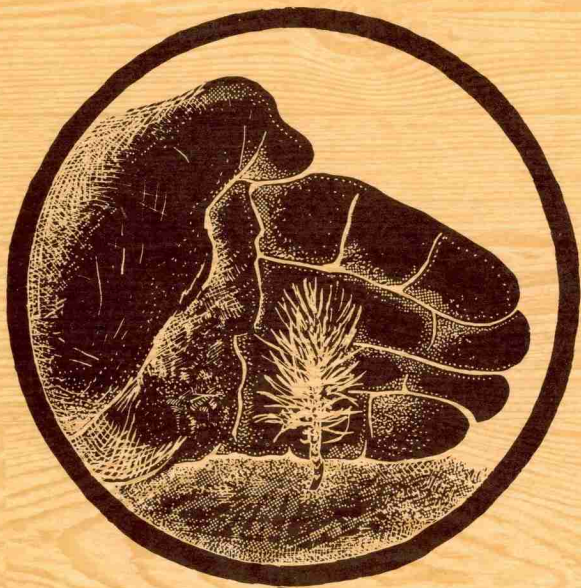
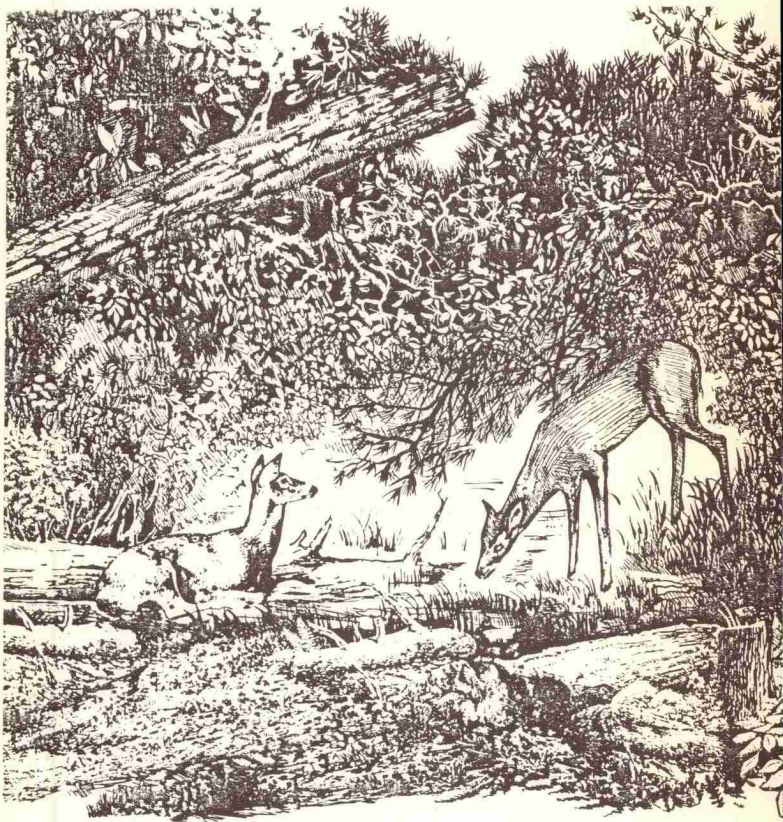


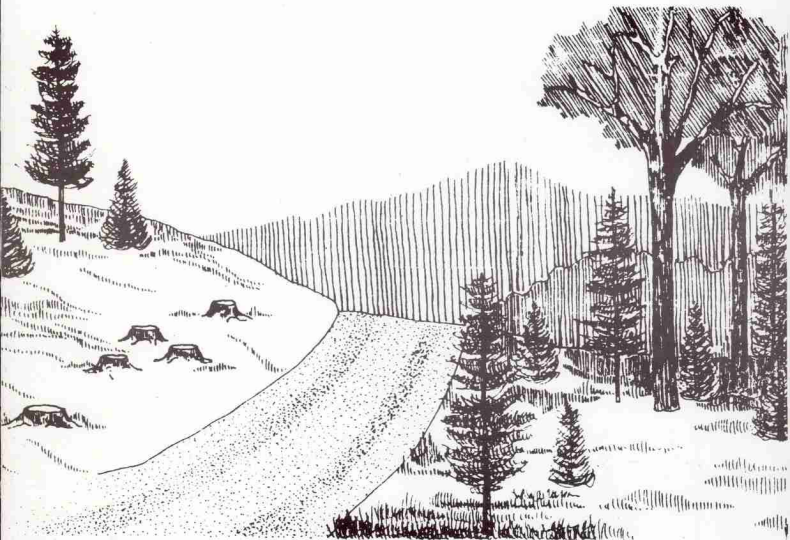
PI-NE-TUM



1983



PI-NE-TUM
Journal of Forest Resources



Conservation, Forestry, Recreation Resources Administration, Wood Science and Technology, Pulp and Paper Technology

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Raleigh, North Carolina
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With Gratitude and Respect, To Darnell Johnson

Darnell has been employed with the N.C.S.U. School of Forest Resources since 1977. Since that time the amount of assistance she has given to the faculty, staff, and students has been immeasurable. Her assistance with the 1983 Pi-ne-tum has been from beginning to end, and not once has she looked for praise. The only reward she is looking for is to see a job well done. Darnell's projects are many. She has been very active on the Bowler's Victory Legion. This is an organization that gives assistance to hospitalized veterans. She is continually involved with charity projects during the holidays and her time off.

Darnell has been an active bowler for many years and is on the board of directors for the Raleigh Women's Bowling Association. She is now the President of the Raleigh 600 Club. She has participated

in various state and local bowling tournaments. She has been the delegate to the National Bowling Organization and the annual state meeting. Darnell has also been very active in organizing new leagues. Aside from her love for helping people, Darnell enjoys needlework, cross stitch, ceramics painting, gardening, walking on the beach, and listening to music.

Darnell hales from Fuquay-Varina, N.C., where she grew up on her father's dairy farm. Her leaving home to work at N.C.S.U. was her father's loss and the faculty, staff and students gain. We are very proud of her and we are sure that her family is also.

Thank you Darnell for being here at the N.C.S.U. School of Forest Resources and for helping us through our days.

With the greatest respect and appreciation, we dedicate the 1983 Pi-ne-tum to DARNELL JOHNSON.



Dean's Message To The Students

by
Eric L. Ellwood

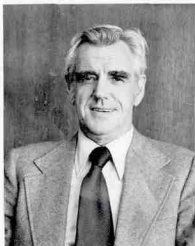
From time to time I have been struck by the diversity in the nature of the students who enroll in the several curricula of the school's programs. Not only is there diversity amongst individuals, but also there tends to be somewhat of a clustering of types according to the particular curriculum. At the risk of over generalizing and perhaps stereotyping, the following characteristics often appear distinct. For example, our forestry curriculum enrolls a substantial number of young people who are attracted to the outdoors and who as a group tend to be oriented towards the experiences associated with that environment. The students, while not exactly introverted, are more at ease working with the forest system than in dealing with people.

On the other hand, the recreation resources students, although activity oriented, seem to project more of an orientation towards people and their interactions, are more extroverted in their values and seem to have fun in doing their school work.

Perhaps the most serious minded and science oriented students and who also project hardworking, Calvinistic attitudes are those enrolled in the wood and paper science curricula.

In a school concerned primarily with the almost infinite complexities of natural resources management, the very diversity of the students, in terms of their attitudinal outlooks, interests and specific abilities, is, I think, distinctly advantageous and bodes well for the future. Just as diversity is preferred in the plant and animal kingdom, which leads to occupation of diverse "niches" and creation of the basis for continuing evolution, human diversity in the natural resource professions is also to be preferred.

Needed in this great arena are the scientists, the dreamers, the communicators, the thinkers, and the doers—the people who can not only obtain material goods from our natural resources, but who can also benefit and enrich the human spirit through management of these resources. I believe our various curricula attract a diverse student body and that the programs and society are richer for it. Another dimension of diversity in relation to the education of professionals is the continuing need for leaders in the variety of facets involved with natural resources and associated services to people. By leaders, I don't simply mean doing a better technical job than most of one's peers, but rather leading the



Eric L. Ellwood
Dean

B.S., M.S., Univ. of
Melbourne
Ph.D., Yale Univ.

way conceptually to better serve society. Perhaps "idea" leadership is a more appropriate term for what I have in mind. Leadership itself is an elusive and difficult to define characteristic, except for the more mundane aspects of its performance. In the normal course of testing for admission to college or of testing the student in college, little or no measure of leadership potential is obtained (although the individual student's extracurricular activities may provide substantial clues). Leadership potential and ability would appear to be much more closely related to personality factors and sense of values, ambition, and other behavioral characteristics, than it is to intellectual capability. An interesting article on the subject of leadership of leaders described what I feel to be very pertinent.

My summary of articles and findings illustrates the importance of values other than, but in addition to, subject matter skills: "Leaders are... high quality people carrying out their destinies through persuasion rather than by direction and with an extraordinary level of vitality in the face of devastating frustrations... but who possess a taste and talent for ambiguity and the capacity to suppress outrage."

SAT scores, grades, or other testing criteria utilized in university undergraduate programs, while they can provide a measure of the student's grasp of technical subject matter, cannot begin to measure this all-important leadership potential.

Which is all the more reason that I feel confident that, from the student diversity which we have in the school, there will emerge the successful practitioner, the scientist, the thinkers, and the doers, and the future leaders of leaders.

Academic Affairs

Student Affairs
by
L. C. Saylor



B.S. Forestry, Iowa State Univ.
M.S. and Ph.D. Genetics, NCSU

The responsibilities of the Associate Dean for Academic Affairs cover a wide spectrum of activities but focus primarily on the administration of the Schools' undergraduate programs. These responsibilities are in large measure delegated and carried out through a combined team effort involving an Administrative Assistant and a Secretary. Much of the effort of the office deals with admissions, advising, program development, scheduling and student records.

An especially important function of the office is to provide coordinating and support services to the three academic departments and student organizations. For example, we coordinate the preparation of program brochures and participate in recruitment activities both on and off campus.

The Associate Dean for Academic Affairs represents the School of Forest Resources on a number of university committees, and also serves on or chairs several school committees, e.g. Courses and Curriculum and Advising Committees. As coordinator for advising, a considerable amount of time is spent counseling students, administering late drop and withdrawal requests, assisting faculty, etc. A sizeable effort is also invested in directing school enrichment activities such as the Honors Programs and the Work Study Cooperative Education Programs.

There are also several administrative responsibilities currently handled by the associate dean for Academic Affairs that are not related directly to the undergraduate programs. Examples include: (1) serving as the school's Affirmative Action Officer which involves reviewing hiring, termination, and grievance requests; (2) assisting the Associate Dean for Research in administering various aspects of the Graduate Program; and (3) assisting the Dean in a variety of assignments as needed. In actuality, the Department Heads and the Deans work cooperatively in many areas in an effort to carry out the role and mission of the school in the most effective and efficient way possible.

Progress Report

by
Eric L. Ellwood

The year 1982-83 may well be categorized as the bottom of the economic down cycle which has severely impacted on many industries, including the forest products industries, as well as upon tax revenues which in turn provide appropriations for education. However, there is a developing consensus amongst economists that the economy is on the upturn. Already, in early spring, housing starts have increased by more than one-third. Unfortunately, the overall economic situation has had its negative impacts on forest and natural resource schools nationwide, including ours. Undergraduate enrollment, particularly in forestry and in recreation resources, has continued its downward trend (although wood and paper science has increased) to a level some three (3) percent less than that for ten years ago. On the other hand, our graduate enrollment has more than doubled over that period. Further growth of our very healthy graduate program is limited more by the lack of space and facilities than any other factor. My expectations are that the undergraduate enrollment will bounce back to a significant extent when the economy revives, but perhaps not to the same level that it reached in the mid-seventies.

With our enlarged graduate and associated research program, we have been literally bursting at the seams. Because capital funding from appropriations for building is not immediately likely, we have increased our space through constructing relatively low-cost research space at Method—one mile from campus—and our Small Woodlot Research Unit moved out of Biltmore Hall into rental space again about one mile from campus. Most recently, we have contracted for several modular (trailer) units to be built at Method, hopefully for occupation by May. Our longer range planning to overcome the space and facility limitation includes working towards the construction of a Natural Resources Center adjacent to Biltmore Hall and hopefully a fund drive, through the N. C. Pulp and Paper Foundation, to expand the Robertson Wing.

During the year we established the first comprehensive School of Forest Resources Advisory Council comprised of North Carolina leaders in the variety of enterprises in which the school is engaged or has interests. The first meeting of the 17 member Council was held in the fall. Dr. Tom McLintock of Asheville, North Carolina was appointed chairman.

We look forward to the Council being a very helpful addition in our planning and development activities.

During the fall semester, the program in Recreation Resources Administration underwent its reaccreditation review with flying colors and the undergraduate computer laboratory was established and put into action. To our knowledge, this latter facility is one of the first fully-dedicated undergraduate computer facilities in a forestry school. It will be used by undergraduates in all of our curricula. Also in relation to computers, a substantial acquisition of hardware and software has greatly enhanced our capability in graphics and in computer assisted mapping.

In early spring our largest lecture room (2010) was dedicated in honor of the late Dr. John W. Johnson. Members of his family and his colleagues from industry and the university were present.

Although the School suffers from some reductions in the state based budget appropriations, we are much heartened by the steady support provided by the forest products industry and by the stability of federal appropriations received by the school. However, we are not letting these stringent fiscal times prevent us from moving ahead in curricular revisions and program strengthening and development, in preparation for the upturn we believe to be around the corner.

Faculty recognitions during the year were as follows:

Professor Robert G. Hitchings was named Reuben B. Robertson Professor of Pulp and Paper Science and Technology.

Dr. Arthur W. Cooper was awarded the 1982 Sol Feinstone Award for his contribution to the environmental movement.

Dr. Charles B. Davey was awarded the prestigious Barrington Moore Award by the Society of American Foresters at its annual meeting in Cincinnati, Ohio. This award is one of SAF's most prized awards for scientific achievement and is awarded for "distinguished individual research in any branch of the biological sciences that has resulted in substantial advances in forestry."

Dr. Awatif E. Hassan was designated the 1982 winner of the American Society of Agricultural Engineers' Engineering Concept of the Year Award. This honor was given to her and her coworkers for the engineering concepts embodied in the design of an intermittent motion tree transplanter.

Dr. Ellis B. Cowling was named by the N. C. Wildlife Federation as Air Conservationist of the Year.

Dr. Floyd Bridgwater was awarded a Certificate of Merit from the U. S. Forest Service for high level of performance as a research scientist and high level of cooperation with N. C. State University.

Dr. Jan G. Laarman was named as secretary of the Society of American Foresters' International Forestry Working Group.

Dr. Jimmy D. Gregory was elected treasurer and the 1983 meeting chairman of the Southern Forest Hydrology Group and meeting chairman of the Southern Forest Environment Research Council.

Dr. Siamak Khorram has been elected as the first deputy chairman for the Hydrospheric Sciences by the American Society of Photogrammetry.

Dr. Jim McGraw was selected as the Outstanding Extension Entomologist in the Southeastern Branch of the Entomological Society of America.

Dr. Bruce J. Zobel was named Man of the Year in Forestry for 1982 by the North Carolina Forestry Association.

Dr. Chrystos Siderelis was presented the 25th Anniversary Award, Park Practice Program Publications, National Park Service and National Recreation and Park Association.

Dr. Roger Warren was presented the Fellow Award by the North Carolina Recreation and Park Society.

Dean Eric L. Ellwood was appointed to the National Academy of Sciences' Board of Agriculture and to the National Association of State Universities and Land-Grant Colleges' Board of Directors of the Division of Agriculture.

New faculty appointments made during the year were Steven Anderson as Research Assistant in the Forest Fertilization Cooperative, Dr. Ann Bartuska as Visiting Assistant Professor in the Departments of Botany and Forestry, and Dr. Gary Kronrad as Research Associate in the Small Woodlot program. Dr. Siamak Khorram was appointed as Director of University Systems Analysis and Control Center on a one-third time basis.

The following promotions were approved:

D. Lester Holley promoted to Professor
Myron W. Kelly promoted to Professor
Hinz G. Olf promoted to Professor
Sondra L. Kirsch promoted to Assoc Professor

Enrollment (Fall of 1982)

Degrees awarded in 1981-82 were:

Curriculum	Ph.D.	M.S	Undergraduate		
Conservation			19	Bachelor	150
Forestry	32	38	228	Masters	30
Recreation Resources Adm.		32	152	Doctorate	8
Pulp & Paper Science			188		
Wood Science & Technology	13	18	63	Total	188
Total	45	88	650		

Employment Concerns: Preparing for the Interview

by
Alan T. Stutts

Studies indicate that many job applicants are not successful in their search for employment because they do not handle the interview effectively. In the following few paragraphs are some ideas that should be considered by the prospective job applicant when preparing for an employment interview.

Considering the competitive nature of most employment opportunities in today's economy, a job applicant who is asked to interview should approach this opportunity with more than just casual preparation.

It is not enough to merely show up for the interview. The successful job applicant will be an active participant during the interview. This means that the applicant must learn as much as possible about the organization conducting the interview. Questions such as the number or types of employees, geographic locations of organization property-facilities, scope of programs-services-products and salary-benefit programs are among a few of the important questions that should be considered before the interview.

In addition, prior to the interview the successful applicant will formulate a clear understanding of how his-her education and experience are the best combination possible for the job being considered. It is a "sure bet" that a question will be asked by the prospective employer which requires the applicant to relate her-his experience and education to the job in question. The successful applicant will be the one who does not wait until the interview to formulate a coherent response to this question.

During the employment interview the successful applicant:

- 1) Will not dress inappropriately...Consider the age or expectations of the interviewer and employing organization;
- 2) Will not smoke unless invited by the employer;
- 3) Will not display discouragement or tell the employer his or he troubles relating to such things as an inability to find employment;
- 4) Will not overlook important personal facts...Develop a mental checklist of your personal strengths that need to be conveyed during the interview;
- 5) Will not deprecate or criticize former employers or associates;
- 6) Will not hold out for an arbitrary salary figure...What is the current salary scale for the industry or type of employment.

Upon concluding the interview the successful applicant will determine whether the employer requires any additional information that has not been submitted (e.g. references, transcripts);and the successful applicant will make sure the employer knows whether he-she is still interested in the position.

DEPARTMENT HIGHLIGHTS

by
Arthur W. Cooper

The past year has been a busy one for the Department of Forestry. Events here, as elsewhere in our society, have been heavily influenced by the state of the economy. Most of our work has involved responding to problems brought on by our depressed economy and preparing for the economic improvement we expect to occur in forestry.

The undergraduate curriculum continues to be an item of importance. With the revision of FOR 405-406 this year all new and revised courses developed when the curriculum was reviewed in 1980 are in place. We continue to emphasize writing as a vital part of a forester's training. The increased emphasis on good writing in reports and paper has resulted, we think, in much improved communication skills in current undergraduates. The new minicomputer facility in room 2006 is the most important new feature of our undergraduate program. With this facility we can expose all our students to computer programming as a part of their courses in forestry. We can now realistically achieve our goal of having each graduate understand the use of the computer as a tool in support of professional forestry work.

This year's poor job situation has offered us the opportunity to re-examine placement procedures. When the economic situation improves we want to be in a position to offer better placement services to our students. We will emphasize job awareness much earlier in the undergraduate program and will take steps to explain better to prospective employers why they should employ NCSU foresters!

This year saw completion of our remote sensing hardware capability. Under the direction of Dr. Siamak Khorram, and in conjunction with Electrical Engineering, the computer facilities necessary to analyze computer tapes from each resource satellites have been obtained. With this equipment Dr. Khorram and his students can analyze earth resources scanned by satellites orbiting earth at regular intervals. A study of water quality in the Neuse estuary is their first application of this technology to North Carolina resources.

Establishment of the Southeastern Center for Forest Economics Research was a major stimulant to forest economics studies. The Center, which combines forest economists from Duke, NCSU, and several other schools, will serve as a catalyst for application of economic analyses for forestry. Already a major study of the economics of international forestry has been carried out and others are expected.

Enrollment of minorities in the forestry program has increased significantly in the last several years. Traditionally, forestry is not a field sought out by minorities. We have begun a change in that picture, a change which we think will be beneficial for the profession.

Despite the present glum economic picture in forestry we are optimistic about our future and that of the profession. The South is where the future of forestry in the United States will be and we will play an important role in that future.



FACULTY



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Ph.D., Univ. of California



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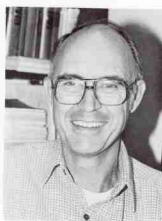
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M.A., Univ. of Idaho



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Floyd Bridewater
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State



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M.S., Ph.D.,
Univ. of Wisconsin



William Dvorak
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PhD Univ. of California

SENIORS

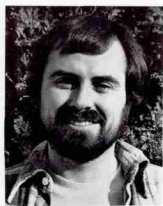


David Dorsey Absalom
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Forestry Club
Hometown: Durham

James David Allen
Hometown: Mt. Gilead



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Xi Sigma Pi
School Forest Work Crew
Hometown: Princeton
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Asst. Equipment and
Equipment Chairman
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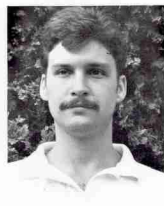
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Barry C. Forrest
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Hometown: Robbins



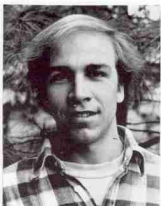
Kim Formyduval
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Mgr.
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SAF, Forestry Council
Gamma Sigma Delta
NCSU Pipes and Drums
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Gwen Gay
Xi Sigma Pi
Hometown: Wheaton,
Maryland



Randy Cleveland Guy
Forestry Club
Xi Sigma Pi
Gamma Sigma Delta
Hometown: Apex



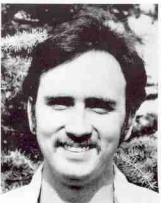
Matthew Hardison
Alpha Gamma Rho
SAF, NCSU Rugby
Football Club
Hometown: Washington
DC



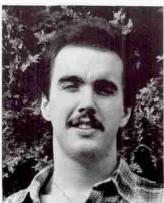
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Alice May Perry
Forestry Club
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Hometown: Fayetteville



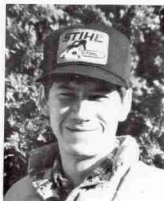
David Alan Robinson
Xi Sigma Pi
Forestry Club
Hometown: Greensboro



Mark Edward Robinson
SAF
Hometown: Bakersville



Scott Richard Schellin
Baptist Student Union
Hometown: Xenia, Ohio



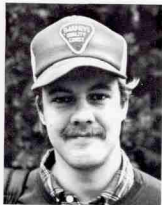
Tim Hilton Sellers
Forestry Club
Hometown: Wendell



Steven Douglas Sutton
Forestry Club
SAF
Hometown: Murfreesboro



Mark Douglas Watkins
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Michael G. Wienholt
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David Lee Yarbrow
SAF
Forestry Club
Hometown: Oak Ridge,
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Forestry Club



by
Robin McRae

For folks in the Forestry Club at North Carolina State University, the school day doesn't end with classes and labs. Bi-weekly meetings lay the ground work for the club's volunteer and fund-raising projects. Our main source of income is from Saturday tree jobs in residential areas. Among other things, this entails locating and bidding on jobs, consulting with the landowner, and trimming and removing trees. Because the entire club benefits from these jobs, efforts are being made to recruit more volunteers who will work on a regular basis. Special thanks goes out to the small, dependable work crew, particularly Tree Job Chairman Craig Sasser and Nash Hardy, for showing up every Saturday, rain or shine.

Our hard-earned money goes towards annual events enjoyed by the Forestry Club, as well as other clubs in the School of Forest Resources. Fall semester began with a perfect pig-pickin' held at Schenck Forest. Our display at the State Fair in October sparked public interest in the club and its functions, as well as forestry seniors who got quite a surprise when they tied for first place with the sophomores at the Rolleo.

January began with a tree planting job out at the Hill Forest. The Forestry Club was among the sponsors for an evening square dance organized by several clubs within the School of Forest Resources.

We also participated in the University Volunteer firewood cut, "Wood for Warmth." Attendance was good, and over 60 cords of firewood for the needy were cut, split, and stacked by N. C. State Volunteers.

The Spring semester also brought anticipation for the main event of the year—Conclave. Practice began in February and competition just from within the club was tough. The 26th Annual ASFC Conclave was hosted by the University of Florida in Gainesville. As always, a great time was held by all, and the club gave its best effort in competition as well as sportsmanship. With the school year drawing to an end, the Logger's Brawl provided the club with another evening of dancing, beer, and fun.

The Forestry Club wishes to extend thanks to faculty and technical advisors, and special friends: T. V. Gemmer, J. D. Gregory, W. D. Smith, Richard Braham, Maurice Farrier, Jim Orrell, Cullen Whitley, Moreland Gueth and Tommy Poe—we never could have done it without you.

SAF



The student chapter of the Society of American Foresters has made great progress during the past year; membership has tripled and the club has become much more active. New officers were elected at the first meeting and included Chairman Juan Jurado-Blanco; Vice-Chairman, Jeff Donaldson; and Secretary-Treasurer, Daniel Edwards.

Two members were able to attend the SAF national convention held in Cincinnati, Ohio. The topic of the convention was "America's Hardwood Forests—Opportunities Unlimited." It was generally productive for one of the two students, who found employment while there.

The chapter participated in the "Wood for Warmth" university project. The chapter was well represented at the annual meeting of the Ap-

plachian Society, held in Myrtle Beach, S.C. The topic of the meeting was "Maintaing Site Productivity." During the semester, speakers for each chapter meeting were lined up in conjunction with the forestry club.

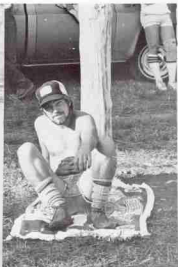
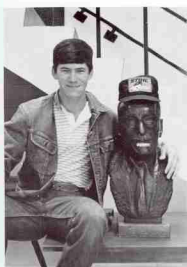
The chapter would like to thank Bill Smith, our advisor, and the Forestry Alumni Association for all of their support and advice. All in all, this year was a good one for the SAF, and we look forward to a bright future.

HIGHLIGHTS



LOGGER'S BRAWL





RECREATION RESOURCES ADMINISTRATION

DEPARTMENT HIGHLIGHTS

by
Roger Warren

One of the highlights of the 1982-83 year was the reaccreditation of the department by the Council on Accreditation, National Recreation and Park Association in cooperation with the American Association for Leisure and Recreation. Reaccreditation was granted for a five-year period ending in 1987 for the Master of Science, Master of Recreation Resources, and baccalaureate degree program with specializations in Recreation and Park Management, Recreation Program and Leadership, Recreation Resource Management and Commercial Recreation. The department received high praise from Dr. Charles Hartsoe, the Council's visitation representative, as one of the very strong programs in the United States. The Department of Recreation Resources Administration was the first program in the United States to be accredited in 1977. There are now 33 colleges and universities which have been accredited by the Council.

A second noteworthy event during the year was the Fourth Annual Recreation Internship and Summer Employment (RISE) Conference. Under the leadership of seniors Jeri Lemons and Lisa Watts, with excellent support from members of the Recreation Club, the conference was again extremely successful. Thirty agencies from Virginia, North and South Carolina participated in the day-long event.

The RISE banquet speaker was Mr. Rick Dodge, Park and Recreation Director, St. Petersburg, Florida who challenged the audience to develop more innovative management techniques if we are to be successful in the future. The evening's entertainment included a cleverly done skit by students depicting a day in the life of the departmental faculty.

One of the most important developments in the School during the year was the establishment of a microcomputer laboratory. Recreation Resources faculty and students have made extensive use of the facility for class demonstrations, problem and project assignments, special workshops for graduate students and individual research. In January the

department sponsored a workshop for microcomputer applications for practitioners which was extremely well received by the participants. Dr. Hugh Devine and Ms. Carol Hamlett led this effort.

The department continues to stress the importance of continuing education. The Maintenance Management School had its greatest enrollment ever with 223 persons from across the United States attending this year's School. The School reached a milestone of having their one thousandth graduate this year. Dr. Sternloff continues to provide outstanding leadership for this program. We hope to broaden our continuing education offerings particularly in the area of computer applications to provide practical hands-on experience for practitioners.

We continue to critically examine the department's curriculum and course offerings. Substantial changes in the undergraduate core curriculum were put into effect during the Fall semester, 1982. A major review of the departmental graduate program was completed and changes as a result of this study are being considered. A new concentration area in Resort, Hospitality and Travel Management has been proposed with a series of new course offerings.

In summary, the department is not standing still. We are proud of the department's accomplishments and seek ways of doing an even more effective job in the future.



FACULTY



M. Roger Warren
M.S., West Virginia
Re.D. Indiana Univ.



David F. Culkin
B.S., M.S., Univ. of Ill
Ph.D., Univ. of Oregon



Hugh A. Devine
B.S., M.S., Ph.D.,
Penn. State Univ.



Carolyn S. Love
B.S., Shaw Univ.
M.S., N. C. State



Phillip S. Rea
M.S. SUNY at Cortland
Re.D., Indiana Univ.



Chrystos D. Siderelis
M.S., Ph.D.,
Univ. of New Mexico



Robert E. Sternloff
B.S., M.S., Ph.D.,
Univ. of Illinois



Alan T. Stutts
Ph.D. Univ.
of Illinois-Urbana



Don D. Tarbet
Re.D. SUNY at Syracuse



Beth E. Wilson
B.S., M.S., N. C. State



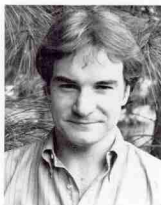
SENIORS



Anita Watkins Anderson

Rho Phi Alpha
Phi Kappa Phi

Hometown: Burlington



William James Biddlecome

Recreation Club
Rho Phi Alpha
N. C. State Hockey Team

Hometown: Clinton,
New York



Warren Brent Boykin

Rho Phi Alpha

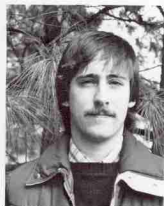
Hometown: Zebulon, N.C.



Robert M Burroughs

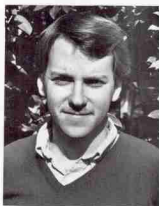
Sigma Pi Fraternity
University Players

Hometown: Charlotte



Lynn McRay Driver

Hometown: Rocky Mount



Dwayne Eric Hellard

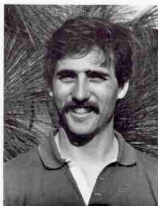
Hometown: Charlotte



Donald Franklin Holloman

Recreation Club
Forestry Council

Hometown: Wilson



William Edward King

Recreation Club
Rho Phi Alpha
Inter-Varsity

Hometown: Charlotte



Jeri Sue Lemons
Recreation Club, Secretary
Rho Phi Alpha, Vice-Pres
Rise Chairperson
Hometown: Eden



Sue Marie McFarland
Hometown: Cherryville



Judith Kay Nicholson
NCSU Track Team
Recreation Club
Off-Campus Intramural
Director
Hometown: Fayetteville



James Calvin Robinson
Recreation Club
Animal Science Club
Hometown: Enka



Michael Wayne Smith
Recreation Club, President
N.C. Recreation
and Park Society
Hometown: Kings Mt



David Neal Tugwell
Hometown: Wilson



Lisa Faye Watts
Recreation Club
Rho Phi Alpha, Secretary
Rise Co-Chairperson
N.C. Park and
Recreation Society
Hometown: Kannapolis

NCSU Recreators

Lead the Pack

Rho Phi Alpha



Rho Phi Alpha Honorary Professional Recreation Fraternity was established in 1958 here at State to recognize, promote, and encourage students of high academic achievement in the field of recreation.

The Alpha Chapter of Rho Phi Alpha here at NCSU has a membership of twenty, and sponsors several activities during the school year. The first activity of the current year was a smoker held at the start of last semester.

At the smoker, each of the members prepared their favorite dish and brought it to one of the faculty member's house, played exiting games and ate their fill of good food, as well as met the new pledges for the fall.

High school seniors were involved in the next Rho activity. At the university Open House, Rho members were at the Recreation Department's booth to answer any questions about the program the seniors may have had.

The next Rho Phi Alpha project was done in conjunction with the Recreation Major's Club at the State Fair. "Life...Be In It" buttons, T-shirts, and sun visors were sold to promote recreation and raise money for the North Carolina Recreation and Park Society.

During December, Rho Phi Alpha members took time out of their busy schedules to visit the Carriage House, a local home for senior citizens. Baskets of fruit and candy were distributed, along with Christmas cheer.

The spring semester started off the same way the fall semester did, with a smoker. Only at this one of the six new spring pledge prospects were invited.

There were two activities in March that Rho members were involved in. The first was the Outdoors North Carolina Show, and the next was the Second Annual Spring Work Service project.

For the spring project, Rho members 'rented' their services to faculty members in the School of Forest Resources for the day to clean windows, wax floors, or any other chore that needed to be done. Money was paid by the faculty members to the fraternity for the work done by the members. The spring project continued on into the next month, with two work days being set up in April in addition to the one in March.

The formal event of the spring semester was the Spring Banquet held at Ballentine's in Cameron Village. Rho Phi Alpha members and the faculty in the Recreation Department got together to enjoy good food, fellowship, and a special guest speaker.

Recreation Club



by
Kevin Ewbank

The N. C. State Recreation Club is composed of a small but active group of people interested in Recreation. The 1982-83 school year saw many events sponsored or attended by the "Rec" Club, most of which involved people other than the members.

There were two softball games near the star of last

semester in conjunction with parties on the upper intramural field. The first party saw the undergraduate students slaughter the graduate students, while in the second one they joined forces to defeat the faculty team.

"Life...Be In It" was the theme for the week when the State Fair was in town. Rec Club members and other interested students manned the North Carolina Recreation and Park Society's booth, selling hats, T-shirts, and buttons.

As far as T-shirts go, a new club logo and motto was on the shirts and jerseys sold this year. Now not only do Recreators Fool Around With Mother Nature, but "NCSU Recreators Lead the Pack" up a trail and into the mountains.

November was the month of the trip to the NCRPS annual conference in Asheville, North Carolina. Students attending the conference were able to meet some highly placed recreation professionals and attend seminars on different issues facing recreators today. The keynote speaker for the weekend was Senator John East.

Spring semester started off at a fast pace. In January there was first a square dance co-sponsored by the Rec Club and the Forestry Club, then probably THE big event of the year, the Recreation Internship and Summer Employment (RISE) conference and banquet.

The RISE conference offers a chance for Recreation students who need a summer job to meet prospective employers and (hopefully) line up a job. Representatives from forty recreation agencies attended, representing all areas of recreation. Kitty Hawk Kites and Fontana Village Resort were there for the commercial recreation field and the US Army Corps of Engineers and various country departments were there representing the public sector, as well as many others.

The largest fundraiser of the year was concluded at halftime of the State-Notre Dame basketball game with the drawing of the winning raffle ticket. The winner received a free dinner for two and two tickets to the State-UNC game. Proceeds from the raffle will go to supporting next year's RISE conference.

There is one more event scheduled for the Rec Club this semester, a mini-conference at Fort Caswell near Wilmington, North Carolina. Sponsored by the Student Chapter of the NCRPS and presented by UNC-W, the mini-conference is an opportunity for students from recreation programs around the state to meet and discuss topics of interest to students.

Resort, Hospitality and Travel Management

by
Alan T. Stutts

In recent studies the U. S. Travel Data Center reported that travel and tourism generated more U. S. jobs than any other private industry in 1980, except health services. Travel was the top source of jobs in 12 states and among the top three employers in 35 states.

During 1981 U. S. and foreign travelers spent 191 billion dollars in this country and produced 182 billion dollars in business receipts. Travel spending directly generated 4.6 million dollars in wages and salaries.

The Department of Recreation Resources Administration is developing a new "concentration", in its degree program for undergraduate students wishing to specialize in the rapidly growing area of travel and tourism. Students in the new "concentration", Resort, Hospitality and Travel Management, will prepare themselves to assume management positions in a variety of leisure service organizations including resort hotels, clubs, government travel and tourism centers, convention centers and air passenger carriers.

The Resort, Hospitality and Travel Management concentration will incorporate courses to be taught by the Department of Recreation Resources Administration in the areas of travel planning, accommodations and lodging and food-beverage systems. In addition students in the concentration will complete coursework in business and complete an on-the-job management training experience with a leisure organization offering the type of career opportunity in which they are most interested.

The Department of Recreation Resources Administration is expected to offer courses in this new concentration in the 1983-84 academic year.

I n t e r n s h i p

by
Sondra Kirsch

The Department of Recreation Resources requires that all seniors in the curriculum spend ten weeks or 400 hours off campus in a controlled recreation or park management environment to acquire practical "on-the-job" experience. Scores of commercial, private and public agencies participate with NCSU

in this 9 credit hour cooperative internship program which provides students with the opportunity to better understand and appreciate all phases of a particular agency's Recreation and or park operation. There is much flexibility in the program in an effort to meet both the agency's needs and the career objectives of the student. The intern becomes a functional member of the agency's staff and, at the same time, a student engaged in an assigned training program for the university. Internship locations might include the mountains or

coastal areas of the National Park Service, Corps of Engineers' reservoirs, resorts like Kiawah Island or High Hampton Inn, children's homes, church or 4-H resident camps, Disney World, state historical sites, urban parks or military reservations. Interns complete the practicum when they return to campus and submit a detailed written and oral report early in the fall semester to their fellow interns and faculty. Close monitoring by the University Internship Coordinator throughout the internship ensures a quality experience for both the student and the agency.

R.I.S.E Conference

On January 20, 1983, the Third Annual Recreation Internship and Summer Employment Conference (RISE) was held. The Rise Conference sponsored by the Recreation Club was held at the Student Center Ballroom. Over 25 agencies ranging from Kitty Hawk Kites (commercial) to the Northern Virginia Regional Park Authority (Urban Parks) were present.

The purpose of the RISE Conference is to bring agencies and students together so that the students may find summer or internship employment with an agency that fits their needs.



After the conference in the afternoon, the banquet was held in the Walnut Room. This year's guest speaker was Rick Dodge from St. Petersburg, Florida. Present also at the banquet were Dean Eric Ellwood, Dr. Roger Warren, students, faculty, and agency representatives.

The representatives from the Northern Virginia Regional Park Authority commented that the RISE Conference was "well organized and fun, and they would like to return next year."



Wood Science and Technology

DEPARTMENT HIGHLIGHTS

Undergraduate enrollment in the Department decreased from last year's record of 272 to 251 students. The Pulp and Paper Science and Technology program (PPT) enrolled 188 and Wood Science and Technology (WPT) curriculum 63 students. The number of students receiving merit scholarships continues to increase. Presently 80 PPT students and 8 WST students are receiving merit scholarships. Academic performance remained high as illustrated by the fact that 28 PPT students and 5 WST students made the Dean's List in the Fall 1982 semester.

Although employment opportunities for May 1982 were not as numerous as in the past, all of the PPT graduates secured employment with an average salary \$26,365. Graduates from WST found the situation more difficult; however, by last fall all had found employment in their field. The average salary was \$16,500.

During the past year Professor Hitchings was named as the Reuben B. Robertson Professor in recognition of the many significant contributions he has made to the department. Other faculty recognized for outstanding performances were Dr. H. G. Olf and Dr. M. W. Kelly, both of whom were promoted to the rank of Professor.

Both the quality and quantity of the faculty research

remain very high. During the past year more than \$250,000 in research grants was generated by the faculty. Two projects which hold great promise for adoption by industry were partially completed. The first was the development of a process of either treating wood chips prior to pulping, or afterwards with Na₂S or green liquor. The pulp produced is of equal quality to that obtained by conventional pulping but requires less energy, chemicals and reduces pollution from the bleaching plant. The process eliminates chlorine compounds from the bleaching system and thus overcomes a major obstacle towards the creation of a completely closed mill.

The other project, which combined a new air drying procedure with presurfacing of boards prior to drying resulted in oak lumber completely free of drying defects. The new air-drying process places the lumber between thin sheets of plywood decreasing the moisture gradient between the surface and the interior of the lumber such that the drying stresses do not reach the magnitude required to develop checks and splits in the lumber. A large industrial trial of the new drying procedure will be performed this year.

Due to the efforts of students, staff and faculty the past year has been one of progress. The Department will persist in its efforts to recruit high quality students, maintain a high standard of teaching and continue to carry on research programs of importance to the state and region.



FACULTY



Richard J. Thomas
M.S., N. C. State
D.F., Duke Univ.



Robert Gilmore
B.S., Penn State
M.W.T., N. C. State



Arthur Hart
Ph.D.,
N. C. State Univ.



Myron Kelly
B.S., SUNY College;
Ph.D., N. C. State



Adrianna Kirkman
B.S., M.S. NCSU



Ronald G. Pearson
B.A., M.C.E., Univ.
of Melbourne



Elisabeth Wheeler
M.A., Ph.D., Southern
Illinois Univ.



SENIORS

Wood Science



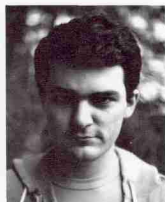
Mark David Allen
Hometown: Wilmington,
Delaware



Thomas Alvis Allison
Hometown: Efland



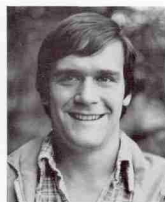
Robert Trent Benton
FPRS
German Club
Delta Upsilon Fraternity
Hometown: High Point



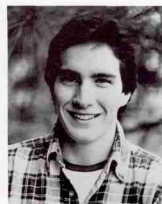
Alan Ritter Davis
FPRS
Hometown: Trinity



Bruce Alan Hamlett
FPRS
Athletic Director for FPRS
Hometown: Burlington



Gregory Lawrence McGee
FPRS
Xi sigma Pi
Honors Program
Hometown: Raleigh



John Clifton Park
Sailing Club, Golden Chain
FPRS, Forestry Council
Xi Sigma Pi, Phi Kappa Phi
NCSU Civic Symphony
Hometown: Statesville



Kevin Stuart Sanders
Hometown: Hampstead



Stephen George Schadt

Hometown: Jamestown



Alan McNairy Smith

FPRS
Hometown: Summerfield



Todd Mitchell Spurgeon

FPRS
Forestry Council
Delta Upsilon Fraternity
Hometown: High Point

Pulp and Paper Technology

SENIORS



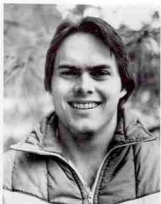
Gregory Thomas Birk

Forestry Council
TAPPI, FPRS
NCSU Varsity Swim Team
Hometown: Medway, Ohio



John William Boyden, II

TAPPI
Alpha Gamma Rho
Hometown: Pensacola



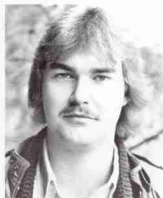
Henry Tilmon Corey

TAPPI
Xi Sigma Pi
Hometown: Greenville



James B. Coward, Jr.

Tau Beta Pi
Hometown: Canton



James Brian Farley

TAPPI
Xi Sigma Pi
Hometown: Canton



Steven Jeffery Gordon

Zeta Beta Tau Fraternity
Yearbook Photographer
YearBook Business
Manager
Vice President Gold Hall
Hometown: Norfolk
Virginia



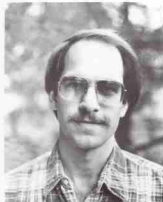
Julian Scott Grimes

TAPPI
Farm House Fraternity
NCSU Blood Service
Committee
Hometown: Plymouth



Dwayne Henry Hinkie

Phi Kappa Phi
TAPPI
Hometown: Silsbee, Texas



Joseph Donald Hosch

TAPPI
NCSU Marching Band
Hometown: Pensacola,
Florida



Todd Alan Hudson

TAPPI
Hometown: Hickory



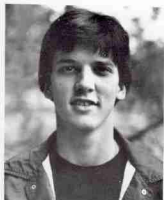
Michael Bernard Jackson

TAE KWAN DO Club
Hometown: Hartsville
Florida



Karl Peter Jensen

Lutheran Student
Movement
Hometown: Covington,



Steven Edward Kirk

Phi Kappa Phi
TAPPI
Hometown: Pensacola,
Florida



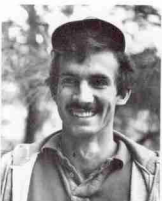
Joyce Elizabeth Lackey

Campus Crusade for Christ
Univ. Choir - Accompanist
Hometown: Pensacola,
Florida



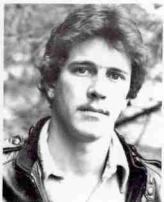
Daniel Frederick McCulloch

TAPPI
Owen House Council
Hometown: Hartsville,
South Carolina



Michael David Miess

TAPPI
Hometown: Cary



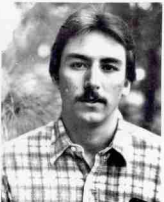
Jeffrey Franklin Moore

TAPPI
Hometown: Williamston



Steven Herman Parker

TAPPI
Hometown: Asheboro



James Parnell

TAPPI
Hometown: Charlotte



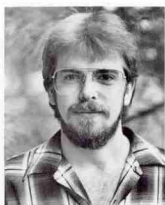
William Harold Petke

TAPPI
Hometown: West Point



John Allen Phillips, Jr.

TAPPI
Hometown: Durham



George Radford, Jr.

TAPPI
Resident Advisor
Hometown: Eden



William Harold Rogers

TAPPI
Xi Sigma Pi
Hometown: Havelock



John Shepley Schofield, IV

TAPPI
Owen House Council, IRC
Resident Advisor
Central Campus
Executive Board
Hometown: Charlotte



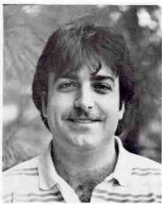
David Klopp Seyler

TAPPI
AICHE
Band and Orchestra
Hometown: Reading,
Pennsylvania



Thomas Edward Single

TAPPI
AICHE
Fencing Team
Hometown: Atlanta,
Georgia



John W. Slaydon

TAPPI
Hometown: Wooster, Ohio



Gary Stanley

TAPPI
Hometown: Crofton,
Maryland



Eric Stuart Sylvester

TAPPI
Hometown: Mobile,
Alabama

Robert Walter Trojak

TAPPI
Hometown: Mount Holly



David Allen West

TAPPI
Hometown: Coshocton, Ohio



Robert Franklin Whitley
Phi Eta Sigma
TAPPI
Baseball
Hometown: Waxhaw

David Lee Wynn

Forestry Council
TAPPI
Hometown: West Point



F.P.R.S

The Forest Products Research Society (FPRS) had an active year during 1982-83, and student participation increased steadily throughout the year. Our first project was Open House, in which members participated in setting up and operating the booth for the Wood Science and Technology curriculum. We were successful in generating interest in the WST program, and have had several requests for additional information.

For fund raising, the club sold wooden plaques that we manufactured on a computer-controlled router, and we sold more of our "Wood is Weird" T-shirts. We also raffled off a wooden rocking chair that was donated to us by the furniture industry.

The FPRS held a picnic each semester at Schenck Forest. Both events were a lot of fun, giving WST students and faculty a chance to get to know each

other better on a social basis. Many hamburgers and cups of beer were put down, and a fine time was had by all. Horseshoes and volleyball were again the main competitive attractions.

At the regular meetings, we had several interesting speakers. In accordance with our goal of "effective technical communication," some of the topics were: Fiberboard Production; the Forest Base in North Carolina; Resume-Writing; Databases in Forest Products; and Materials Handling.

As a special event, the club provided support for the National FPRS "Advances in Finishing" conference held at the Mission Valley Inn. This project gave some of our members the chance to meet professionals in the industry, developing some of our members the chance to meet professionals in the industry, developing some valuable contacts.

The FPRS and the Furniture Club held joint meetings once each semester, hoping to develop a custom and to bring the two clubs closer together. Topics for these meetings were "Radio-Frequency Drying of Wood" and "Computer-Controlled Manufacturing Operations."

Our softball team, the "Termites," competed in intramural softball this year. Although we have much room for improvement, it is safe to say we had a better time than the more "serious" teams.

Overall, the FPRS had a very successful and en-

joyable 1982-83 school year. Most of the activities had good attendance, and the club members learned a lot and had fun. Special thanks are due to Dr. Wheeler and Mr. Gilmore for their much needed help as faculty advisers, and to the officers for their hard work in organizing the club's activities. Recognition also goes to Greg Birk for his fund raising.

Officers for 1982-83 were: Greg McGee, President; Kevin Sanders, Vice-President; Denise Johnson, Secretary; John Lyons, Treasurer; John Park, Program Chairman; Bruce Hamlett and Bob Thompson, Athletic Directors.

FOREST RESOURCES

Forestry Council



by
Todd M. Spurgeon

faculty, and to encourage greater cooperation and communication between students and faculty of the School of Forest Resources. Another important duty of the council is the appointment of officers of the PINETUM and the funding of this publication.

This year's council had a productive year and came up with some good ideas that benefited the whole school. As a service project, the council successfully conducted a food drive during December. As a result of the excellent support by the faculty, staff, and students, enough food was collected to feed a large family for over a week. During the course of the year the council successfully resolved many student problems, allocated the funds wisely, and promoted more unity between the students and faculty of the School of Forest Resources.

Xi Sigma Pi



The Forestry Council was the first school council organized at North Carolina State University. Now as then, its purpose is to promote the overall unity of the students of the different departments of the School of Forest Resources. The Council accomplishes this through its diverse membership. Along with the offices of President, Vice-President, Secretary and Treasurer the membership also includes a representative from each department, each undergraduate club, and the two student senators. The duties of the council are to administrate and budget the student funds allocated to the school, resolve current problems common to the students or

Xi Sigma Pi is one of the more active honorary societies—especially the Mu Chapter. The year started off with Doc's Chili and Wine Tasting and included Smokers, the Steak Dinner, and the Senior Picnic. The meetings usually featured guest speakers and this year we were privileged to listen to Dr. Cooper, Dr. Ruth Anderson of the Speech Department, Dr. Warren and Dr. Lancia.

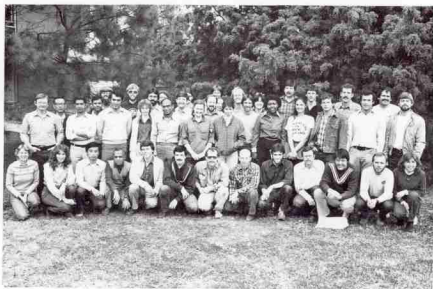
Because we are an honor society, we like to honor those who show leadership, scholarship, and good character. In addition to the initiations, where we recognize students and faculty who have shown these qualities, we also presented the traditional Freshman Ax Award to Jeffrey Reese for his

outstanding freshman year and a special Mu honorary membership to Darnell Johnson and Charlotte Swart for their contributions to Forest Resources; its students, and especially Xi Sigma Pi.

Xi Sigma Pi is not a closed society, rather it attempts to reach everyone in the School of Forest Resources. We have continued to reach out through our tutoring program and by opening eligibility for membership to Fisheries and Wildlife majors.

It has been another rewarding year for us and I am sure this trend will continue into the future. On behalf of Xi Sigma Pi, I want to wish you success in the future.

F.R.A.G.S



by
Barbara McCutchan Hise

The Forest Resources Association of Graduate Students, FRAGS, is composed of all graduate students in the departments of Forestry, Recreation Resources Administration and Wood and Paper Science. The chairperson of FRAGS and a representative from each department form the Executive Committee, which provides an effective means of relaying information between graduate student and the school administration. The chairperson of FRAGS for 1983 is Barbara McCutchan Hise; the departmental representatives are: Ted Shear (Forestry), Vickie Emblar (Recreation Resources Administration) and Web Hatley (Wood and Paper Science).

FRAGS plays an important role in welcoming new students, both in the form of sending "welcome" information packets to newly accepted students and in sponsoring fall and spring picnics where the new students can meet faculty and graduate students in the School of Forest Resources.

FRAGS is also part of a campus wide Graduate Student Association, which provides us an important line of communication with other graduate students and the university administrators.

We greatly appreciate the dedicated efforts of the PINETUM staff in the preparation of this journal.

COOPERATIVES

Fertilization



(Left to Right) First Row: STEVE ANDERSON: B.S.,M.S., Univ. of Washington. JEANNE KRAUS: B.S., Southern Illinois Univ. BOB MAIMONE: B.S.,Syracuse Univ. BETH HAINES: B.S., M.S.,NCSU. Second Row: LEE ALLEN, B.S., M.S., Univ. of Maine, Ph.D. NCSU. HOWARD BUCKHOLZ: B.S.,NCSU. LARRY MORRIS: Ph.D. Univ. of Florida.

Forestry Equipment



AWATIF E. HASSAN: B.S., Agricultural Engineering, M.S., Engineering, Ph.D., Engineering. WILLIAM H. HADDOCK, W. DALE MYATT, MARK T. SENIOR.

Forestry Extension



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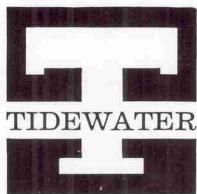
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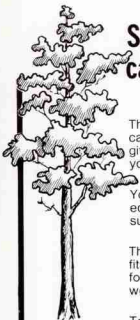
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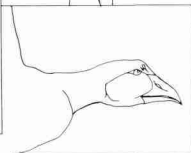
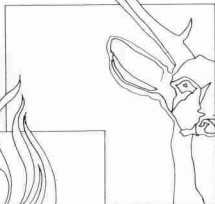


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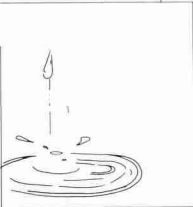
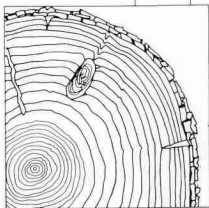
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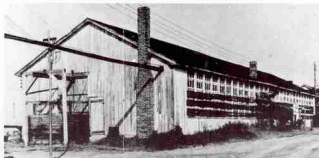
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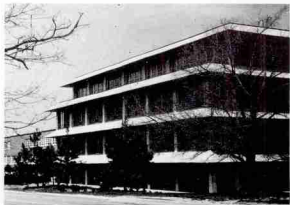
Kilgore Hall (1952-1970)



Robertson Pulp and Paper Laboratory (1956-)



Hodges Wood Products Laboratory (1960-)



Biltmore Hall (1970-)

FORESTER'S DELIGHT

ROAST WILD DUCK

- 2 wild mallard ducks**
- 1 teaspoon salt**
- ½ teaspoon pepper**
- ¼ teaspoon rosemary leaves**
- 1 medium onion, cut into eights**
- 1 apple, cut into eights**
- 2 stalks celery, cut up**
- ½ cup butter or margarine, melted**
- ¼ teaspoon pepper**
- ¼ teaspoon rosemary leaves**

Heat oven to 350°. Clean ducks; wash and pat dry. Stir together salt, ½ teaspoon pepper and ¼ teaspoons rosemary leaves; sprinkle in cavity and on outside of each duck.

Place half the onion, half the apple and half the celery in each cavity. Place ducks breast side down on rack in open shallow roasting pan. Roast 40 minutes. Combine butter, ¼ teaspoon pepper and ¼ teaspoon rosemary leaves; baste ducks frequently during roasting. Turn ducks and roast 50 minutes longer or until done. Ducks are done when juices are no longer pink when meat is pricked and meat is no longer pink when cut between leg and body. Remove ducks from pan; split in half lengthwise. Discard stuffing.

4 servings.