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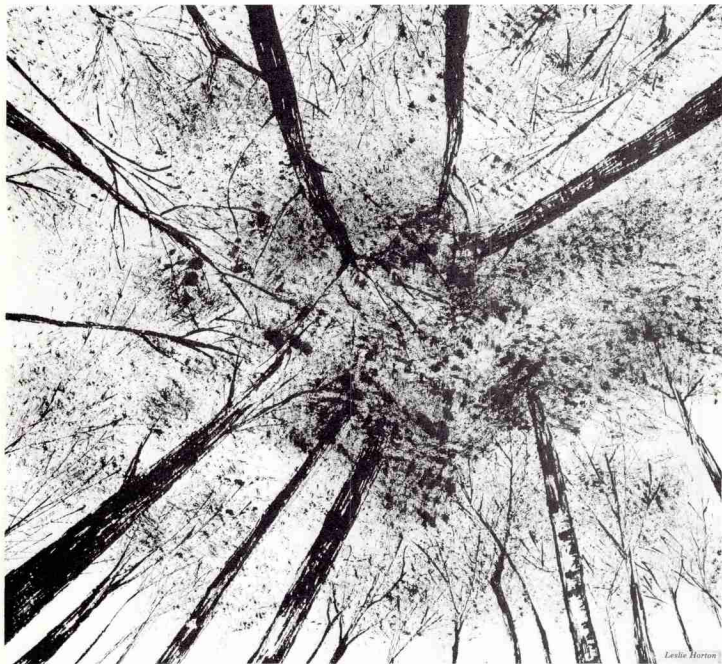
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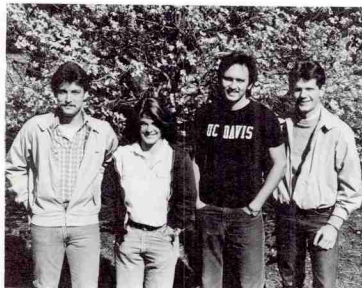
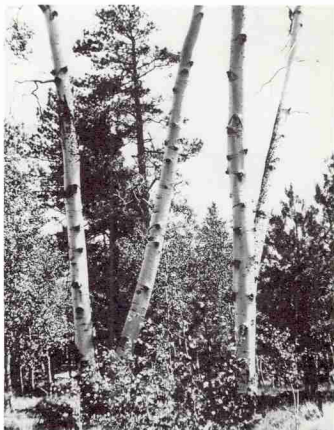
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The *Pinetum* staff would especially like to thank Darnell Johnson and the others whose generous assistance made this journal possible.

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Dedication

Have you ever heard of elytra, frass, checkered beetles, overwintering stages, green ostomids or Betsy bugs? Have you seen the "cockroach dance" or "katydid stridulation?" Have you ever been given a fifty-fifty chance and "muffed" it? If your answer to these questions is yes, then you've for sure witnessed the daily quotations on the board, vivid demonstrations and tough thorough tests which accompany the never-boring Entomology 301 class, taught by the highly-respected Maurice H. Farrier.

Back in his native Iowa, Farrier received a B.S. in Zoology and Entomology and M.S. in Entomology at "State College," now Iowa State University. That's where he unknowingly began his forest entomology career by studying the biology and parasites of a previously undescribed caterpillar that destroyed the cones on "all the pine trees in Iowa." Many years later (about 30), this caterpillar would be known as the webbing coneworm and would strike fear in the hearts of southern yellow pine tree improvement specialists and seed orchardists.

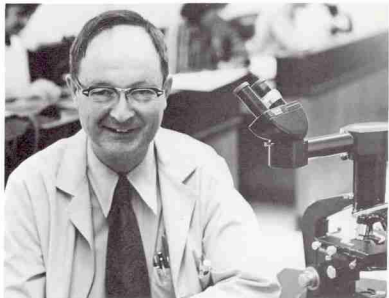
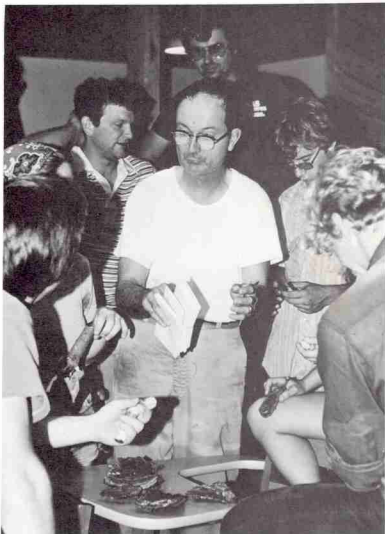
After coming to "State College" in Raleigh to work on his doctorate, he attended the first Acarology Institute in North America at Duke University. The relatives of the tiny mites he studied in that pioneer course would later be found associated with bark beetles, seed and cone insects, Christmas trees and even used to monitor the effects of site preparation and prescribed burning.

In the twenty-plus years that Farrier has taught forest entomology at Forestry Summer Camp and on the State campus, hundreds of students have enjoyed his renowned droll sense of humor and "stomping demonstrations." Students will vouch to the fact that his teaching standards are high and his rules rigorous and demanding. Not once has one of his old tests been found infesting a fraternity exam file! As a student once said, "I guess Dr. Farrier figures you to be able to beat the bugs in his class if you expect to beat them on the job!" Students also attest to the fact that he will honor any legitimate demand or honest request for help which includes spending his evenings and Independence Day holiday at Summer Camp.

Less known but widely used his "open-door policy" extends beyond graduation and has been enjoyed by many "old grads" who need a refresher to deal with the latest outbreak or a letter of reference for a new job. Many return to just say "Hello" or to tell of a real-world experience they think might help his future students.

A member of Xi Sigma Pi, honored as Outstanding Teacher (1962-1963) and co-recipient of the 1970 Outstanding Contribution Award from the Southern Forest Insect Work Conference, he has both enlivened and enriched the lives and careers of many N.C. State Foresters, past and present.

The students and faculty are proud to dedicate the 1982 *Pinetum* to this outstanding gentleman, respected scholar, devoted teacher and renegade forest entomologist, Dr. Maurice H. Farrier, professor of Entomology and Forest Resources.



The New Forestry Curriculum

Arthur W. Cooper — Head, Department of Forestry

In the fall of 1979 the late Dr. Bill Johnson, who was then department head, initiated a comprehensive review of the forestry undergraduated curriculum. This review led to a full revision of the curriculum that became effective in the fall of 1981. Elements of the revision were implemented for the freshmen who entered in the fall of 1980.

There were a number of reasons why this review was undertaken. Both the University and the Society of American Foresters, which accredits our program, require regular reviews. The faculty felt that our program was not providing sufficient emphasis on writing, speaking and the use of mathematical and computer techniques. Feedback from employers of recent graduates reinforced this view. Many veteran members of the faculty, most of whom had organized and taught key undergraduate courses for a number of years, recently had retired. They were replaced by younger men with different backgrounds and it was felt to be important that the courses and curriculum be revised so as to reflect the philosophy of these new faculty members. It was also important that these new men be integrated into undergraduate teaching as soon as possible so that students could benefit from their views and experience. Finally, there were several subjects that were not required, including computer science and remote sensing, that were generally regarded as skills essential to the practice of modern forestry. Most faculty felt strongly that these subjects should therefore be required.

The review was accomplished by a series of teams of faculty and teaching assistants with each team handling a small number of closely related courses. As recommendations emerged these were discussed in regular and special faculty meetings and re-referred to committees as appropriate. When the basic recommendations were clearly enough defined, I met several times to discuss them with undergraduate groups such as the Forestry Club and the student SAF chapter. A number of very valuable ideas that were incorporated in the final revision emerged from these discussions. The major work was completed in the spring of 1980, and approval was obtained at the School and University levels during the 1980-81 school year.

The objective of the new curriculum are as follows:

- To educate and train students in the ability to produce the optimum mixture of goods and services from forest lands by proper management.
- To educate students in such a way that they retain a strong desire for continuing their education throughout the entire professional career.
- To develop a strong ability to communicate, both orally and in writing.
- To integrate modern forestry technology into the students' education, both as formal courses and as working skills in other courses.
- To present the subject matter of forestry through courses that reflect current knowledge and issues in forestry.

- To develop a course structure that provides an integration of the basic disciplines such as mathematics, chemistry, biology and English communication, together with modern computer technology throughout the curriculum.

- To offer the student an opportunity to develop a working knowledge of one or more of the fields of forestry through the use of technical electives to develop an area of concentration meeting his or her personal interests.

- To provide a strong, working relationship between the students and their advisors.

- To allow transfer students, because of their increasing importance to our program, to be integrated more smoothly into the final two years of the undergraduate program.

Specific changes in course content, requirements and sequencing were made to achieve these goals. Communication skills will be improved by requiring a grade of C or better in both ENG 111 and 112 and by requiring that the English elective be either a course in speech or scientific writing. A different mathematics sequence (MA 113-114,) covering calculus and math topics of importance to quantitative forestry courses, was required. A more rigorous second course in chemistry (CH 107) was substituted and an additional basic biology course added.

Major changes were made in the forestry courses. An introductory course (FOR 110) with greater subject matter content was added in the freshman year to replace FOR 101-201. Dendrology was reorganized into a one-semester, four-hour course. The old mensuration and statistics courses were reorganized into two courses in forest biometry (FOR 272-ST 312) with statistical methodology integrated into both courses. The forest economics syllabus was rewritten and the number changed to FOR 319 reflecting the course's place in the junior year. The most significant changes were made in the junior and senior years where a four-semester sequence in silvics (FOR 303), silviculture (FOR 304), forest management (FOR 405) and forest land planning (FOR 406) was instituted. These sequential four-hour courses were designed to introduce students to forest ecological and tree growth concepts precedent to an intensive discussion of the practices used to manage each of the major forest systems of the United States. This information then will be integrated with quantitative skills and economic concepts into the capstone course of the senior year. Computer science (FOR 273) and remote sensing (FOR 353) were required of all students.

Because of the added required courses, the 23-hour "option" requirement was replaced with a 15-hour concentration elective which must be identified by the beginning of the junior year. It may be selected either from organized areas identified by the department or from courses mutually chosen by the student and advisor.

Summer camp was reduced from ten to nine hours and a special course (FOR 111) was initiated in May prior to the

opening of the regular summer camp. This two-week course will be required of transfers and will prepare them to take summer camp between the sophomore and junior years as four-year students do now. This change is regarded as critical to fitting transfers more smoothly into the junior and senior years. As a consequence of this change, transfers should move into the junior-senior sequence of courses with little difficulty thus allowing instructors to build more completely on the summer camp and previous course experience.

Because the faculty felt very strongly that undergraduates should be given the benefit of these changes as soon as possible, implementation was accelerated. Freshmen entering in the fall of 1980 were enrolled in the new FOR 110 course and FOR 111 will be incorporated in summer camp in spring 1982. The new courses in silvics and silviculture were offered in 1981-82 and the revised 405-406 sequence will be presented in 1982-83. Thus the spring 1983 graduates will be the first to reflect essentially the full requirements of the revised curriculum.

Other steps to improve the quality of our program are also being taken. For several years the School has had the half-time services of Gary Blank to assist with improvement of the writing ability of our students. Blank was an instructor in English at State and is thoroughly familiar with technical writing. His early involvement has been with freshman and senior courses but he will ultimately be involved in implementing writing requirements in over half the courses in the curriculum. Our goal is to make competent writing ability a skill possessed by each of our graduates. In the same vein, computer technology is being integrated into many of our undergraduate courses. Computer simulations are used in several areas, such as fire control and analysis of management alternatives. In 1981-82 the School invested in a number of mini-computers. The use of these will be incorporated into those courses where quantitation is essential, such as mensuration, economics and management. Our goal here is to make each graduate familiar enough with computers and their use so that he or she can utilize them in an employment situation.

Further changes in the administration of the undergraduate forestry program are being discussed. As the University moves toward a 2.0 GPA requirement for graduation the forestry faculty will also upgrade its requirements. A minimum grade of C will be required for certain critical forestry courses and perhaps for some basic science courses. Minimum requirements for entry into summer camp will be set. Discussions are now being held concerning development of sequences of freshman and sophomore courses adapted to each student's ability as estimated by data derived from entrance requirements. This "tracking," plus more intensified advising, appear to be the most appropriate ways to deal with problems now encountered by some underclassmen. Finally, we are considering ways of evaluating more thoroughly each student's professional, as opposed to academic, potential.

The forestry faculty feels these changes are important steps in improving our curriculum. In the last analysis, however, successful education and training are the result

of strong, motivated students taught by competent, dedicated faculty. Although we now have an uncommon share of both, we will continue to strive to improve our curriculum and our students and teaching. By remaining abreast of changes in the demands of the forestry profession, we intend to retain our position as one of the best forestry programs in the United States.

The Hodges Wood Products Laboratory

— R. J. Thomas, Head Department of WPS

The Wood Science and Technology program is fortunate in having one of the finest facilities of its kind in the United States. The Brandon P. Hodges Laboratory was completed in 1959 to provide facilities for undergraduate and graduate training in wood science and technology and service to the North Carolina wood using industries through research and development activities.

The laboratory is presently equipped to handle all aspects of wood processing. Primary process equipment include a circular sawmill, short log bolter mill and a rotary veneer lathe. Two conventional dry kilns are available for drying studies. The second kiln, recently added, is an Irvington-Moore kiln for conventional and high temperature drying with a 1,300 board feet capacity.

Two hot presses are available for the manufacture of composite panels such as plywood, particleboard and fiberboard. In addition the laboratory houses a wide range of industrial woodworking machines, all of which can be found in conventional wood using industries. During the past year, through the generosity of the Porter Company, the laboratory received a digital controlled router. With this item intricate designs can be easily inscribed on wood through programming of the digital computer. Equipment donations such as this keeps the Hodges Wood Products Laboratory as one of the finest wood research facilities in the country.

The laboratory, working with both large and small wood products firms, has completed a wide variety of industrial research projects. Some typical projects were:

- Mechanical properties of fast grown pine
- Development of air-drying techniques to prevent checking
- Evaluation of glue bonds
- Strength of furniture components
- Wood machining properties
- Wood preservation studies

One of the busiest times for the laboratory is the five week practicum for the wood science and technology undergraduate students and the students studying in the furniture manufacturing and management curriculum. This intensive practical course is devoted to the manufacture of an item of furniture. The students perform all of the necessary processing steps, including drying, dimension stock cut-up, machining, gluing, assembly and finishing operations.

Progress Report

— Eric Ellwood

The tenor of the times in 1981-1982 is one in which the key words are inflation, survival, unemployment. Our affluent U.S.A. is undergoing an adjustment of its standard of living during an aggressive federal policy directed towards reducing inflation, which includes reduction of the growth of federal expenditures and control of money supply. Although the inflation rate is diminishing, interest rates still remain at all time high levels which impacts negatively most heavily on the housing and related industries. The high mortgage rates prevailing put house purchasing out of the economic reach of many because of the high monthly payments and income necessary to qualify for loans. A direct consequence of the collapse of the housing market is the severe effect on the forest products industries, particularly those which manufacture building materials, as distinct from paper and board. But even the latter segment of the forest products industries is now feeling economic stress. In a nutshell, the forest industries are near the bottom of a down economic cycle. However the down cycle is temporary and it is building a backlog of demand, for not only its products, but also of graduates who must eventually be hired when the upcycle commences hopefully in the not too distant future.

State level support, which constitutes 56 percent of the schools' budget, did modestly increase for 1981-1982 which helped us in reducing the effects of inflation. On the federal funding side (which constitutes 22 percent of our total school budget) the McIntire Stennis research budget was significantly increased for 1981-1982 although a reduction is proposed by the federal administration for 1983. Also in 1982 the long-awaited funding for the new Renewable Resources Extension Act was authorized but almost immediately rescission procedures were initiated. However, we in the forestry schools have reason to believe that Congress will not accede to the rescission and that the funding will eventually become available later in the year.

Another encouraging aspect of our funding is the relatively high stability of the support provided by the forest industries (which constitute 22 percent of our total budget) primarily to the several research cooperatives, the Southern Forest Research Center and the Pulp and Paper Foundation. This continued support from industries in the face of substantial reductions of their own staff, in many instances, is an expression of the value that the industry does place on our programs. An outstanding part of the Pulp and Paper Foundation program this year was the rapid growth of special named endowments to provide scholarships for pulp and paper students. Plaques honoring those donors are visible on the wall of fame in the lobby of Biltmore Hall. It was also heartening that the consensus of the Board of Advisors of our Southern Forest Research Center, now in its third year of operation, was that progress made in the several projects of that program had exceeded their expectations. It is interesting that our programs in cooperative research with industry have at-

tracted interest on campus as being a very effective mode of operation and other schools are adopting this system.

New and expanded endeavors embarked upon during the year included the decision to invest in a computer laboratory for the School of Forestry which will provide the opportunity for students to utilize microprocessors, such as Apple II's and others. Also the School joined with Duke School of Forestry and the U.S. Forest Service in establishing the Southeastern Center for Forest Economics Research which should eventually make the Research Triangle area the perimeter area in forest economics relating to the Southeast.

The Small Woodlot Program, now in its third year of operation has been gathering momentum both in research and development and in extension. Some of the visible results include expansion to more than 50 county woodlot owner associations and the involvement of four graduate students in aspects of the research program.

We continue to work towards the establishment of a Renewable Resources Center together with other units of the University. With respect to alleviation of our immediate space problems we now have under development further expansion of facilities at the Research Annex located at Method. This involves modular construction of offices and laboratories to house several parts of the expanding forestry research program.

A corollary of the existing economic situation and the diminishing numbers of college bound students is that enrollments in the School have continued a downward trend in all undergraduate and graduate programs except undergraduate pulp and paper science and technology and wood science and technology. Also, degrees awarded during the year were off by approximately 10 percent compared to the previous year. Enrollment and graduation statistics for 1981-1982 are as follows:

Faculty recognitions during the year were as follows:

Dr. David Adams was named to the Board of Directors, National Association of Environmental Professionals.

Dr. Floyd Bridgewater was named Chairman of the North American Quantitative Genetics Group, and was named conference co-chairman and program chairman for the sixteenth Southern Forest Tree Improvement Conference.

Dr. Arthur Cooper was named 1982 Conservationist of the Year by the N.C. Wildlife Federation and was appointed as Society of American Foresters N.C. Division Forest Science Coordinator. He was also profiled in the Research Triangle Leader.

Dean Eric Ellwood was elected president of the newly-established National Association of Professional Forestry Schools and Colleges, he was elected chairman of the Appalachian Society of American Foresters for 1982 and was

appointed as advisor to the North Carolina Forestry Council.

Dr. Carlyle Franklin was nominated chairman, TAPPI Forest Biology committee.

Dr. Douglas J. Frederick was awarded a New Zealand Senior Research Fellowship.

Dr. Thomas Gemmer was named Alumni Distinguished Professor for 1981.

Dr. Donald Steensen was elected president of the Triangle Chapter of the Society of American Foresters for 1982.

Dr. Alan Stutts was elected chairman, Educator's Division, N.C. Recreation and Park Society (November 1981.)

Dr. Richard J. Thomas was elected president, Society of Wood Science and Technology.

Mr. Leon Harkins received Wildlife Federations' Award as Forest Conservationist of 1981.

Dr. Myron W. Kelly was selected as member of Board of Directors, Society of Wood Science and Technology.

Dr. Phillip S. Rea was elected vice-president, North Carolina Recreation and Park Society (November 1981.)

	<u>Undergraduates</u>	<u>M.S.</u>	<u>Ph.D.</u>
Conservation	23		
Forestry	256	38	26
Recreation Resources	177	37	
Administration			
Pulp and Paper Science	195		
and Technology			
Wood Science and Technology	<u>77</u>	<u>17</u>	<u>8</u>
TOTAL	728	92	34

Degrees awarded in 1980-'81 were:

Bachelor	170
Masters	20
Doctorate	<u>6</u>
TOTAL	196

On Ethics and Professionalism

Dean's Message to the Students

— Eric L. Ellwood

In contemporary higher education (university or college), too little attention is being devoted to the understanding of ethics and professionalism even in "professional" schools. [The literal meaning of ethics is the science of moral values and duties; professionalism is the appropriate conduct, aims, qualities which are characteristics of a profession.] The natural inclination of both students and faculty is to concentrate on mastering the ever-increasing technical subject matter of their chosen fields, whether it be managing forests better, making better and cheaper products from it, or managing recreation resources. It is difficult to deal in a meaningful way with abstract behavioral and value judgments. Then, too, over the last decade, there has been a relinquishment of the "in loco parentis" attitude by universities towards students — more is left to the student to decide on his/her own life

style while in school.

But in undertaking a profession as a career, such as forestry or recreation, there is the expected commitment that the qualified graduates will join and participate in the professional association(s) of their fields. Most of the learned professions have adopted codes of ethics which are based on integrity in behavior and which benefit both the public interest and professional advancement. These codes really reiterate the principles of fair, truthful, just and seemly behavior, and apply them to the common situations likely to be encountered in that profession. These situations encompass the conduct of the individual's professional life relations with the public, clients, employers, employees, and with other professional foresters.

The concept of "trust" is uppermost, i.e., professionals shall not take advantage of their special situation and

violate public trust or compete unfairly. And particularly in the forestry profession, there are many situations in which professionals could take advantage of the lack of knowledge in their specialty of people with whom they deal, such as woodlot owners.

From the perspective of the profession and the public, indeed, it is patently obvious that the long-term effectiveness of any profession depends not only on the particular skills which the practitioner possess, but also on the degree of honorable respect and confidence which the public and others have for the professionals.

From the perspective of the individual professionals, it is axiomatic that personal integrity of character is an essential ingredient for those who seek to aspire to the very highest levels of responsibility. As a generality, ascent in responsibility also imposes more pressures and opportunities for violation of public trust.

Even though the basic ethical standards of individuals are products of their life experiences before they arrive at college, the least that should be done in schools is heighten the awareness of students about ethical standards and professional performance.

Quite apart from moral and ethical aspects, another dimension of professionalism is the perceived behavior of the professional in action. Does he/she project personality and behavioral characteristics in mannerisms, appropriate dress, objectivity and dignity which inspire respect and

confidence, as distinct from behavior which turns people off. For example, sloppy dress and tobacco spitting or chewing is hardly a way to convey professionalism.

While we have never claimed or tried to be a "finishing school" in these matters, it is a fact that personality characteristics are highly weighted in everyday life and that the "image" of a profession is often derived from the appearance, personal behavior, and attitudes of the professionals.

And in reverse, the success of the professional can be markedly influenced by his/her personal image, quite independently of technical competence.

The feedback from the field and forest suggests that we in the Forest Resources Schools should expose students more to the underlying concepts of ethics and professionalism. It is difficult area to deal with because individuals' ethical standards and personal behavior modes are not necessarily changed by listening to lectures.

But there are ways to heighten students' awareness of and sensitivity to ethical and professional issues. These ways include study of role models, participation in student chapters of professional societies, inclusion of aspects of the subject in particular courses (such as Dr. Holley's new course in consulting) and perhaps the establishment of a course entirely devoted to the subject. I believe we should and will place more emphasis on these matters in our several programs.

The School Forests

— Larry Jervis

This past year has been one of substantial progress in the development of our four teaching and research forests. Virtually all management activities, field plot work and camp maintenance chores continue to be performed by the weekend work-scholarship crew (10 students), two full-time student technicians stationed at Slocum Camp (Fred Beck and Tom Tew), and a half-time graduate assistant (Gery Glover).

In addition, this year Jo-Ann Marco, under the direction of Rich Braham, has been busy remeasuring and analyzing the data from the many plantings of exotic species at Hill

Forest. These are the people who show up, rain or shine, to make the operation a success and who deserve the credit for our accomplishments this year.

Hill Forest — A major project on the Hill Forest this year was the establishment of a streamside buffer strip study which required the clearcutting of three watersheds totaling 150 acres. The study is designed to determine the importance of ephemeral drainage ways as sediment contributors and the degree of protection needed during logging to minimize sediment production. Field work has included weekly collection of rainfall, streamflow, sediment load data and almost daily supervision of logging crews to insure proper treatment of the various streamside zones.

The most intense activity on the forest, of course, occurs during the 10-week summer camp. This year 44 forestry students and eight wildlife students attended, bringing with them a wide range of ideas regarding natural resource management. A particularly interesting discussion developed concerning a colony of beavers on Dial Creek which is (a) inhabiting or (b) destroying the sweetgum stand there, and which should be (a) encouraged, (b) extingished or (c) allowed a vote in the matter, depending upon your perspective. The discussion was enlightening — the trapping program is progressing nicely. Following camp, 8 students of supreme dedication (but of ques-



tionable sanity) stuck around in the 100 degree heat of August to re-roof the faculty living quarters and finish installing a network of benchmarks across the forest. Plans for a new camp kitchen are well underway and promise to make a vast improvement in this critical part of the summer camp operation.

The acquisition of a fire plow from the N.C. Forest Service this year had a major impact on the efficiency of our prescribed burning program at the Hill Forest. Over 100 acres of pine plantation received fuel reduction burns during the winter and, although one burn got "slightly out of hand", it afforded an opportunity to study the effect of crown scorch on subsequent growth. Ongoing research activities included the remeasurement of Dr. Perry's factors that presage southern pine beetle attacks in shortleaf pine stands. The Fertilizer Co-op's "Instant Forest" study (involving early fertilization) was terminated and the study area subsequently thinned to a low residual density which will demonstrate early sawlog production — the 10-year old stand has been appropriately renamed the "Sudden Sawlog" area.

Schenck Forest — A positive note on the Schenk Forest is that no highway, reservoir, sewerline or other development project threatened to take any land this year. We used the opportunity to survey and mark the various boundary changes which have resulted from these various encroachments of past years.

Major modifications to the picnic area were completed this winter, including relocation of the grill and incorporation of an adjacent hardwood planting into the area. The changes are designed not only to improve the recreational experience, but also to reduce trampling and the resultant feeder root damage around the Schenk oak. The one-mile interpretative trail which originates at the picnic area was renamed "The Frances Liles Trail" in December in honor of Liles' retirement.

Other activities of note include the adoption of a new long range cutting program which will eventually result in

a more balanced age class distribution and a more varied teaching resource. Meanwhile, two work-scholarship students (Wally Bostic and Karen Papke) have begun the job of storing our Schenk Forest maps and records on the computer. The FOR 304 (Silviculture) students undertook pre-commercial thinning operations in two stands and marked the preparatory cut in a planned demonstration of the shelterwood harvest method.

Goodwin Forest — Sales of sawtimber and pulpwood brought premium prices this year in spite of the generally depressed economy and development of the forest is proceeding at a good pace. Some of the plantations established just 10-12 years ago are almost ready for the initial thinning and prospects for substantial future earnings from this property are good.

The income level of the Goodwin Forest has important implications since profits are earmarked for undergraduate scholarships. The first such award, in the amount of \$1,000, was made last fall and we hope to be able to increase the number of these scholarships in the years ahead.

Hope Valley Forest — The B. Everett Jordan Reservoir, which surrounds our peninsular Hope Valley Forest, is now almost full. The lake has had no appreciable scenic or recreational impact on the University property, however, because of the wide buffer strip acquired above the permanent pool by the Corps of Engineers. The forest's primary values continue to be as a teaching and research site and for timber production.

Last year's cutting area, designed to demonstrate the single tree selection harvest method, was burned for seedbed preparation in October and will hopefully result in the establishment of a new age class this spring. Other work on the forest included re-establishment of a portion of the property boundary and marked pulpwood thinnings in about 40 acres of pine stands.

Job Opportunities for Graduates of SFR

EMPLOYMENT OUTLOOK IN RECREATION

— Betty West

It would be great if everyone graduating from college had a job waiting for them and they could immediately exchange cap and gown for a regular paycheck, but unfortunately these are difficult times for job seekers. The field of Parks and Recreation is like any other human service profession; it is subject to changes and trends within the social and economic systems of our society.

Since World War II the area of leisure services experienced tremendous growth. To meet the demand of a growing profession, educational institutions either created or expanded the study of parks and recreation. North Carolina was no exception and today there are twenty-eight educational institutions that offer a curriculum in

Parks and Recreation. The possibility of too many people and too few jobs in North Carolina is all too real. There have been national studies conducted and projections of employment needs appear to have been overestimated. A recent Parks and Recreation Manpower study conducted in the State of North Carolina by Valerie Bryan and Jesse Mann of UNC-Greensboro revealed certain educational implications for future development of training programs for Park and Recreation professionals with the hope of curtailing the employment problem. Bryan and Mann predict that during the next four years the employment trend will level off. Those graduating in 1982 will find employment mainly in the "entry-level leadership positions." It appears that

those with graduate degrees will be able to find some administrative positions if some of the previous graduates decide to enter other fields.

Bryan and Mann also feel that educational institutions should not encourage an increase in enrollment. The focus should be on the quality of education for those already enrolled and not on quantity of students enrolled. With this focus, hopefully, supply will not exceed demand.

Also, agencies in all sectors should be encouraged to hire people who have been trained in the recreation discipline. We must all work to increase professionalism within the field. Finally, women and minorities are under-represented in the field. Specially attention should be focused on offering more opportunities for qualified women and minorities. Recreation is a diverse field. According to Bryan and Mann the number of administrative positions and supervisory level positions will not increase and if these jobs are filled by current graduates the employment opportunities for these positions appear to be minimal for future graduates. Currently the public sector is attempting to maintain the status quo rather than to acquire new personnel. The emphasis seems to be on training present staff to provide more effective services and to make the best use of available resources.

The potential for employment in leisure services seems to be best in the private sector. What types of jobs can a person expect to find in this area? According to Arlin Epperson in "Private and Commercial Recreation: A Text and Reference" there are a few broad categories that will give you some idea:

- Tourism – Travel for pleasure
- Amusement and Entertainment – Disney World
- Lodging – Hotels, convention centers, steamships
- Cultural – Museums, historical sites
- Sports – sports centers, physical health spas
- Food and Beverage Services – cafeterias, catering services.

There are certain problems confronting the recreation student or professional who is interested in entering the private sector. First, traditionally these jobs have been held by people with educational background in business, finance, or marketing. Management positions in the private sector rely heavily on employees with administrative skills. The continuing question centers around whether to hire a business major who has had some recreation courses or a recreation major who has had some business courses.

Second, promotions primarily come from within after an employer has had the opportunity to observe someone on the job and analyze his or her "track record." Therefore, it is often necessary for the person entering the private sector to do so at a low entry-level position. This is often discouraging for those who have administrative abilities and who have spent four or more years preparing for a career as a recreational.

Third, it is often difficult to locate jobs in the private sector because there has been no concerted effort to organize job listings. Each agency may belong to a different profes-

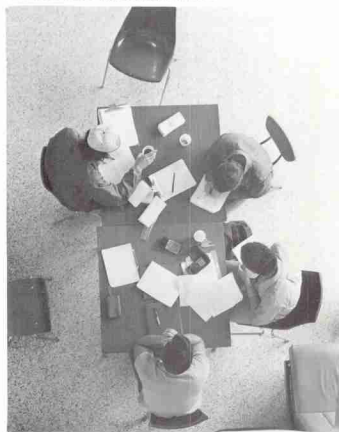
sional organization which adds to the difficulty of providing a centralized job listing service.

Finally, many jobs that are available in the private sector are seasonal. Although some agencies are moving to year-round programming it is often discouraging for those seeking full-time employment.

There is a challenge for students interested in private recreation. Although the economy has been sagging and inflation has been increasing, the private leisure service field has continued to grow. At NCSU, the Department of Recreation Resources administration has attempted to meet the challenge and are keeping up with changes in the recreation field. An emphasis in this curriculum in on developing administrative skills and courses are designed to help the student acquire these skills.

New courses are being developed to train students for the private sector. For instance a course soon to be offered focuses on tourism as a leisure service. With dwindling resources it is important for the professional to analyze and evaluate the effectiveness and efficiency of such things as a recreation program. Skills for evaluation and analysis are taught to the students through classroom teaching and actual experience with the evaluation process. As technology plays an ever-increasing role in providing efficient services, computer competency is becoming more and more necessary. The development of a working knowledge of computer technology is incorporated into many of the courses in recreation at NCSU and they better prepare our students for work as practitioners, researchers, and educators.

People continue to experience more leisure time than ever before. The opportunity is there!



EMPLOYMENT OUTLOOK FOR FORESTERS

— T.V. Gemmer

There is good news and there is bad news.

The good news is that, on a long-term basis, the wood products industry in the Southeast has an excellent outlook. This part of our country will be pressed to supply ever larger percentages of a steadily increasing demand for lumber, fiber and other products from the forest. This should be accompanied by a need for well educated foresters to intensively manage the land used to grow trees and to provide all of the functions involved in supporting this management.

The bad news is that the outlook right now, for our 1982 forestry graduates, is grim. The industry is plagued with high interest rates, a recession and the lowest projections for housing starts in the last 30 years. There has been a bit more activity from employers looking for foresters than last year at this time — but only a bit.

As of this writing, all of the recruiting activity has been by industrial forestry organizations. There has been no interest in filling permanent positions on the part of any of the several governmental organizations who usually seek employees at NCSU.

We expect that the situation will be similar to 1981 when, at commencement, only about 20 percent of the graduates had found employment in a position of the type for which they were looking. However, by the end of the summer that percentage had increased to slightly over 60 percent. It continues to grow as the persistence of the 1981 graduates finally bears fruit — or jobs.

That is the key to job hunting in this economic climate — persistence. It may be necessary to take a job on a temporary basis while you continue to look for that ideal position with the right organization at the right salary in the right location.

It is also to the recent graduates' advantage to stay in touch with the School of Forest Resources. We will make an attempt to keep everyone informed of job openings as they occur. We can only do this if we have your current address and telephone number.

Your stay at NCSU in Forestry has provided you with a very well rounded and broad scientific education. You are qualified for many kinds of jobs other than in Forestry. You should not feel like a deserter if you consider jobs in other fields. We realize that if you had sufficient desire and ability to complete the rigorous requirements for a bachelors' degree in forestry, you may have your heart set on employment in forestry. But, if your views have changed or your needs have been altered, do not feel that forestry-related work is all you are qualified to do. Present yourself to as many prospective employers as will talk to you. There are many jobs waiting to be filled.

One last word of advice — some graduates will decide to apply for graduate school to begin work toward an MS in forestry because they cannot find a job. In our opinion, that is not a good decision.

First, if your scholastic performance was good enough to be considered for graduate school then it is good enough to

open doors for job interviews. You can get a job if you persist.

Second, the rigors of a graduate program of study are such that you must have a great amount of desire as well as ability to complete it. Entering graduate school because you can't get a job does not usually provide the right amount of motivation.

Get out into the real world and work for a few years. Then, if you so decide, come back for your masters degree. It is never too late.

JOB PLACEMENT IN THE PULP AND PAPER CURRICULUM

— R.G. Hitchings

"Our company has recently instituted a hiring freeze," has become the favorite expression of phone calls from corporate employers to the Pulp and Paper office during January-March 1982. The May 1982 graduates in the Pulp and Paper curriculum are being forced to look for jobs for the first time since the mid-1970's as the effects of the economic downturn are felt in the PPT job market. During the beginning of the '82 interview season in October 1981, the on-campus interviewers expressed optimism for the number of jobs for new college graduates, but as the first of 1982 passed, a number of interview schedules were cancelled and the number of plant trips offered were greatly reduced.

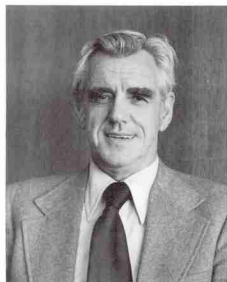
The graduates of the fifth-year CHE curriculum, who will finish in December 1982 are also finding it difficult to find a permanent position before they leave for the summer. The practice of anticipating a new employer six-eight months hence does not appear to be in the picture for this year's graduating class.

The picture for employment is not completely bleak. As of this writing, over 50 percent of those graduating in May 1982 and available for permanent employment are placed. The projected 1982 salary average for these persons offered positions is \$25,960. This is an increase over last year's offers by about 7.5 percent.

In the fields of technical sales and technical service, opportunities still are available. Chemical suppliers to the paper industry tend to be particularly active in seeking pulp and paper graduates. The specter of spending 30 to 70 percent of your time in travel is not always attractive to the young graduate with marriage in mind. However, compensating attractions of a company car, an entertainment budget and sales bonuses frequently overcome any negative factors in this area.

It has been encouraging to see the announcements in recent trade journals of several new "green-field" mills by national corporations scattered throughout the fourteen southern states. Additionally, major expansions by several mills have included new paper machines, recovery boilers, waste heat boilers, and computer control systems. The installation of these new and advanced major equipment items will continue to make the paper industry demand highly educated, technical personnel and provide life-time careers for Pulp and Paper graduates.

Administration



ERIC L. ELLWOOD

Dean, School of Forest Resources
Professor of Wood and Paper Science
B.S., M.S., University of Melbourne
(Australia); Ph.D., Yale University



L. C. SAYLOR

Associate Dean, School of Forest
Resources, Professor of Genetics and
Forestry
B.S., Iowa State University;
M.S., Ph.D., N. C. State University



ELLIS B. COWLING

Associate Dean, In-Charge of Research,
School of Forest Resources; Professor of
Plant Pathology, Forestry, and Wood and
Paper Science
B.S., M.S., State University of New York;
Ph.D., University of Wisconsin;
D.Fil., University of Uppsala (Sweden)



ARTHUR W. COOPER

Department Head, Forestry
B.A., M.A., Colgate University;
Ph.D., University of Michigan



RICHARD J. THOMAS

Department Head, Wood and Paper Science
Professor of Wood and Paper Science
B.S., Penn State University;
M.W.T., N. C. State University;
D.F., Duke University



M. ROGER WARREN

Department Head, Recreation Resources
Administration
Professor of Recreation Resources
Administration
B.S., Wake Forest University;
M.S., West Virginia University;
Re.D., Indiana University

Forestry Faculty



Left to Right: First Row: **Gary B. Blank**: Lecturer, B.S. English, Frostburg State College; M.A. English, University of Idaho. **Jan B. Laarman**: Assistant Professor of Forestry, B.S., University of Michigan; M.S., M.A., Ph.D., University of California, Berkeley. **Richard R. Braham**: Lecturer, B.S., M.S., University of Michigan, Ph.D., North Carolina State University. **Larry G. Jarvis**: Associate Professor of Forestry, B.S., M.F., North Carolina State University. Second Row: **Douglas J. Frederick**: Associate Professor of Forestry, B.S., M.S., West Virginia University; Ph.D., University of Idaho. **H. Lee Allen**: Assistant Professor and Director, Forest Fertilization Cooperative, B.S., M.S., University of Maine; Ph.D., North Carolina State University. **Robert C. Kellison**: Professor of Forestry and Director, Hardwood Research Cooperative, B.S., West Virginia University; M.S.F., Ph.D., North Carolina State University. **Thomas V. Gemmer**: Associate Professor of Forestry, B.S., M.S., Purdue; Ph.D., North Carolina State University. **Jimmy D. Gregory**: Associate Professor of Forestry, B.S., M.S., Ph.D., North Carolina State University. **Dennis W. Hazel**: Research Associate, B.S., M.S., North Carolina State University. **E. Carlyle Franklin**: Professor of Forestry and Director, Small Woodlot Forestry R³D program, B.S., North Carolina State University; M.S., University of California, Berkeley;

Ph.D., North Carolina State University. **J.B. Jett**: Liaison Geneticists, B.S., M.S., University of Tennessee, Knoxville. **Siamak Khorram**: Associate Professor of Forestry, M.Sc., University of Tehran, Iran; M.Sc., University of California, Davis; Ph.D., University of California, Davis/Berkeley. Third Row: **Kenneth R. Roeder**: Research Assistant, AAS, SUNY Ag. Tech.; B.S. SUNY College of Environmental Science and Forestry; M.S., University of Florida. **Charles B. Davey**: C.A. Schenck Professor of Forestry and Professor of Soil Science and Plant Pathology, B.S., Syracuse University; M.S., Ph.D., University of Wisconsin. **David A. Adams**: Visiting Associate Professor of University Studies and Forestry, B.S., M.S., Ph.D., North Carolina State University. **Mike Kane**: Liaison Forest Soils Specialist, B.S., University of Michigan. **Russ Lea**: Assistant Professor, B.S.F., Queens College; Ph.D., Cornell University. **Floyd E. Bridgwater**: Associate Professor, B.S., M.S., Ph.D., Oklahoma State University. **Arthur W. Cooper**: Professor of Forestry and Botany, Graduate Administrator and Head, Department of Forestry, B.S., M.A., Colgate University, Ph.D., University of Michigan. Fourth Row: **Robert J. Weir**: Associate Professor of Forestry and Director, Cooperative Tree Improvement Program, B.S., University of Maine; M.S., Ph.D., North Carolina State University.

Recreation Faculty



Left to right: **Beth Wilson:** Instructor, B.S., M.S., North Carolina State University. **Hugh Devine:** Associate Professor, B.S., M.S., Ph.D., Penn State. **Carol Love:** Teaching Technician, B.S., Shaw University, M.S. North Carolina State University. **Allan Stutts:** B.S., M.P.A., University of Arizona; Ph.D., University of Illinois of Urbana. **Chrystos Siderelis:** Associate Professor, B.S., Arizona State; M.S., Ph.D., University of New Mexico. **Dave Culklin:** Assistant Professor, B.S., M.S. University of Illinois of Urbana; Ph.D., University of Oregon. **Don Tarbet:** Assistant Professor, B.S., M.A., California State University; M.S., West Virginia University; Re.D., Indiana University. **Sondra Kirsch:** Assistant Professor, B.S., University of Arkron; M.S. University of North Carolina.



Librarians

Left to right: **Pamela Puryear:** Forest Resources Librarian, M.A. North Carolina State University, M.L.S. University of North Carolina-Chapel Hill. **Nancy Roundtree:** Library Assistant. **Pam Rowland:** Library Assistant.

Wood Science and Pulp and Paper Technology



Left to right: First row: **Irving S. Goldstein**: Professor, B.S. Rensselaer Polytechnic Institute, M.S. Illinois Institute of Technology, Ph.D. Harvard University. **Josef S. Gratzl**: Ellis-Signe Olsson Professor of Pulp and Paper Science and Technology, Ph.D. University of Vienna, Austria. **Richard J. Thomas**: Professor and Head of Wood and Paper Science Department, B.S. Pennsylvania State University, M.W.T. North Carolina State University, D.F. Duke University. Second Row: **Ronald G. Pearson**: Professor, B.C.E., B.A., M. Engr. University of Melbourne. **Chen-Loung Chen**: Senior Research Associate, B.S. National Taiwan University, Diplom-Chemiker, Dr. rer. nat. University of Heidelberg. **Heinz G. Olf**: Associate Professor, B.S., M.S., Ph.D. Technical University of Munich. Third Row: **Thomas W. Joyce**: Associate Professor, B.S. Rose-Hulman Institute of Technology, M.S., Ph.D. Purdue University. **Elisabeth A. Wheeler**: Associate Professor, B.A. Reed College, M.A., Ph.D. Southern Illinois University. **Richard H. Cornell**: Associate Professor, B.A. Colgate University, M.S., Ph.D. Institute of Paper Chemistry. Fourth Row: **C. Arthur Hart**: Professor, B.S. Virginia Polytechnic Institute, M.S., Ph.D. North Carolina State University. **Adrianna G. Kirkman**: Research Assistant and Teaching Technician, B.S., M.S. North Carolina State University. **Robert G. Hitchings**: Professor and In-Charge of Pulp and Paper Science and Technology, B.S. New York State College of Forestry, M.F. Duke University. Fifth Row: **Myron W. Kelly**: Associate Professor, B.S. State University of New York, Ph.D. North Carolina State University. **Hou-min Chang**: Professor, B.S. National Taiwan University, M.S., Ph.D. University of Washington.

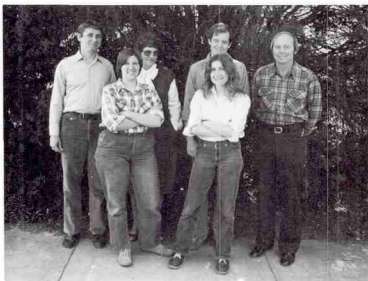


Secretarial Staff

First Row: **Sally Patterson**: Secretary, Forestry. **Joan Johnson**: Secretary, Wood and Paper Science. Second Row: **Nancy Roberts**: Administrative Assistant. **Betty Moore**: Secretary, Forestry. **Judy Williams**: Secretary, Forestry. Third Row: **Mary Walker**: Accounting Technician. Fourth Row: **Reggi Powell**: Secretary, Recreation. **Cynthia Hammond**: Research Technician, Wood and Paper Science. **Carolyn Cobb**: Secretary, Administration. Fifth Row: **Gloria Jones**: Secretary, Wood and Paper Science. **Martha Holland**: Secretary, Hardwood Co-op. **Charlotte Swart**: Administrative Assistant — Student Affairs. Sixth Row: **Darnell Johnson**: Secretary — Student Affairs. **Virginia Woodruff**: Accounting Clerk — Administration.

Small Woodlot

Front Row: (Left to right) **Celeste Pramik**: Research Assistant, B.S. University of Michigan, B.S. Kent State. **Marty Hood**: Research Assistant, B.S. North Carolina State University. Second Row: **Dennis Hazel**: Research Assistant, B.S., M.S. North Carolina State University. **Martha Miller**: Secretary. **Mark Smith**: Research Technician, B.S. North Carolina State University. **Carlyle Franklin**: Director, B.S. North Carolina State University, M.S. University of California at Berkeley, Ph.D. North Carolina State University.



Tree Improvement

First Row: Left to right: **Jackie Evans**, Secretary. **Donna Miller**, Assistant Analysis Programmer. **Judy Stallings**, Secretary. Second Row: Left to Right: **Vernon Johnson**, Agriculture Research Technician. **Floyd Bridgwater**, Associate Professor, B.S., M.S., Ph.D., Oklahoma State University. **Jerry Sprague**, Liaison Geneticist, B.S., North Carolina State University. **Bob Weir**, Associate Professor of Forestry and Director, Cooperative Tree Improvement Program, B.S., University of Maine; M.S., Ph.D., North Carolina State University. **J.B. Jett**, Associate Director, Tree Improvement Program, B.S., M.S. University of Tennessee. **John Talbert**, Liaison Geneticist, B.S., University of North Carolina — Chapel Hill.

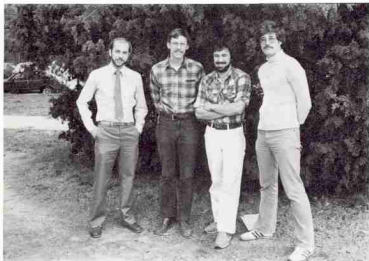


Hardwood Cooperative

Front Row: Left to right: **Douglas J. Frederick**: Associate Professor of Forestry, B.S., M.S. West Virginia University, Ph.D. University of Idaho, Moscow, Idaho Professor. **Bob Kellison**: Director, Hardwood Research Cooperative, B.S.F. West Virginia University, M.S. Ph.D. North Carolina State University. **Martha Holland**: Secretary. **Russ Lea**: Assistant Professor, B.S. University of Washington, Ph.D. SUNY, Syracuse, New York. **Kenneth R. Roeder**: Research Assistant, M.S. University of Florida. Back Row: Left to right: **Bob Maimone**: Research Technician, B.S. SUNY, Syracuse, New York. **Mike Williford**: Research Technician, B.S. North Carolina State University. **Paul Marsh**: Computer Programmer, B.S. North Carolina University.



Fertilization Cooperative



Left to right: **Lee Allen**: Assistant Professor of Forestry and Director of Forest Fertilization, B.S., M.S. University of Maine at Orono; Ph.D. North Carolina State University. **Mike Kane**: Assistant Director of Forest Fertilization, B.S. University of Michigan. **Bob Maimone**: Lab Manager, B.S. Syracuse University. **Skip Hyberg**: Lab Technician, B.S. Rutgers University, M.S. North Carolina State University.

Forestry Extension



Front Row (left to right): **Mike Levi**, Leader Specialist-in-Charge, B.S., Ph.D., Leeds University (England). **Rick Hamilton**, Ext. Forest Resources Specialist, A.B., Lycoming College, PA; M.F., Duke University. **Leon Harkins**, Associate Professor, B.S., Millersville State College, M.S. Northern Illinois University. **Robert Hazel**, Ext. Associate Professor, B.S., M.S., Penn State University. Second Row (left to right): **Larry Jahn**, Ext. Assistant Professor, B.S., M.B.A., Penn State University. **Jim McGraw**, Ext. Associate Professor, B.S., M.S., North Carolina State University; Ph.D., University of Florida. **Earl Deal**, Ext. Forest Resources Specialist, B.S., North Carolina State University; M.S. University of Georgia. **Bill Swint**, Agriculture and Research Technician, B.S. North Carolina State University. Third Row (left to right): **Bill Stanton**, Ext. Associate Professor, B.S., M.F. North Carolina State University. **Bill Gardner**, Ext. Forest Resources Specialist, B.S., M.S., North Carolina State University.



Eric Ellwood — 1964 Pinetum



Maurice Farrier — 1962 Pinetum



Larry Jervis — 1966 Pinetum



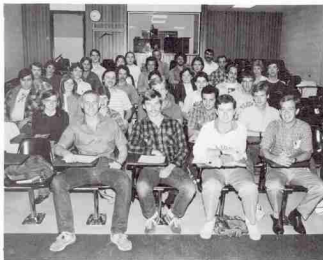
Don Stenson — 1966 Pinetum

It was another very active year for TAPPI (Technical Association of Pulp and Paper Industries). The club started off and ended the year with its annual fall and spring picnics. Throughout the year TAPPI was honored to have speakers from the Pulp and Paper Industry to speak at their meetings. The club also sent members to the Carolina - Virginia TAPPI meetings.

TAPPI started off the fall with its annual fall picnic. The picnic was once again held at Schenck Forest. The approximately sixty people attending went through the barbecued chicken and beer in a hurry. It was a fun time for all, and a great way to get reacquainted with the faculty and students after the long summer.

TAPPI had some excellent speakers talk at their meetings this year. The speakers spoke on a wide variation of topics and represented companies such as: Procter and Gamble, BELK, Nalco, Mead and the EPA. The club was also honored to have Dr. Cornell speak on financing and management of money and Bob Trojak explain how to make homemade beer. Bob of course brought in a few cases of homemade beer for the club members to try.

The club once again sold "Papermakers Do It Between the Sheets" T-shirts for its main fund raising project. The club was also represented at the Virginia - Carolina TAPPI meeting in Lynchburg, Virginia by TAPPI members who traveled to the meeting in March. For the first time in several years, TAPPI was represented in intramural softball by the Pulpheads, a bunch of TAPPI softball players who had a lot of fun and even managed to win a few games. Great job Pulpheads!



TAPPI would like to thank Professor Hitchings for all the help and support he gave TAPPI over the year as the faculty adviser to the club. The members had a great time during the year, and learned a great deal about the Pulp and Paper Industry. The 1981-82 officers were as follows: President - Bruce Hodgins; Vice President - Greg Birk; Secretary - Rick Taylor; Treasurer - Sharon Willis; Program Chairperson - Sue Fringer.

- Greg Birk

The Forestry Club's activities began with Open House on September 26. Club members demonstrated old time loggers' skills and answered questions regarding the School of Forest Resources.

The next day the club held its annual Pig Pickin' at Schenck Forest. The weather was perfect, the volleyball was fun and the pig was devoured.

In early October, an expedition to Hill Forest felled, bucked, skidded, loaded and transported the Rolleo timber back to Raleigh in a record time. These logs were soon milled into the competition cants.

On October 21, club members and alumni manned the Forest Resources Exhibit at the North Carolina State Fair. This gave club members a chance to represent their school and profession.

The fiftieth annual Rolleo was held on November 1. It was a disappointing turnout as far as spectators go, but the student competitors were not discouraged. The seniors won the event handily and a good time was had by all.

In March, the club was ready for a break from school and Conclave practice. The Logger's Brawl provided this with plenty of good music, good dancing and good fun.



The twenty-fifth annual ASFC Conclave was held April 1-4 in Oklahoma. The club was ready for the boll weevils, dawgs, aggies and gobblers and the trans-continental trip was handled with relative ease.

The Forestry Club wishes to thank its advisors, T.V. Gemmer, J.D. Gregory, W.D. Smith and Mike Williford for their able assistance. The club also thanks R.C. Gilmore for milling the practice wood and all those "hardcore" club members that put it all together.

- Steve Whitfield

Xi Sigma Pi

The Mu chapter of Xi Sigma Pi, the National Forestry Honor Society, entered its 42 year in full swing. The society remains committed to the promotion of academic achievement and professional excellence. Traditional events such as the wine and chili tasting, spring steak dinner and senior picnic continued to dominate the calendar. A concerted effort is underway to revitalize the free

tutorial service and hopefully will increase student access to and participation in this unique program.



Recruitment focused on increasing membership of students in recreation, pulp and paper and wood and paper science curriculums as well as forestry, and also of graduate students and faculty. The fall and spring initiatives showed a significant increase in the membership.

The chapter nominated Vincent Gentry for the 1982 Xi Sigma Pi Southeastern Region scholarship and hopes he will be a point of pride for us. We again thank Dr. Steenson who continued to serve as faculty advisor to this year's officers: Michael Thompson, Forester; Ted Shear, Asst. Forester; Lissa West, Ranger and Chuck Krecklow, Secretary-Fiscal Agent.

— Ted Shear

Recreation Club

The Recreation Club at NCSU established three broad goals for this year: (1) promote student fellowship, (2) promote faculty-student interaction and (3) promote the recreation profession.

The club sponsored several events to promote fellowship. First, the undergraduates played the graduate students in softball. The undergraduates won, but keeping score seemed irrelevant. Also, the club sponsored a "thank-you" party for our head secretary, Reggi Powell. "Reggi Day" was held at Schenck Forest and was well attended by undergraduates, graduates and faculty.

The two biggest projects which the Recreation Club sponsors each year are the RISE Conference and the Annual Banquet. The RISE (Recreation Internship and Summer Employment) Conference provides an opportunity for representatives of professional organizations to meet those students who are seeking internships and summer jobs. The Annual Banquet allows everyone associated with the NCSU Recreation Resources Administration department to come together to renew contacts and reaffirm goals.

Last year, the Recreation Club had 87 paid members. (This year's membership drive is still in progress.) Membership is included with the purchase of a Recreation Club t-shirt. These very popular t-shirts proclaim "Recreators Fool Around With Mother Nature."

— Jeri Lemons

FPRS

The Forest Products Research Society (FPRS) had a very productive and busy 1981-82 school year. The fall picnic started off the year as a large success and a lot of fun. As in the past, the picnic was held at Schenck Forest. A large percentage of both the Wood Science and Technology (WST) faculty and staff and WST students came out to support the picnic. They managed to put away sixty pounds of barbecued chicken and plenty of other fix-ins. The barbecue sauce was unique, but nobody seemed to mind its flavor. The spring picnic was held in April.

During the fall semester the club had six meetings. There was quite a wide variation in the speaker's topics, which helped to expose everybody to the diversified field of Wood Science and Technology. Some of the topics were: Atmospheric Deposition (Acid Rain), Wood Energy in North Carolina, Hardboard Production, Modern Sawmills and the World's Timber Imbalance. At still another meeting, five club members reported on the fall meeting of the Carolina/Cheasapeake Section of FPRS which they attended in November in Williamsburg, Va.

Due to the economic recession in the furniture industry, the club was unable to get any furniture donated for the club's annual furniture raffle. For fund raising projects, the club sold firewood kindling and club T-shirts and planned to build and sell student desks.

For the past several years, the FPRS members had expressed a desire to have FPRS t-shirts. This year the club made up the logo "Wood to Weird" and had it printed on t-shirts. The club members and WST faculty all seemed to wear a t-shirt by the time the year was over.



Overall, the club had a very successful 1981-82 school year. The club undertook several new activities and had plenty of members turning out for the activities. The FPRS officers worked very hard and did a fine job organizing club activities. The members attending the club functions learned a great deal, had a lot of fun, met other WST students and went home for the summer wearing a "Wood to Weird" t-shirt.

Officers for 1981-82 were: Greg Birk, president; Greg McGee, vice-president; John Park, secretary; Web Hatley, treasurer; Mike Freeman and Mike Allen, chairpersons; John Roberts, athletic director.

— Greg Birk

SAF

The first order of business for this year's chapter was to install new officers. This year's officers were: Chairman, Tim Perry; Chairman-Elect, Ricky Cantrell; Vice-Chairman, Chip Davis and Secretary-Treasurer, Vince Gentry.

Five of our members were able to attend the SAF national convention in Orlando, Fla. this year. The convention's topic was increasing forest productivity and included several speakers from the North Carolina State University Forestry Department.

This year's chapter has made great progress. Attendance has been up dramatically from previous years and the chapter has gained increased recognition from other forestry associations. Several student members were sponsored by the Forestry Alumni Association and the chapter was asked to host a student forum at the Appalachian Society's annual meeting in Asheville, N.C. The theme of this meeting was the management of non-industrial private forest lands. The chapter selected the topics, speakers and provided a moderator and support personnel.

The chapter also had speakers lined up for each meeting and sponsored a keg party for all members.

The chapter, as a whole, would like to extend its' appreciation to advisor Bill Smith for his continued support and advice. All in all, this year's SAF program has been very successful and we look for increasing membership and continued success in the future.

— Ricky Cantrell

Forestry Council

It is the objective of the Forest Resources Council to represent the students in the School of Forest Resources through representatives from each of the three departments and the seven clubs. The fifteen council members consist of: four officers, a representative from each club and a senator from the School of Forest Resources. During the 1981-82 school year, the council members did a fine job of working with both the students and the faculty and administration.

The council kept busy during the fall and had several



proposals planned for the spring semester. During the fall, the council presented Frances Liles with a gift at her retirement reception on the behalf of the council, the clubs and the students in the School of Forest Resources. As in the years past, the council financed the school's yearbook, the *Pinetum*.

For the spring semester, the council had several proposals planned such as: financing the senior picnic, proposing a new course and "N.C. State School of Forest Resources" t-shirts.

Overall, the council ran very smoothly during the year. The council members showed a lot of interest and made every effort to make all the meetings for the attendance at every meeting was excellent. Great job, members!

— Greg Birk

FRAGS

The Forest Resources Association of Graduate Students has the distinction of being the oldest organization of graduate students on campus. All graduate students enrolled in the School of Forest Resources are members of this club, some 140 in number.

One of the original ideas in establishing FRAGS was to facilitate communication and cooperation between the administration of the school and the graduate students in all three departments. This has been a very successful venture over the years, and we continue to enjoy substantial interaction with the dean and department heads.



We also play an important role in welcoming and orienting new graduate students. Packets of information are mailed to each prospective student which aid in finding housing, getting registered, etc. FRAGS sponsors a fall and a spring picnic which allow new students to meet faculty and graduate students in the three curricula.

FRAGS is also an active part of the campus-wide Graduate Student Association, which provides us with an important communication link to the University Administration as well as the State Legislature.

The Chairperson of FRAGS for 1982 is Ronnie Hise; the departmental representatives are: Lisa Wisniewski (Forestry), Phil Lownee (Recreation Resources Administration), and Bill Biggers (Wood and Paper Science).

We would like to express our appreciation to the men and women who spent many hours preparing PINETUM 1982 for publication!

— Ronnie Hise

Rho Phi Alpha

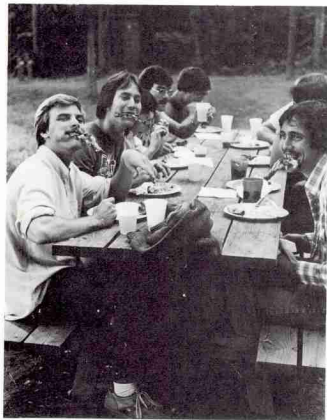
The 1981-82 school was a year of commitment for the members of the society as they decided to launch a campaign toward national recognition as a professional recreation society. This year, the society has been involved with the writing of a national constitution, fund raising projects, and chapter expansion into other universities. The campaign will be a two or three year project. Our members felt that the process should not be delayed.

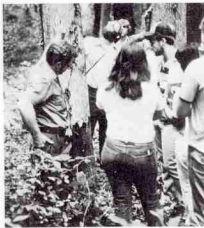
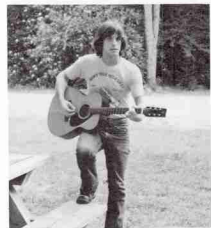
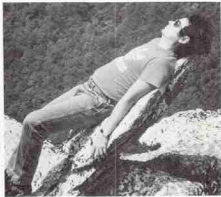
Along with the extra work involved with establishing a national organization, the society diligently worked together to accomplish its regular projects. These included

Open House in October; induction of its new members in November and February, and correspondence with our other chapters in December and January. The club will finish out the year with a three-day service project in April and will celebrate the end of a successful year at its departmental picnic on April 30.

The society would like to extend a warm congratulations to the eighteen seniors who received their degree in December and those in May. We wish them happiness and the best as they pursue their careers.

— Mark Bollinger





Forestry Summer Camp

Where were you the summer of '81? For 46 embryo foresters Slocum Camp provided us with a summer "vacation" we'll never forget. As the first week began, rain dampened everything but our spirits. Viv and Helen provided us with hearty breakfasts and then we shuffled off to the woods or classroom to learn about cruising, clearcuts and climax species. Soon everyone was in' Doc' trinated into the rigors of camp with surveying, dendro quizzes and those wild silviculture parties. A few far-sighted individuals began their bug collections and discovered just how elusive the checkered beetle can be.

Recreational hours were spent banjo pickin' favorite top 40 hits like the "Slocum Camp Blues" and shall we say "The Chigger Song". Martha kept us laughing with her memorable BB joke. (You'll never live that one down.) We had the opportunity to meet some fellow foresters when the Tennessee summer campers unexpectedly dropped in for an evening of merriment. The night resulted in the join-

ing of musical talents and a better understanding of other forestry curricula.

As the days sped by, so did the time before finals and bug collections were due. Bug fever swept the camp, and it became necessary to rally financial support for the disappearance of Cabin five's beams. Everyone rushed to pin that last bug with the prospect of the mountains and the end of cod eaks lingering in our minds.

Group B bid its farewell to Slocum, to be rejoined later by Group A for the final week of fire school. The serenity of the mountains was accentuated with nightly adventures to the dam, hard-fought volleyball games and "moon" lit bus trips. All in all, summer camp was a h-u-g-e learning experience as well as a unique opportunity to cement friendships. But enough said — some things are better left u-n-k-n-o-w-n to upcoming summer campers.

— Leslie Horton

Summer Practicum

The summer practicum of 1981 was a very educational and enjoyable experience for WST and FMM students. The six-week program consisted of lecture and lab for six hours a day plus a week of plant trips. The class was divided into groups, a morning group and an afternoon group, so that lecture and lab instruction could go on simultaneously.

Each student was required to build a nightstand which he could keep. In order for this to be accomplished, the lumber had to be put through a series of processes that began with drying the lumber.

Two charges of lumber were dried, one on a low temperature kiln schedule and one on a high temperature kiln schedule. Subsequent stress and moisture content tests were run to see if the lumber was ready to be machined. The students then learned how to set up different machines such as the planer, moulder and tenoner according to the specifications called for by a blueprint of the nightstand. The processes for fabricating the nightstand were very similar to the processes being utilized by furniture plants. Students also found out (some the hard way) the problems encountered when machining lumber. Dr. Kelly kept saying, "If you don't sand off these knife marks, once you stain it you'll be able to count them by your night light!!" Some students now can.

The nightstand was then assembled, glued and readied for the finishing steps. Roy Carter supervised and instructed the students on the proper way to apply a high quality furniture finish.

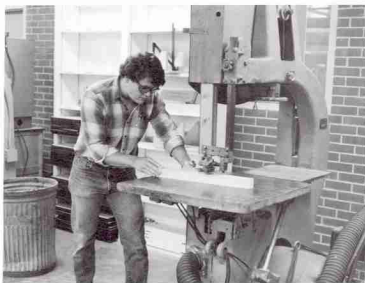
Many other wood products were made such as veneer, particleboard and plywood. Students figured out glue mixtures, press times and press temperatures just as one would have to do in industry for the production of these products.

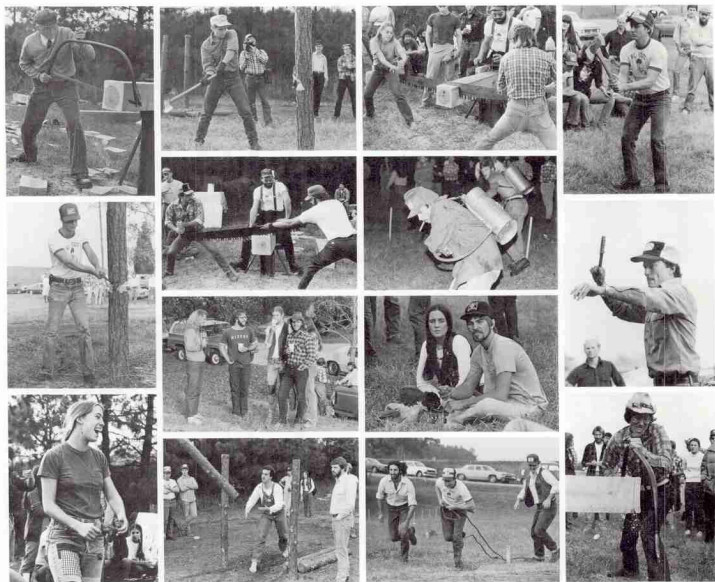
Throughout the practicum, emphasis was placed on safety and the industrial application of all techniques learned in the lab. Roger C. Gilmore, lab superintendent, and Myron W. Kelly gave excellent and knowledgeable instruction throughout the course of the practicum. They also endured a week of plant trips where the students toured furniture plants such as La-Z-Boy, particleboard plants such as Champion and sawmills such as the Jordan Lumber Company — a computerized sawmill. Also, a unique process for cutting three to five inch diameter dowels out of logs was seen at Roundwood Corporation. At the end of each day, a plant was assigned and students wrote a brief summary of the assigned plant's production process.

Another highlight of the practicum was the annual softball game, again dominated by Wood Technology. Yet, this wasn't half as fun as the keg of beer and subsequent swim in a nearby lake.

As a whole, the practicum offers students a chance to utilize their classroom knowledge in a "hands on" experience. After the practicum, WST students went on to serve summer internships in many divisions of the wood products industries.

— John C. Park





Rolleo 1981

Once again, the Forestry students had the opportunity to gather for some fun competition during the fiftieth annual Rolleo this past fall. Various old time logging techniques were displayed in this competition between the classes and good times were as plentiful as the beer.

The old adage "experience is the best teacher" proved true. After a good challenge from the juniors and an enthusiastic freshman team, the senior class showed that their time-tested skills were superior.

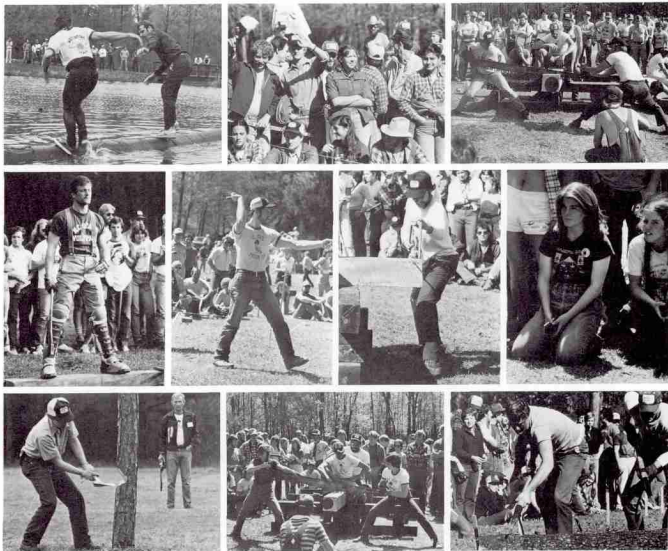
The juniors started out strong, placing first in both chain throwing and log rolling. The seniors then took control of the contest by winning seven of the next eight

events. This effort built up an insurmountable lead which the other classes could not overcome.

One of the brightest spots of the Rolleo was the fine showing by the freshman class. They consistently placed high in events all day and even ran away with all non-point events.

The Forestry Club would like to give special thanks to all those who helped the Rolleo run as smoothly as it did. Oklahoma — look out!

— Jim Orrell



Conclave 1982

Small in number, large in spirit, the N.C. State Forestry Club began the 24 hour trip to Broken Bow, Oklahoma on March 31. The old green bus proved to be an accomodating party unit, sans a bathroom. The mood was mellow until we encountered a busload of cheering VPI wahoos in Knoxville. At that point, the competition began.

The rain arrived at Beaver's Bend State Park after us, dampening everything but our spirits. The first day's non-point events were topped off with a third place in greased pole climbing by the fearless crew of Gemmer, Gallamore, Schweizer, Rambo and Hartsfield. A rainy night made it easier to study for the technical events rather than socialize.

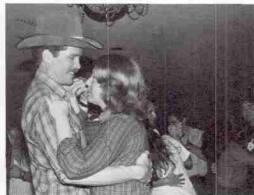
Friday's skilled events took place despite the rain, and thanks to the faithful rain chant crew, the storms held off just long enough for Scott Schweizer to win second place in log burling. On the way back to camp, we learned of a tornado that touched down in Broken Bow. Luckily, the rain and hail that pelted Conclave participants were only of minor annoyance. Friday night's activities included drain-

ing and rebuilding camp, the traditional barbeque and dance. Competitors for Saturday's events were urged to save their energy.

Saturday brought beautiful skies, rejuvenated spirits and lots of fun. It soon became apparent the long trip was taking its toll on our competitors as we did not give our best performance. However, Nash Hardy deserves an honorable mention for endurance in speed chopping. Jim Gemmer placed first in pole classification and Marshall Hartsfield and Kyle Rambo received second place in Wildlife, placing us seventh overall. The banquet, awards and dance passed much too quickly. A few short, sweet goodbyes and we were eastbound in the fast lane. Special thanks to Mike Williford and Moreland Gueth for their marathon driving. The Conclave spirit prevailed all the way back to Raleigh and plans are in the making for next year. Look out, wahoos — we're hot!

— Robin McRae

Loggers' Brawl





Seniors Forestry

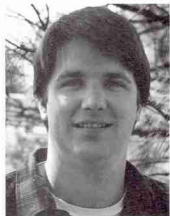
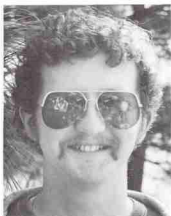
Mark D. Allen

Jacob F. Almond

SAF

John D. Alsup

SAF

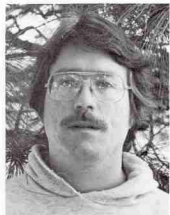
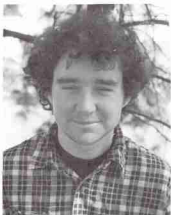
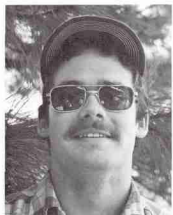


Joyce M. Britt

Ricky Lee Cantrell

Xi Sigma Pi, For. Club, Gamma
Sigma Delta, Amer. For. Assoc
Dept. Rep. For. Council, SAF

Chuck Church



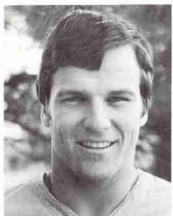
Charles M. Davis

Xi Sigma Pi, Alpha Gamma Rho
Frat. Reporter, SAF

Tom DeSchriver

Thomas W. Edwards

SAF



Ricky E. Etheridge

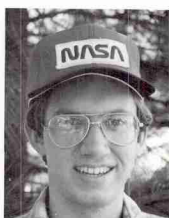
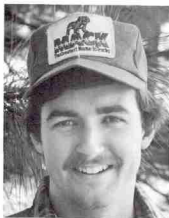
Howard J. Ettinger

Xi Sigma Pi, Alpha Gamma Rho,
Marching Band, Inter-Frat. Council,
Vice-Pres.

Kay E. Foley

Forestry Club-Treasurer, SAF

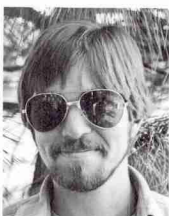
James D. (Jim) Gemmer
Forestry Club-President, N.C.
State Band



Vincent M. Gentry
Co-Editor and Editor *Pinetum*,
SAF-Sec.-Tr., Xi Sigma Pi,
Forestry Club-Photographer

James E. Greene

Daniel F. Habig

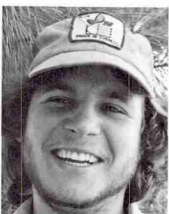


Benjamin A. Hardin

Marshall B. Hartsfield
Co-Editor *Pinetum*, Xi Sigma Pi,
For. Club-Vice-Pres., Pole
Climber, Wildlife I.D.-Conclave

Lesley Harvey

Swim team manager, *Pinetum*
business manager, 1981



Stephen O. Henderson

Forestry Club, SAF

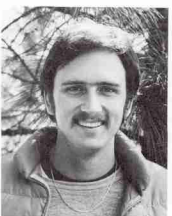
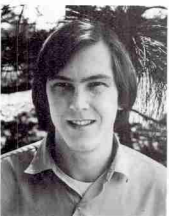
Bob E. Ilgenfritz

Edward J. Jakos

Campus YMCA

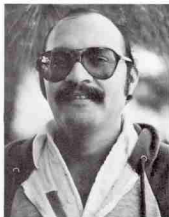
Juan Jurado-Blanco

Forestry Club, SAF, Forestry
Council, *Pinetum* photographer



Hugh B. Kennedy

Xi Sigma Pi

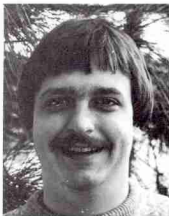
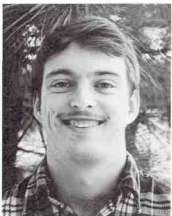
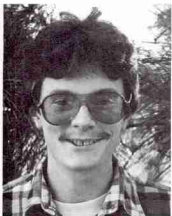


James E. Kerr, II

Forestry Club-Asst. Equip. Chair-
man, Asst. and Tree Job Chair-
man

Drake William Lanier

Monty H. Maldonado



Bryan K. McKay

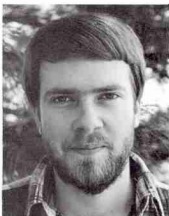
Conference Coordinator-Campus
Crusade for Christ

Eddie J. McWhirter

SAF, Wolfpack Club

Randal A. Oliver

SAF



James L. Orrell

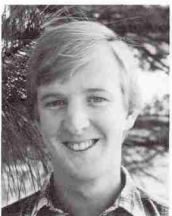
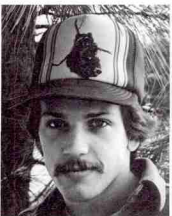
Forestry Club-Conclave Chair-
man, SAF

Tom F. Passanant

Xi Sigma Pi

George A. Pruitt

Forestry Club



Kyle E. Rambo

Forestry Club, Wildlife Club, Xi
Sigma Pi, Gamma Sigma Delta,
Varsity Wrestling Team

Barry P. Rochelle

Forestry Club, N.C. State Band,
Gamma Sigma Delta

Scott Schweizer

Forestry Club, National Student
Exchange

Lawrence J. Such

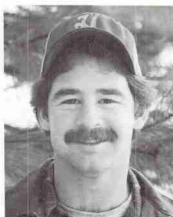
Sportswriter *Technician*, Varsity
Rifle Team

Marc J. Suhler

Forestry Club, SAF

Raymond Payne Taylor

NCSU Club Football, SAF



Jeffrey L. Ward

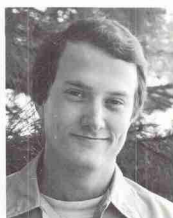
SAF, Forestry Club, Pinhead
Anonymous

Elizabeth A. West

Xi Sigma Pi-Ranger, SAF, Golden
Chain Leadership Society

Stephen A. Whitfield

Forestry Club-President, SAF



Charles Wilson

Carroll L. Wyke

Forestry Club, SAF, NCFA, AFA

*Pulp & Paper
Technology*

Mark J. Alexander

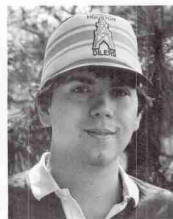
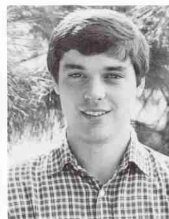
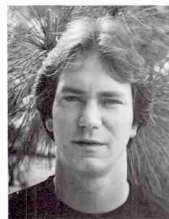
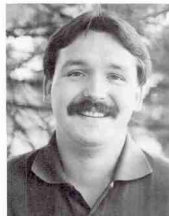
Charles D. Angle

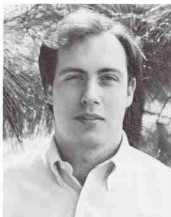
Roy L. Brinson

TAPPI

John D. Carpenter

Fellows Program





Myra J. Carpenter

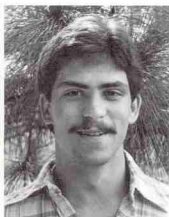
Phi Eta Sigma, Phi Kappa Phi, Xi Sigma Pi

Stan H. Chesson

TAPPI

A. Gray Conrad, Jr.

Pulphead Softball Team



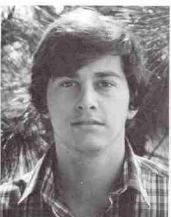
Glenn E. Corcoran

Anthony L. Cross

TAPPI, Xi Sigma Pi

Susan K. Fringer

Xi Sigma Pi, TAPPI-1981-82 Programs Director



Robin R. Goodrich

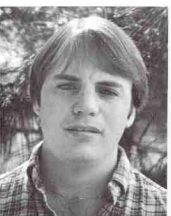
TAPPI, Xi Sigma Pi, For. Coun. Church Soc. Comm., Orchestra

Larry T. Head

TAPPI, Xi Sigma Pi, Slam Dancer's Soc. Dance Club

Karen B. Hinson

TAPPI, Xi Sigma Pi, Phi Eta Sigma, Alpha Lambda Delta



Bruce C. Hodgin

TAPPI-Pres and VP, Delta Upsilon, Alpha Zeta, WKNC News St and DJ

Douglas L. Howell

TAPPI, Pulphead Softball

Sheri L. Humphrey

Phi Eta Sigma, Alpha Lambda Delta, Xi Sigma Pi, Campus Adv

Derwin B. Johnson

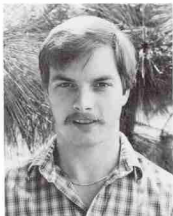
Intervarsity Christian Fellowship,
AIChE

Dallas D. Lowdermilk

Delta Sigma Phi-VP, TAPPI

Kevin J. Marcilliat

Sigma Phi Epsilon, Pledge Class
Pres., Rush Ch, Corres. Sec.



Alvin J. Paul, III

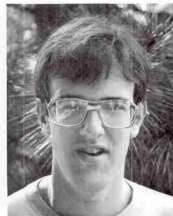
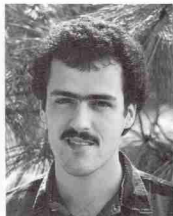
TAPPI, Bragaw Bd of Gov-Treas,
West Campus Comm-Treas, Res
Ad

Gregory Clint Smith

TAPPI Phi Kappa Phi, Mar
Band, Symphonic Band, Stage
Band

Matthew H. Taylor

TAPPI, SAA



Richard X. Taylor

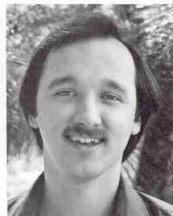
Delta Upsilon, Pres., TAPPI-Sec,
Bragaw Bd of Gov, NCRHA-Sec-T

David B. Turpin

Xi Sigma Pi, TAPPI, Alpha
Lambda Delta

L. Carr Tyndall

Pulpheads Softball Team



Sharon J. Willis

TAPPI-Treasurer

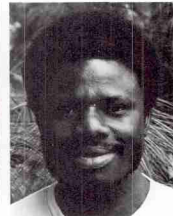
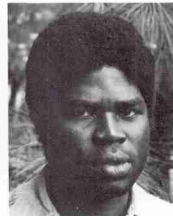
**Wood Science
& Technology**

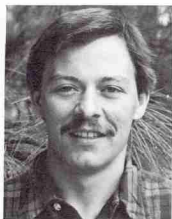
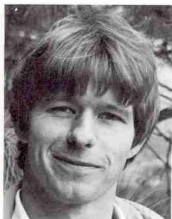
Stephen Adebisi

FPRS

Abel T. Ajiboye

Society of Wood Science and
Technology

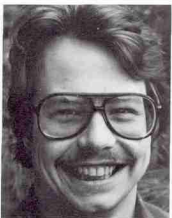




Michael L. Allen
FPRS-Program Chairman

Timothy M. Brinkley

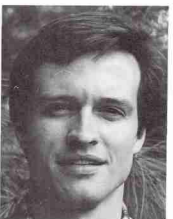
Duane R. Crawford
FPRS



Jack L. DeSarno

Mike H. Freeman
For. Council-Dept. Rep., For.
Coun.-VP, FPRS, Xi Sigma Pi

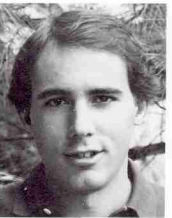
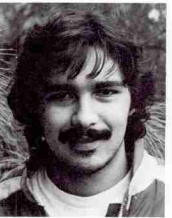
Clyde W. Hatley
FPRS-Treas., Xi Sigma Pi, NCSU
Pipe Band



Ralph Dewey Hill
FPRS, National Campus and
Hikers Assoc. Pres.

Dennis C. Lockhart
FPRS

William D. Miller
FPRS

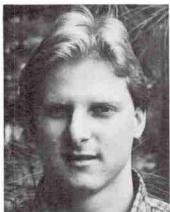


Michael F. Mussack
FPRS, Soccer Intramurals, Karate

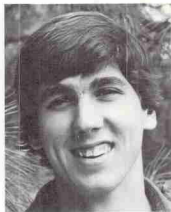
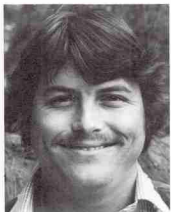
Dale C. Smith
Forestry Council, FPRS

Donald E. Steagall

Matt A. Thomas
FPRS



Ralph B. Ward, Jr.
FPRS

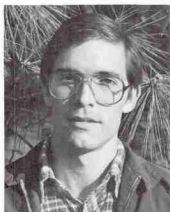


James F. Winecoff
Xi Sigma Pi, FPRS

*Recreation
Resources
& Administration*

Mark Bollinger

Rho Phi Alpha, Treas-80-81, Presi-
dent 81-82



Becky Chan

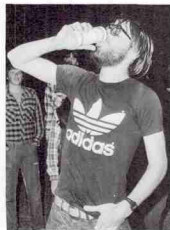
Rho Phi Alpha, Varsity Track,
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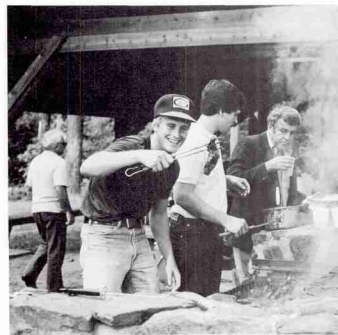
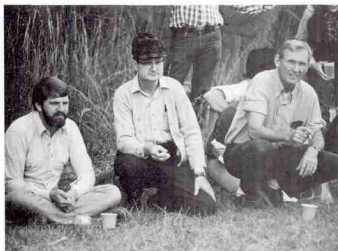
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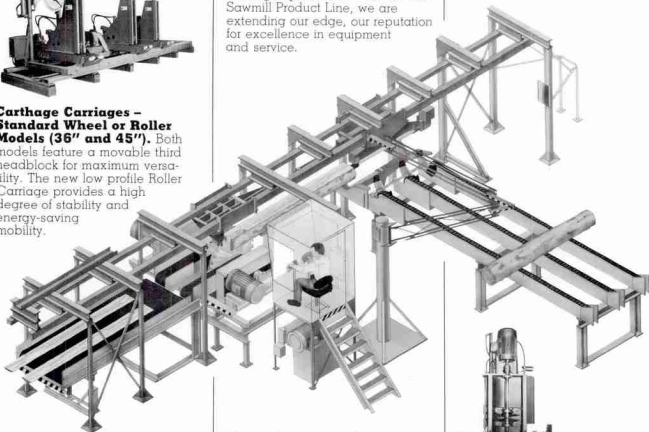
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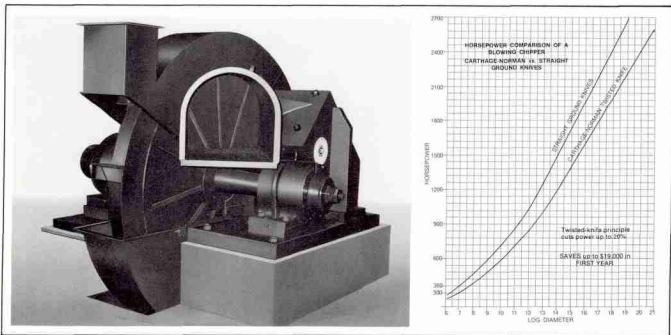
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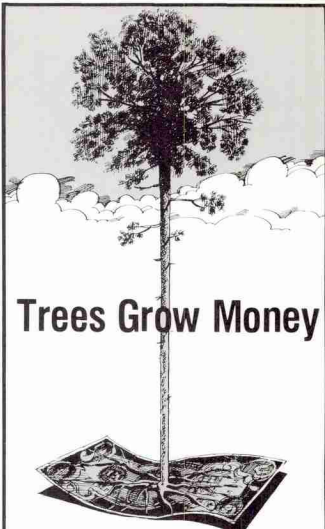
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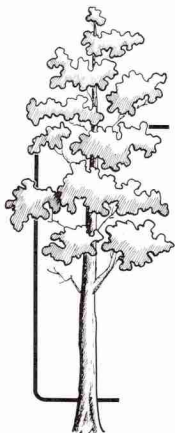
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