in the undiluted pure 2,4,5-T). The amount that actually arrives on an acre sprayed with two pounds of 2,4,5-T is about 20 millionths of a gram, more or less. The amount that reaches the forest floor is seldom more than four of these micrograms.

TCDD is no doubt very toxic. So are many natural substances, but TCDD really is nasty stuff. Fortunately, it does take significant dosage to cause symptoms. The amount appearing in a forest doesn't approach harmful quantities, and there is no toxic hazard. We have examined wildlife in 2,4,5-T treated forests



with equipment so sensitive that we could detect a few parts per *trillion* in livers, where TCDD would accumulate if present. But it wasn't present. More recently, it has been discovered that the dioxins, a whole group of chemicals of which TCDD is only one, are naturally occurring products of burning. Apparently, we have evolved with them over the millennia, and 2,4,5-T does not contribute significantly to the environmental load.

As a matter of interest, humans appear to be quite tolerant of TCDD, as mammals go. An industrial accident at a cosmetics plant in Seveso, Italy, released between 1.5 and 11 pounds of TCDD on about 250 urban acres two years ago. This may be compared with the 3 ounces released over 7 million largely uninhabited acres in the United States during a year's use of 2,4,5-T. The Seveso incident was in an area inhabited by 30,000 people. Remarkably, there were no fatalities. 143 children were afflicted with a skin rash known as chloracne, but there were no increases in spontaneous abortion or birth defects among 628 pregnant women. Dogs and cats died by the thousands, but adult humans were hardly affected even though they were not evacuated for two weeks.

Seveso was an incredible human exposure to TCDD, and it has been thoroughly documented. It should dispell any possible doubts about TCDD dangers from the routine use of 2,4,5-T. Fortunately, TCDD doesn't last more than a few hours when it is released with 2,4,5-T, and that does a great deal to eliminate any residual problem, even in the event of an accident. There are no plants in this country with the weaknesses of the Seveso plant and the likelihood of such accidents in manufacturing is remote. There are no other sources of significant exposure.

The introduction of herbicides has given the forester some new and professionally thrilling opportunities to meet resource management obligations. They can be applied quickly and cheaply. They release labor for far more important and safer tasks than cutting brush. They permit the salvage of stands that would be exterminated by brush or weed tree cover without attention. They reduce the destructive effects of harvesting and site preparation. Maine has many millions of acres of land that are potentially good for growing timber, wildlife and scenery. The development of herbicides for a variety of uses will permit the forester and wildlifer to get on with the management of the resources under his or her jurisdiction. Good management no longer need be limited to a few small demonstration plots. The modern forester should be familiar with these tools and use them wisely.

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Editor's Note: On March 1, 1979, E.P.A. banned 2,4,5-T and Silvex for forestry and pasture use and for use on rights-of-way. The validity of this action by E.P.A. has been challenged in the Federal courts.



# Maine's Critical Areas Program and White Pine

By

Harry R. Tyler, Jr. — Critical Areas Program Manager

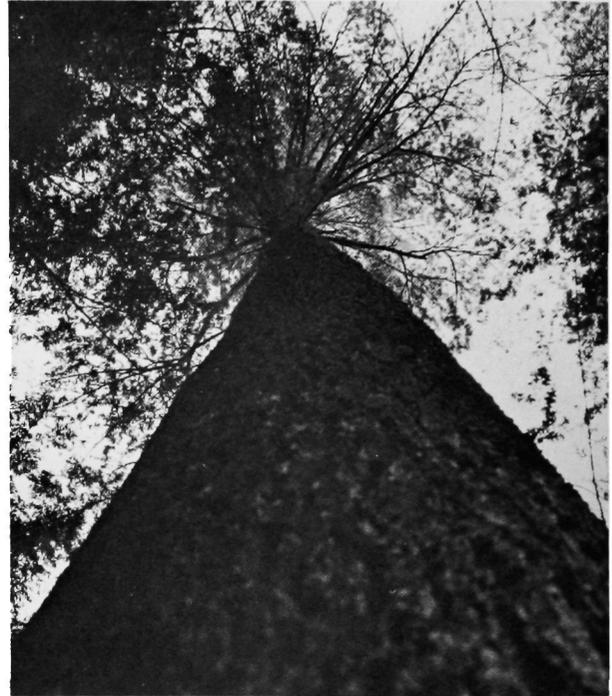
In 1974 the State Legislature directed the State Planning Office to conduct a comprehensive state-wide inventory for significant natural areas. The name "critical area" was assigned to natural features of state significance that are worthy of conservation. These include rare plants, unusual animal habitats, and outstanding geological formations. An eleven-person Citizen Advisory Board was established to advise the State Planning Office on the listing of areas on the Register of Critical Areas. Because the program is essentially non-regulatory, conservation of critical areas depends upon the cooperation of the landowners.

There are three main parts of the Critical Areas Program: 1) inventory, 2) registration, and 3) long-term protection. The program uses the topic approach to identify significant areas. The report, "A Preliminary Listing of Noteworthy Natural Features in Maine," lists suitable topics for the program to investigate. Once topics are selected, the State Planning Office contracts with professional geologists, botanists, or zoologists to prepare planning reports. In four years, 61 reports have been prepared on such topics as mountain-laurel, eider ducks, fossils, and white pine.

After areas are identified, the State Planning Office staff contacts landowners regarding critical area designation. The staff evaluates the site and draft descriptions and maps. The Critical Areas Advisory Board meets about every two months to approve areas for inclusion on the Register of Critical Areas. Since 1974, 203 areas have been designated, and an additional 200 areas have been inventoried. In addition, the Critical Areas Program has used the 1400 areas on the updated Natural Areas Inventory as resource material.

After designation, the Critical Areas Program works closely with landowners on the long-term conservation of some areas. Most areas, however, are well protected by their isolation. The program works closely with The Nature Conservancy and the Maine Coast Heritage Trust on the conservation of many of Maine's critical areas.

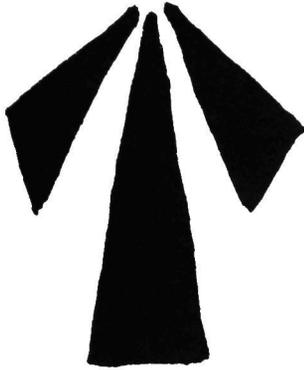
In June of 1977, the State Planning Office hired Philip Conkling, a consulting forester, to conduct a state-wide inventory to locate and evaluate significant old growth white pine stands. White pine was selected as a critical areas research topic because the species is the official State tree, and because it played an important role in Maine's lumbering industry. Also, many people place a high value on seeing large old growth trees.



When the first settlers explored Maine's river courses, they were overwhelmed with the abundance of large white pine. The steep-sided edges of ponds, lakes, rivers and streams provided suitable ecological situations for the growth of large white pine stands. In northern Maine, however, the pine was a scattered super dominant, with an estimated occurrence of one tree per twenty acres. The large pine crown would poke up above the spruce-fir forest. Because the pines were clustered along watercourses, the early lumberman greatly overestimated the abundance of large commercial white pine in Maine.

White pine was the mainstay of Maine's early economy. The first sawmill in the New World was built in Maine in 1623 at the foot of Asbenbendick Fall on the Piscataqua River in what is now South Berwick. The English were the first to recognize the importance of Maine's pine, which eventually provided the Royal Navy with superior white pine masts. In fact, the high quality of the Maine mast pine helped England maintain her naval supremacy. Ship timber exports to England and other European shipyards were the life blood of Maine's economy. At one time there were over fifty shipyards along the coast.

The diminishing supply of quality pine prompted the British government in 1691 to reserve all white pine trees greater than 24 inches one foot from the ground growing on lands not already granted to private persons. Royal Navy surveyors cut a "Broad Arrow" into trees reserved for the forest resources, and the Crown made it a crime to cut any white pine on ungranted lands.



**The King's Broad Arrow**

Maine's "pine era" existed from 1775 to 1850 when most of the accessible pine stands were depleted. By 1840 there were an estimated 1,400 sawmills on the major streams. The peak year of harvest was 1909 when 380 million board feet were harvested. By 1932, the total white pine inventory was ninety-one percent second growth, and nine percent old growth.

For Maine's Critical Areas Program, Philip Conkling conducted a state-wide inventory to locate the few remaining old growth pine stands. The criteria used for evaluating stands were: 1) individual trees of historical importance or large size, 2) stands over 100 years in age with 75% pine composition, 3) stands growing in typical pine type-well drained soils, 4) stands with different tree associations—spruce-fir, hemlock, hardwood, 5) genetically superior trees, and 6) stands with minimal human disturbance.

A total of 120 potentially significant stands were initially inventoried, and thirty-one were field checked. Eight stands were recommended for designation. Thirteen stands of known significance and 56 of unknown significance were recommended to be site evaluated.

The significant pine stands that were located in the study range from a single tree with a 49" d.b.h. and estimated age of 300 years to stands of several acres with trees 130 years to 185 years old. The Bowdoin Pine in Brunswick are only 120 years old. Two areas are in Falmouth; one along the Presumpscot River, and the other within one-quarter of a mile of the Maine Turnpike. The Norway Nature Club has been protecting a 200-year-old stand since 1931. The Nature Conservancy owns two old growth pine areas, the Hermitage

and Mullen Woods. During the coming year, the Critical Areas Program staff will be visiting and evaluating other pine stands in order to determine if they qualify for critical area status.

These old-growth stands, which are rare in Maine, serve as important ecological baselines. Further, they serve to give us a glimpse of the stature and aesthetic appeal of undisturbed, unmanaged woods. We hope that the landowners of these identified old growth areas will keep them as living reminders of Maine's past forest. Some of these areas are already owned by conservation organizations and government agencies dedicated to the stewardship of Maine's natural heritage. It is not asking too much to maintain these few remaining areas in a natural state with natural events taking place without man's interference. As time goes on, we will appreciate these areas more and more. Also, as more old growth inventory work is undertaken for the program, new areas will be identified, including, hopefully more significant old growth white pine stands.



# Coastal Islands and Their Seabird Colonies

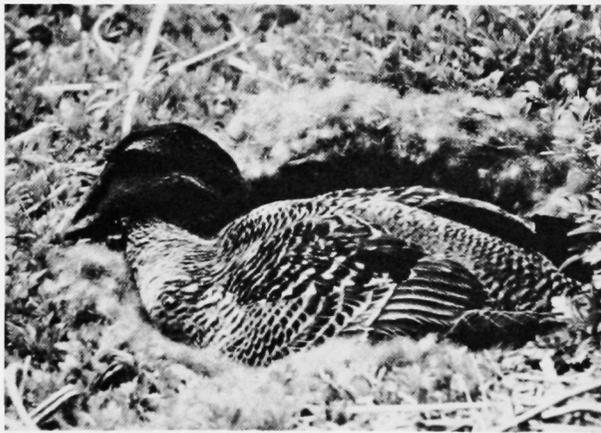
By

Alan Hutchinson  
Wildlife Department

Maine Department of Inland Fisheries and Wildlife

The word "seabird" is a general term referring to a variety of birds associated with the marine environment. There are about 15 species in this group that hold special interest in Maine due to their traditional use — often in large numbers — of certain coastal islands for nesting. Seabirds found nesting on Maine islands include common puffins, razor billed auks, black guillemots, arctic terns, common terns, roseate terns, laughing gulls, great black-backed gulls, herring gulls, double-crested cormorants and Leach's petrels. Although technically not a true seabird, the eider duck is probably the best known of Maine's coastal breeding birds, and we include it in this group due to its colonial nesting nature and its association with coastal islands for nesting. Additionally, black-crowned night herons, great blue herons, snowy egrets and glossy ibis are wading birds that nest colonially on certain coastal islands.

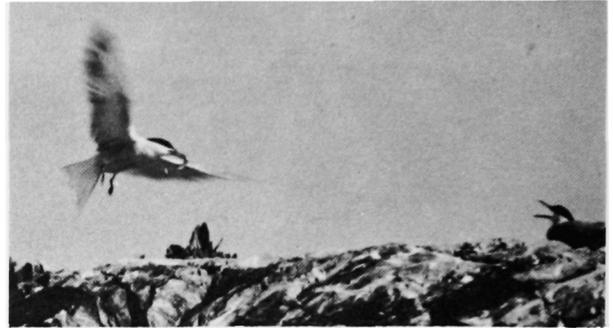
During the breeding season, starting in late March, these birds return to the islands for nesting and raising their young. These concentrations, called colonies, range in size from a few to over 1,500 nesting pairs. The seclusion offered by the island situation enables such concentrations to exist and is a major reason Maine's seabird colonies have survived. During this time of nesting, however, the birds, particularly the young, are extremely vulnerable, and any human disturbance can



**Eider Duck on Nest**

disrupt their normal behavior and result in a tremendous loss of hatchlings and eggs due to predation or exposure.

Historically, seabird populations on the Maine coast, as well as the entire east coast, have shown great fluctua-



**Arctic Tern**

tions. Changes are natural and expected in any biotic community, but the most dramatic changes in seabird population have resulted from man's interference. Judging from the available reports, it appears that by the late 1800's, seabird populations had been eliminated from the waters of New England. This decline from the great numbers present in colonial and pre-colonial years resulted from several factors. For many years, the eggs had been collected from the nesting islands for food and for several species the adults were avidly hunted for the "stew pot". A more serious threat resulted from the world of fashion in the late 1800's. At that time it was extremely popular for ladies' hats and headpieces to be decorated with bird feathers or an occasional whole, stuffed bird. The nesting colonies found on the coastal islands provided a ready source for this trade in millinery fashion. The combined effects of all these pressures proved too much, and the nesting populations disappeared. The advent of regulated hunting and legislation protecting the nesting birds in the early 1900's, stimulated a return of these nesting birds. This recovery has been documented quite well for several species and provides an excellent example of what proper management of our wildlife resources can accomplish.

With the objective of establishing an up to date information file regarding coastal wildlife resources and in particular these traditionally used islands, this office initiated a program in 1974; to identify the nesting islands, to inventory the seabirds using them, and to establish management goals.

Through a cooperative effort in 1976 and 1977, extensive information has been made available by the University of Maine's coastal nesting seabird inventory (a contractual agreement between the University of Maine at Orono and the Office of Biological Services,

U.S. Fish and Wildlife Service) headed by Dr. Carl Korschgen. With this information, steps are now being taken to establish Departmental management policies and to reassess island acquisition plans. The findings of this survey are summarized in Table 1.

Table 1  
Summary of Coastal Bird Colonies in Maine, 1977<sup>1</sup>

Species	Number of Colonies	Estimated Number of Breeding Pairs
Common Puffin	1	125
Black Guillemot	116	2,665
Razorbill	2	25
Great Black-backed Gull	223	10,009
Herring Gull	224	26,387
Laughing Gull	6	231
Common Tern	24	2,095
Arctic Tern	9	1,640
Roseate Tern	3	80
Least Tern	2	21
Leach's Petrel	17	19,131
Double-crested Cormorant	105	15,357
Common Eider	240	22,385
Great Blue Heron	18	903
Little Blue Heron	2	4
Snowy Egret	4	90
Louisiana Heron	1	1
Black-crowned Night Heron	8	117
Glossy Ibis	3	75

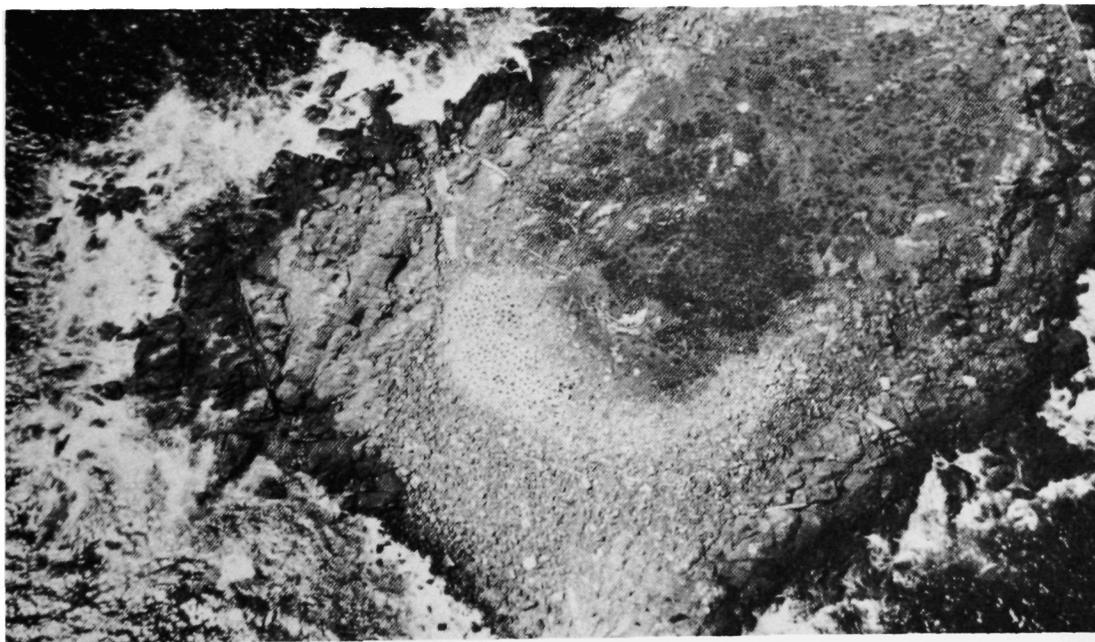
<sup>1</sup>from: Korschgen, C.E. 1979. Maine Coastal Waterbird Colonies 1976-1977. U.S. Fish & Wildlife Service, Biological Services Program, unpublished.



**Common Tern**

There are approximately 3,000 islands and major ledges on the coast of Maine. Of these, approximately 350 are used by nesting, "seabirds", with nesting populations ranging from one to over 1,500 pairs per island. These data indicate that a rather small percentage of Maine's coastal islands are responsible for supporting these seabird populations and that an even smaller percentage (those with the larger colonies) supports the major portion of the populations.

The majority of the nesting islands are currently under private ownership. It is largely a result of the care and stewardship shown by these owners that their is-



**Cormorant nesting colony on Little Egg Rock**

lands are still suitable for nesting seabirds. Rising taxes and increasing pressures for recreational and industrial development provide little assurance that this will continue. With the goal of at least maintaining present levels of nesting seabird populations, this Department is continuing its efforts to protect the most significant colonies. This is being done through island acquisition and transfer, private landowner agreements, encouragement of local planning, and other management measures.

Within the past year, the Department has acquired, through gift or purchase, four major nesting islands: Ram and Vail Islands in Casco Bay; Great Spoon Island in Isle au Haute; and Ballast Island in Jonesport. In addition, portions of Bangs Island in Casco Bay and Carver's Island in Vinalhaven have been transferred from the Maine Bureau of Parks and Recreation to our Department to be managed as seabird nesting islands. With these additions, the Department now owns 29 islands. The estimated nesting populations for

Briefly, the management policy for coastal, nesting islands owned or managed by this Department and recommended for private owners interested in the protection of the nesting birds, has three major objectives.

1. To provide adequate breeding habitat by maintaining or enhancing existing conditions.

2. To protect nesting birds from human or other disturbance by prohibiting public use of the islands during the nesting season (May through mid-July).

3. To allow public use of the islands, except during the nesting season, for primitive recreational activities such as hiking, hunting, fishing, wild crop harvesting, etc., provided no damage is done to the nesting habitat.

These nesting islands represent a unique and valuable resource to the people of Maine and the nation. With the ever-increasing developmental pressures being exerted along our coast, we feel that every effort should be made to maintain their natural values.



**Black Guillemot Nest**

Department-owned islands and the approximate percentage this represents of the estimated statewide totals, by species, are given in Table 2.

Table 2  
Estimated Seabird Populations Nesting on Islands Owned by the  
Maine Department of Inland Fisheries and Wildlife.

Nesting Species	Estimated Nesting Pairs	% of Estimated Statewide Nesting Population
Common eider	2,370	10.5
Common tern	300	15.0
Black guillemot	110	4.1
Herring gull	2,300	8.7
Great black-backed gull	800	8.0
Double-crested cormorant	2,000	13.2



**Double-crested Cormorant**



# The Passing of an Era

By

Chuck Gadzik



**John F. Carney**

The passing of the old time logging era took another step this past November with the death of John F. Carney. John was born in Ashland, Maine at a time when lumbering was the mainstay of the northern Maine woods and the pulp industry was still in its infancy. John worked at a variety of jobs as did everyone at that time in Maine. But everything John did was done with a maximum effort and determination. He could do the work of three or four men in the woods or on the potato fields. In 1939, John went to the Eastern States Exposition in Springfield, Massachusetts and set a world record in potato picking; he also held records as a potato barrel roller.

The stories of John's ability as a woods worker are many. He was very good with an axe and saw, but that was just the beginning. It's hard to say just how John got started as a sawfiler, but it was probably very similar to the "Felix" story in this publication.

John went to work for Simonds saw in Fitchburg, Mass., the major supplier of saws to this area. He traveled around the logging camps teaching filing and techniques of cross-cut and buck sawing. John got involved in competitive sawing and chopping about this

time. He has held many world records in chopping and sawing, some as recently as 1974.

John's ability as a filer was exceptional. He was always designing new saw patterns for woods work that put Simonds engineers to shame. John would file saws that were being sent out west for competition. Competitors would pay 50% of their cash prizes for the use of John's saws, which almost always won. It's safe to say that at this time and for some time to come John was one of the best filers in the world.

As the crosscut was replaced by the chainsaw in the mid-fifties, Simonds had John travel the Eastern U.S. as a sawmill trouble shooter. John was in his late 40's or early 50's by then. It's amazing that someone who devoted his life up to that point to hand saws could enter a new field with as much enthusiasm as John did. It was at this time that John was writing his "Felix" stories for *The Northern Logger*. He loved to tell stories. According to his oldest son Richard, John had more pride in his story telling than in his saw filing.

The fifties were also the time that John became involved in the University of Maine Forestry Summer Camp. John would spend two or three days teaching the students how to file cross-cuts and bucksaws. He would also spend time talking about his new trade, sawmills. John was a strong advocate of the bucksaw as a faster cutting tool than the chain saw. He could do more than talk about it, he proved it many times and he was in his fifties at the time.

John also became very involved in the UMO and other school's woodsmen's teams. It is impossible to begin to describe what John did for these teams. He was also in great demand to coach professional competitors and run professional meets.

As John's health declined over the years he spent less time on the road and more time in his filing shed, but he was always hard at work. That was John's philosophy on life—a man cannot stop working or he'd go crazy. John kept busy filing saws, teaching people to file, making furniture, and telling stories. After all he had done with saws and wood, John was still busy designing new tooth patterns and filing techniques. And he was sincerely excited about it. I remember John told me last summer that if a man doesn't learn something new every day, its time he stopped existing. He was seventy-two when he told me.

Ed. Note: The following story appeared in the December 1956 edition of *The Northern Logger*.

## Felix Becomes a Filer

By

John F. Carney

Yes, this she be me, Felix, some more, and I want to tell all our young readers about the good old times. How many of you can remember let's say 50 years ago? That's the first winter that I was work up in a lumber camp. There was no chain saw then, no pulp saws and very few cross cut saws. What few cross cut saws that there were, people didn't know how to file them. Gosh, when I look back and see how much of a difference there was.—still I would like to go back to that time for a while for our young readers that never saw how they lumbered in those days. I'll try to picture out a few scenes for them.

When I first started in the woods they were logging only, no pulp wood cutting, and the only way of transportation was horses to haul the logs to the stream in the winter; and in the spring they would drive down those logs. We would go up in the fall and cut and yard till we got enough snow so that they could use sleds. Then they would haul all the logs and pile them on the banks of the stream. Then when the ice would break, the drivers would put the logs in the stream and follow them down the stream till they got them down to the mill pond.

Me, I use to stay up to the camps after everyone was gone. I would stay there to watch camp cause they would have to tote all of their grub in the winter for the next fall's cutting and someone had to stay there to look after the grub, and also there would be some horses to look after.

I started up to a logging camp August the 15th, 1905. I was just a young boy. My Dad was laid up and couldn't work, so the boss told me that he would find me a job so

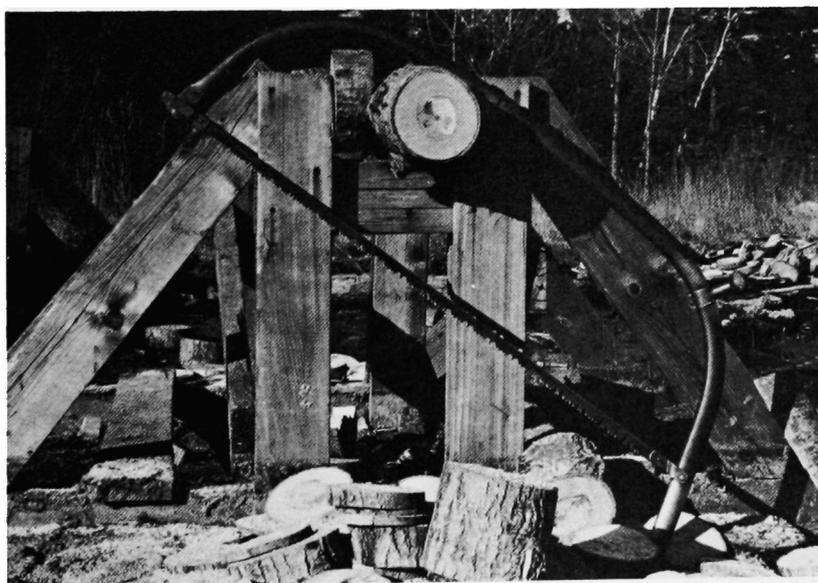
that I could help the family. So here I was going up with a big crew of loggers. I was so small that they nick named me the Weasle. But everyone was very good to me. They put me to looking after the teamsters' camp.

We had some 26 teams there and they decided to keep the teamsters separate so that they wouldn't wake the men up in the morning. In those days every teamster fed his own team and they would get up around 3 a.m. So I had to be up before them to have a good fire going. Then I had to go over and help the cook and cookies out for breakfast. I would wait on tables and wash dishes after the crew had gone to work. We had to tidy up the bunks and sweep the floors and also lug the water and saw up some wood for the cook shack and for all the other camps.

I found out afterwards that this was one of the best camps anywhere in Maine. I later worked at a small jobber's camps but not for long. I'll tell you later on why I didn't stay there. Anyway I worked for a couple of months as a cookie.

One day one of our logging crews had an accident and one of the choppers got hurt. They had to take him down. He had a broken leg and he wouldn't be back that winter. They needed a man very bad in that crew and one of the crew was a cousin of mine. He asked the boss if he would let me go in as a chopper with him. That made the whole camp snicker because I was only eleven years old and very small for my age. But I told them that I would go out and try it.

They had some new cross cut saws there but their filer had got in a fight with the crew cause they told him



that his saws just wouldn't cut. He got mad and quit the job, so everyone went back to axes. That Sunday I asked the boss if I could have one of those cross cut saws. He told me that I could have the whole bunch if I wanted them cause you just couldn't pull one of them. I had tried them and I could see where they needed more set. In fact, they had never been set, only when they left the factory. When that set was out of them you just couldn't pull them.

The blacksmith there was an uncle of mine and I got him to make me a slot in the side of an old horse shoe, and I used this as a spring set. There were a spider gauge there and also a raker gauge. I worked on that saw all Sunday afternoon.

On Monday morning I went out with my cousin as a chopper. I could use an axe with the best of them. We under cut several big spruce trees, then we took the cross cut saw and in less than a minute we would fall one of those big spruce. Boy, you talk about your hooping and hollering. You should have heard my crew. The boss heard the noise and rushed over to see if someone had got hurt, but all he found was a very happy crew. This was only about ten in the forenoon and already we had more logs cut than they ever cut in a full day's work.

The boss took a hold of one end of the saw with me and we cut down several big trees. When we got done he had a big grin on his face and he says to me, "Boy, your days as a logger are over. You follow me to the camp and I will get you some filing tools and you are going to file. Do you know that with saws like that my crew will more than double their cut every day." So that day my career had started as a logger and only in a few hours it had changed to a filer.

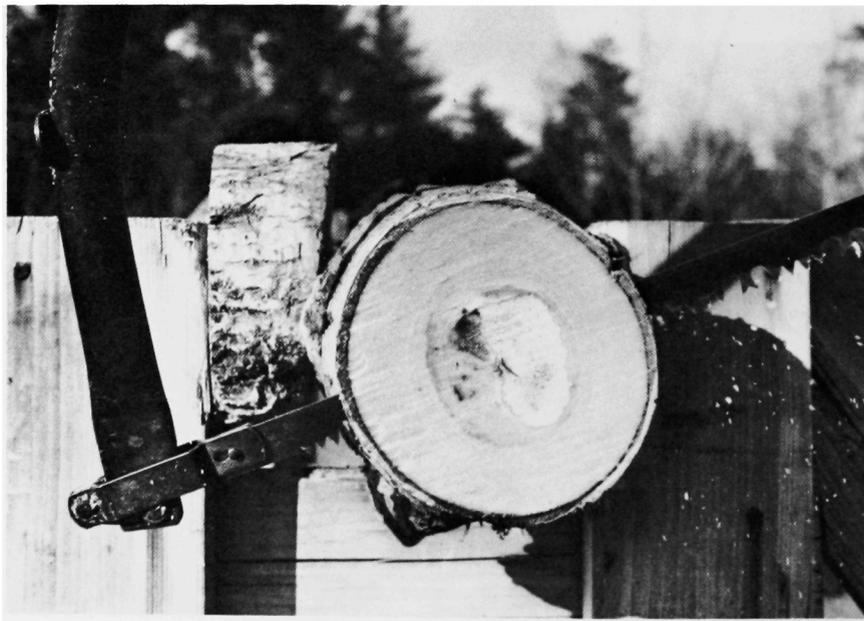
I worked hard as a filer and the saws kept getting better every day. I found that in frozen logs you had to

narrow the kurb and the most important thing was to keep the set uniform. So I stayed on as a filer all winter. The boss was able to pay me good wages. Like he said, he was getting out twice the amount of logs every day. This gave me a chance to send that money home and have my Dad sent to a hospital to be operated on.

Finally the last day came when all the crew were going home. Snow had got too deep for the horses, and they were going down for a while, but come back up for the Big Drive. My family needed money bad, so I had volunteered to stay and watch camp. I could do a pretty good job of cooking so I wasn't afraid to starve to death. But I'll never forget that day when all the crew pulled out. Everyone would say, "Good bye, Weasle. Take good care of yourself" or "See you for the big log drive, kid. Wish you were coming with us. We will miss you. I'll say hello to the folks for you."

Boy, I'll always remember that day. Take all the noise of a hundred men around a camp and disappear all at once. The silence was so great that I could hear myself think. However there was lots of work to be done. I had to feed all those horses. We let them loose in the camp yard and they could go down to the brook to get a drink. But I had to drive them in, tie them up and feed them, which took a lot of time. Also I had to do my cooking and I wanted to learn how to make good axe handles and lace snow shoes.

I guess you can get accustomed to most anything cause a few days after the crowd had gone I had sort of drifted in a world of my own and then again the days started to slip away. I had a lot of little brown squirrels that I use to feed and they got very tame. But every time I would feed them there was always a few gorbies that came down and stole their food. This would start a fight between the squirrels and the gorbies.





## Quotable Quotes

“Dry kilns can be exciting.”

Prof. Hale

“The final exam will be at 8:00, Tuesday morning. It will be typical, not rational.”

Prof. Hale

“If I had my way, I would have blown the bridge at Portsmouth a long time ago.”

Dr. Ashley

“You ask the same questions, but you change the answers.” (in reference to tests)

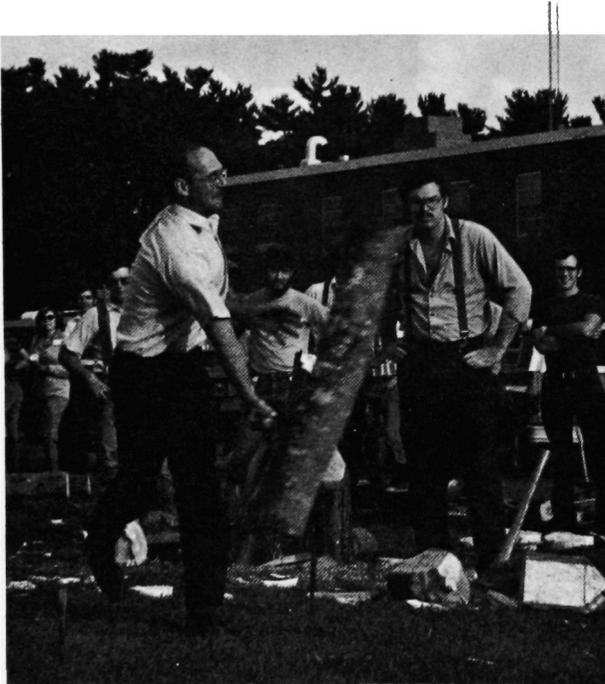
Dr. Ashley

“I need a pair of idiot strings.”

Dr. Ashley

“It feels rather strange standing up in front of this distinguished group of weirdos.”

Dr. Ashley



“All trails lead somewhere; it just depends on where you’re going.”

Barry Christianson  
(while lost in the Univ. Forest)

“I just don’t understand this homework.” (in reference to his calculus problems)

Prof. Hoffman

“The total problem is a mess. You have to break it down into a number of little messes.”

Prof. Hoffman

“Blackflies are a dicord element.”

Prof. Newby

“There are always about 50,000 little old ladies in tennis shoes who are gonna get you.”

Prof. Newby

“In Fy 60, we don’t deal strictly with the facts.”

Dr. Owen

“Everything you learned in Griffin’s course is wrong. . . .”

Dr. Corcoran

“Once you learn something in this class, you can forget it.”

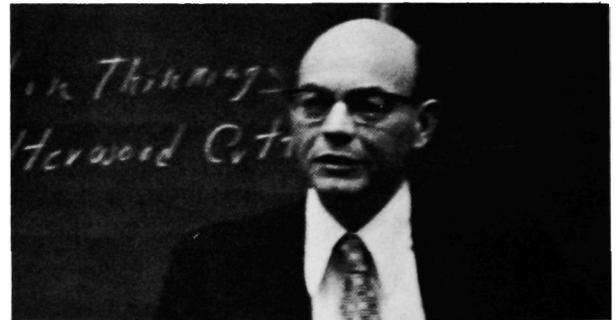
Dr. Corcoran

“The Griffin method of tallying — like being a one-man band.”

Anonymous

“You can’t just *chew* these limbs off.” (in regards to forgetting an axe for lab)

Dr. Griffin



“If the trees can handle it, so can you.”

Dr. Griffin

“Have you ever seen a crown fire? They’re really neat.”

Harry Doughty, Forest Service

“He died in the prime of his reproductive life.”

Dr. May

“If the ark sinks in the next flood, there will be a couple of things left on this earth; raspberries and balsam fir.”

Max McCormack

“You’ve all heard of I.B.M. — It’s Better Manually.”

Prof. Hoffman

“Many are called but few are chosen.” (in reference to fungal spores)

Dr. Campana

“Scotch pine good, but Doug fir give me indigestion.”

Cookie Monster

## University Forests — Demeritt and Worthen

By

Roger F. Taylor

The University Forests currently include the Demeritt Forest in the Orono Old Town area and the Worthen Forest in LaGrange, about 20 miles north of Old Town. The Demeritt Forest is named for Dwight B. Demeritt, former Forestry School head, who was instrumental in acquiring the approximately 1700 acre forest for a School field laboratory. Also included in this Forest is an additional parcel of land in the Orono Bog called the Hyland Tract in honor of Prof. Emeritus Fay Hyland who used the area for many years to teach identification of the great variety of bog plants growing there. This area is included in the National Register of Natural Areas because of the many unique plants and characteristics.

The Worthen Forest is a 250 acre forest which was a gift to the University by the late Mr. Harold Worthen of Bangor, Maine. Mr. Worthen had a strong attachment to the area and desired to have it under continual management by the Forestry School with the income to benefit Forest Resource students. Present benefits are



derived through wages to students working on the area, and through an annual award to one or more recipients.

Management aims for both Forests are to maintain a good stocking of a variety of species in as healthy and desirable condition as possible. The Forests are used primarily for student instruction, research, demonstrations of various silvicultural treatments and also for recreational activities including hiking, jogging, skiing, snowshoeing and other outdoor activities.

Class instruction uses include laboratory exercises in Forest Soils, Silvics, Silviculture, Mensuration, Entomology, Recreation and other related programs including graduate study. Both four year professional degree and two year associate degree programs utilize

the Forest for their field laboratory exercises. Current research projects include a variety of treatments of small clear-cut areas, consisting of site preparation by controlled burning, removal of slash without burning, no treatment of slash and seeding and planting of white birch, red oak, white and black spruce. A study of harvesting techniques utilizing several different types of skidding machines is being contemplated for the Worthen Forest.

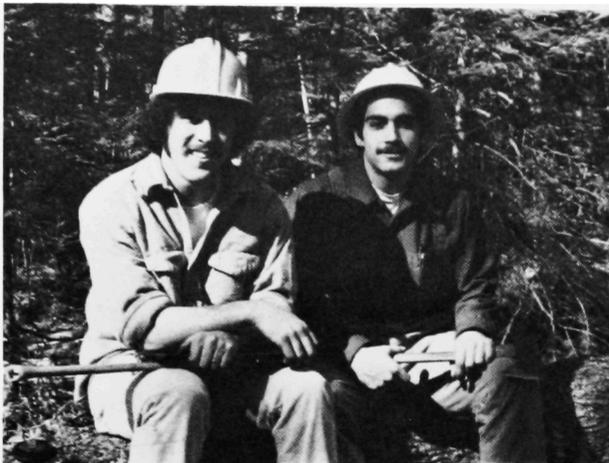
Field trips and demonstrations to view forest management practices and harvesting techniques for small woodlots, with emphasis on safety measures, and production of lumber in the School sawmill are a continual use of the Forest. Many of these programs are sponsored by the Forestry Extension specialists as an assistance to County Agents and small forest land owners of the state.

Soil studies are aided by the use of a number of soil pits located throughout the Forest in various soil types to readily show profiles and aid in soil classification. Silvics classes are divided into small parties, each of which makes a detailed study of the ecological makeup of a ten acre block of forest. Being a full semester project, each student spends considerable time in the forest observing and classifying plant life. With the current large classes in Forestry and Wildlife, several hundred acres are intensively studied each year by this class. Pulpwood piles from harvesting operations are



used for learning scaling techniques for short wood. Sawlog scaling is aided by sawing up several logs in the sawmill to determine actual lumber volumes in each log as compared to the estimate by scaling. Cruising exercises for forest inventory, stem analysis and use of various foresters' tools are other programs using the Forest. Silviculture provides a chance to combine much of the information learned in previous courses and apply it in the management of a segment of forest.

Each individual is assigned a small block to inventory, mark for thinning, and observe throughout the process of harvesting. The combination of each small unit into one larger block provides an excellent opportunity to



view the results of applying certain silvicultural practices.

Harvesting and all other activities on the University Forests are carried on under the supervision of the Forest Superintendent and the Forest Technician, Peter Orzech. All other employees are students working for pay during free time from classes. The current crew of about 20 students, most working only 1 or 2 half days per week, will harvest about 500 cords of wood this season, including approximately 100 MBF of sawlogs. Products harvested from the Forest are sold to local consumers, including sawmills, pulpmills and local firewood customers. Income from sale of products helps to defray labor and equipment costs to the University. The work in harvesting and other activities provides field experience plus income to the forest workers and has been considered by some to have been one of their most valuable educational experiences while in college.

