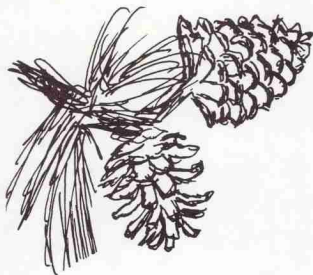


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Journal of The College of Forest Resources

**Anna C. Beam, Editor-in-Chief
North Carolina State University
Raleigh, North Carolina
Volume LVI**

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This not only helps in tracking expenses but also ensures compliance with tax regulations.

In the second section, the author outlines the various methods used for data collection and analysis. These include surveys, interviews, and focus groups. Each method has its own strengths and limitations, and the choice depends on the specific research objectives.

The third section provides a detailed overview of the results obtained from the study. It includes several tables and graphs that illustrate the key findings. The data shows a clear trend towards digital marketing strategies, with a significant increase in online advertising spend over the past few years.

Finally, the document concludes with a series of recommendations for future research and implementation. It suggests that companies should continue to explore new digital marketing channels and optimize their existing ones. Additionally, it highlights the need for ongoing monitoring and evaluation to ensure long-term success.

Dedication: Donald "Doc" Steensen

Wyatt Latimer

All forestry students who have been through forestry Summer Camp in the last few years will fondly remember Dr. Donald Steensen. He was the man who made Summer Camp move along its path with some semblance of order. Doc, as every student called him, taught other classes, but most student memories associated with Doc have to do with the Summer Camp at Hill Forest.

I had the pleasure of working with Doc in the summer of 1988 as a Summer Camp teacher's aide. During the summer and the ensuing year, I came to view Doc as a member of a lost breed. He led an extremely varied life, and his years as a student were anything but conventional. His threads led through more dark and light patterns in the tapestry of life than most other people and probably all instructors. Perhaps because of this, Doc treated students much better than all but a few professors I have had in forestry. His basic belief in regards to students is that they are not mindless idiots that simply supply the tuition money necessary to carry out research. Beneath the layer of plaid golf pants and various sweat suits was a man who gave students responsibility and respect. Doc had an understanding of the problems students faced and was always willing to talk with and advise a student. This is where Doc will be missed most.

From all of my memories as a student at N.C. State, I will have no memories more enjoyable than the one week Doc and I worked together in a briefly deserted Hill Forest. So instead of listing more reasons why Doc will be sorely missed, I will tell you about one small memory reawakened during the 1989 Rolleo.

As I stared out the window of the Thacker House, the sounds of the students yelling across the pond grew softer as another competitor was removed from a slippery log by the speedy footwork of the victor. I was sitting on the same porch that I had occupied for many hours the summer before, in a race to see who could get their allocated cruising sheets graded first. Of all those days, the last day of the week was the best.

The students had gone to fire school for a

hellishly hot week in Kinston. The camp was deserted, and I had a much needed break. I felt sorry for Brad and Deb who had gone to purgatory with the rest of the camp, mainly to keep the peace, grade papers and tell old war stories. Doc's chortle startled me back to awareness, and I stopped feeling sorry for Brad and Deb. After all, they did not have crossed eyes and arthritis in the fingers from racing Doc and his pre-Stone Age adding machine. If Doc was laughing, then he had finished his last plot. Sure enough, I did not hear the wacky-boom of the adding machine any more, which meant that Doc was waiting for me to acknowledge his victory. "Doc," I said, "since you're done, I think I'll give you a few of David's really scrawled tally sheets to decipher."

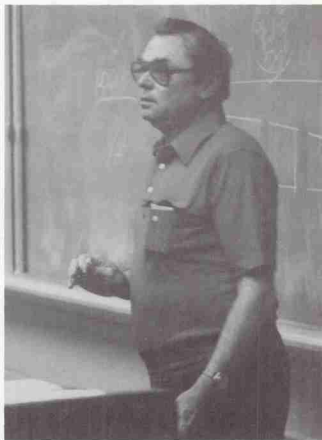
"Shit, want a coke?" he mumbled.

"Hot damn" meant in Doc lingo that he was going to take a break, and that meant he would start talking. With some luck he would tell stories all afternoon.



As usual, he started talking about a few particularly noteworthy incidences around the camp, things such as fire extinguisher fights and pumps not working. Then before I knew it, he had reached into his memories and was talking about the really wild students he had taught at Auburn: from the students who had a fetish with placing alligators in beds, to giving a student baby clothes for her new baby, to playing for the house as a poker player while in college. I sipped my coke and listened with pleasure. I was old enough to understand that I was hearing one of life's better stories from the man himself, and I wished all those students burning clearcuts in Clinton could hear how Doc really came to be a forester.

A tremendous cheer went up from outside, and I glanced out with surprise. It was fall, not summer and some unlucky person had just had the privilege of winning the log burling contest. I sighed and pushed the weathered door open and walked across the pond with the memories of Doc saying, "all right, give me one of your sheets or we will never get done. Race you!"



Comments from the Dean

Larry Tombaugh, Dean

My first year as Dean of this College has been one of the most enjoyable periods of my professional life. One of the most memorable events of the past year was the move of several units of the College of Forest Resources into the magnificent Jordan Hall. By housing the Department of Marine, Earth, and Atmospheric Sciences, parts of the Department of Forestry, our remote sensing and geographic information laboratories, and the natural resources library under one roof, we should be able to address a much wider range of natural resource and environmental issues than has been practical in the past.

The dedication ceremony for the new building was one of the most significant events ever to have been held on the North Carolina State University campus. Distinguished scientists from around the country described some of the key scientific issues associated with global environment change, and equally prominent political and business leaders discussed the practical implications of dealing with the environmental change. It was a memorable affair, capped by a keynote address by Carl Sagan.

Other changes involved our most important resource — the men and women who make up our faculty and staff. A great void was left with the death of Professor Donald Steensen. Don Steensen loved our students and was, in turn, loved by them. He will be missed.

Dr. L.C. "Bud" Saylor retired in February. Bud served loyally and effectively as our Associate Dean for Academic Affairs for 24 years.

Mary Walker served the vital function of bookkeeper for the College, and she retired last summer.

Fortunately, we have been able to also bring several new people on board. Dr. J. Douglas Wellman was named the new Associate Dean for Academic Affairs. Doug joins us from the faculty of Virginia Polytechnic Institute and State University. Dr. Lauri Shainsky and Dr. Paul Schulte are both ecophysiologicalists who have joined the faculty of the Department of Forestry. Dr. Andy Cole, Dr.



Larry Gustke and Mrs. Shirley Harper are new members of the Recreation Resources Administration faculty. Mrs. Debbie Cross replaced Mary Walker as the bookkeeper for the College. Each of these people brings a high level of expertise and a new perspective to the programs of the College.

Moving from the past and the present to the future, it appears that the nation is moving to an ever higher level of interest in forest resources. Public interest in natural resources and the environment continues to intensify. This interest will undoubtedly influence the directions of our programs in the future. It is critical that we be postured to provide educational, research, and extension services emphasizing rapidly evolving natural resource issues. We have the faculty in place to do the job. Next fall, we will inaugurate the new wing of our pulp and paper facilities. This new building, along with Jordan Hall, will provide us with many of the physical facilities to do the job. And the new Natural Resources Research Center, located in Jordan Hall, gives us the institutional mechanism needed to link our scientists with those from other disciplines.

All indications are that the next few years will be among the most exciting and challenging that this College has ever faced. My hope is that, with all the change going on, we will be able to continue to focus on our primary responsibility — providing the education and training needed to allow our graduates to excel in this dynamic environment. It is a pleasure to be part of that noble mission.

Emerging Issues Forum

Jeff Beutel

On February eighth and ninth, several students and many faculty members attended the fifth annual Emerging Issues Forum. The Thursday presentation centered around the scientific aspects of such issues as global warming and included computer models of sea level fluctuations and soil moisture. Following the morning sessions, the Jordan Hall dedication was held with EIF attendees shuttled from McKimmon Center. Interim Chancellor, Dr. Larry Montieth was master of ceremonies. Other speakers included Governor Jim Martin, former Lt. Governor Bob Jordan, and Dean Larry Tombaugh. A plaque will be placed in the building recognizing the Jordan family.

Later Thursday evening, Carl Sagan spoke on environmental issues such as global warming and what people could and should do in preventing further damage to the atmosphere. He suggested ideas which would help the world economically even if global warming was not an issue.

Friday morning speakers were primarily political figures; Tennessee Senator Albert Gore; the Governor of Alaska; the Governor of Vermont, and the President of the National Geographic Society. Each gave their synopsis of a topic and suggested how the public could work to better our world.

The President of the National Geographic Society spoke on the education of our children and what needs to be done to improve it. He was dismayed at the lack of knowledge the children have of world geography. With this knowledge he decided to involve the Society in putting together a project for students to help them learn about geography. In the grand style of any production the National Geographic Society does, the slide show was one for the books. Using what the Society is known for — vivid photography and wonderful storytelling — drew the audience into a world of wonderment. The audience felt like they were actually in the different countries being shown. The presentation then went on to show outer space, and it made the audience feel total awe at the spectrum of the universe. When the journey ended, the President stated that the schools will be able to receive this presentation. Sadly, the morning session was drawn to a close until next year by former Governor James Hunt.

The conference allowed the participants to learn more about the current issues which are affecting the environment. The speeches also clarified hot issues by substantiating or refuting them. This gave everyone a greater understanding of the issues and how to confront them.



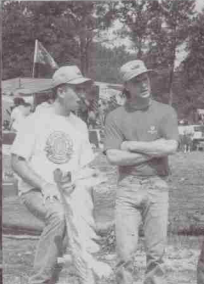
CFR Outstanding Students

The PINETUM would like to pay special recognition to the College of Forest Resources students who made the Dean's List during the 1988-89 school year. They were recognized on October 4, 1989 at the Honors Convocation in Reynolds Coliseum. We salute your academic achievement.

Deborah Lynn Alender
John Welsey
Clyde Gene Arnette, Jr.
Brian Tony Asbill
Matthew Wilson Barbour
Paulette Lynn Barrett
Bradford Scott Barron
Anna Catherine Beam
Kathryn Lynn Bennett
James Fitzgerald Best
Christopher W. Blenk
David Preston Blevins
Melanie Ann Burke
Frederick Smith Carter
Kelly Edward Cooke
Jason Scott Cronin
Robert Shean Cumbsee
Stephen Martin Daniels
Bradley Carr Duckworth
Christopher F. Dumas
Susan Randol Edmondson
Bradley Lee Evans
Ivan Devernet Evans
William G. Fullenwider
Fabienne R. Gareau
Eric Thomas Goehl
Scott Patrick Gottfried
John William Graves
Paula Annette Gray
Jeffrey Blake Greene
Kevin David Hamilton
Scott A. Hamilton
Mary Kathryn Harrison
James William Hauser
Christopher J. Hayter
Andrew Antony Hobson
Larry Scott Jackson

William C. Johnson, II
Christopher David Jones
David Paul Ladd
Mitchell Alan Malcolm
Brent Jerald McClendon
Hallie S. McCormack
John Gerhard Michael
Gary William Mills
Michelle K. Murtha
Heidi Lyn Musser
William Anthony Norris
Kevin Timothy Nunnery
Charles W. Overman
Rachelle Ann Peterson
David Bruce Powell, Jr.
Jack Merritt Ragan, III
Henry Anthony Randolph
Darryll Dwyan Rasberry
Michelle Rodriguez
Kathleen Ann Rossi
Jill Ann Rutten
Talya Rachel Selbst
Jill Shumate
John Charles Single
Ronald Lee Smith
Christopher M. Snow
James Alexander Snyder
Steven Robert Spencer
Antonia Marie StLouis
George Edward Stubbins
Geoffery Paul Stuhmer
Joanne Linda Stumpf
Forrest H. Teague, Jr.
Jeffrey Gordon Thomas
Mark Donovan Tippet
Reynolds Wallin Trull
Ronald Bowman Tucker
Edward Allen Turner, Jr.
Gregory James Venditti
Michi Christine Vojta
Tonia Michelle Wells
Bruce Myerle White
Harvey William White
Timothy Kadez Wilde
Mark Allan Woodrow

Faculty and Staff



Forestry Department Highlights

Arthur W. Cooper

This year has been an eventful one for the Department of Forestry.

All of us, students, staff and faculty alike, were deeply saddened by the unexpected death last June of Dr. Donald H. J. "Doc" Steensen. He died just after completing his session of mensuration class at Summer Camp. Although his name on the dining hall at Summer Camp will continue to remind us of his years of dedicated service, the greatest testimony to Doc's deep love for students and their welfare will be the hundreds of undergraduates whom he taught and counseled. Although a search is on to find an economist to fill his position, we will never quite replace him.

The long awaited move of about 40 percent of the faculty, staff and graduate students into the new Jordan Hall began in late August and was completed with the move of the Biotechnology Program in November. Everyone has been situated in a comfortable, professional working environment.

One of the most important benefits of the new building has been to provide better working space for our Silviculture and Soils Programs and to bring closer together faculty members who have been in outlying locations on campus. We are already realizing the benefits of these moves through closer faculty and faculty-student interactions in program areas where there had only been limited interaction in the past.

Changes in several important areas of our course offerings have taken place. First, the way we teach computers to undergraduates has been drastically altered with the introduction of a course in the use of software during the freshman year. The knowledge acquired in this course will then be used in virtually all succeeding courses in a "computers-across-the-curriculum" approach that directly parallels our highly effective emphasis on writing-across-the-curriculum. The amount of material on international and tropical forestry available to graduate students has been increased substantially through the addition of a new course on the subject in the Spring of 1989. The course is



being taught jointly by Duke and NCSU faculty and meets alternately on the respective campuses. Enrollment was quite high, indicating the significant level of student interest in the subject.

Cooperation between the faculty and the Forestry Foundation became even closer during the year. The faculty has been actively involved in planning for the management and harvesting of the Hofmann Forest. As a result of these increased levels of management and harvesting, more funds have been available to the Department. Among other things, these funds made it possible to send four undergraduates to the National SAF meeting in Spokane, Washington, to send as many as a dozen to the Appalachian SAF meeting in Pinehurst, and to pay registration fees for seven students to the Emerging Issues Forum in February. In addition, Foundation funds derived from the Hofmann Forest provided four new scholarships for undergraduate students this year.

Several students and faculty received important honors during the past year. Chris Dumas was elected to Gamma Sigma Delta, Craig Houghton was elected to Phi Kappa Phi, and Ed Sontag received the award from the U.S. Forest Service as the best math and science student among graduating seniors. Dr. David Adams was named as the Outstanding Teacher for the College for 1989-90 and Dr. Chuck Davey was awarded one of two Graduate Alumni Distinguished Professorships.



Seated Left to Right: Bill Smith, Bill Hafley, Art Cooper, T. O. Perry, Gary Blank, Dick Lancia, Paul Schulte, Floyd Bridgwater, Standing: Lester Holley, Joe Roise, Siamak Khorram, Jim Gregory, Larry Grand, Tim White, Jim Woodman, Rich Braham, Lee Allen, Leslie Henry, Tommy Tew, Heather Cheshire, Andy Gillespie, John Brockhaus, Ed Lunk, Jerry Bettis, Russ Lea, Anne Stomp, Lauri Shainsky, Adul Tohmaz, Larry Jervis

Recreation Resources Administration Department Highlights

Dr. Phil Rea

After 43 years as a curriculum at NCSU, the Department of Recreation Resources Administration finds itself in an environment of change that is sure to provide exciting challenges for students, faculty and students in the years to come. During the 1989-90 academic year, the Department added two permanent faculty, a National Park Service research scientist, a computer mapping laboratory manager and a new secretary. Much needed additional space was provided for new and growing programs, and proposals were developed for a new name for the Department and for an option in tourism management.

New faces around the Department this past year include faculty members Ms. Shirley Harper, Instructor, and Dr. Larry Gustke, Associate Professor. Ms. Miriam Everett joined the Department as Secretary, replacing Sue Rudy who



accepted a position in the Dean's office. Dr. Andy Cole joined the Department as an Assistant Professor and principal scientist for research conducted for the National Park Service, and Ms. Jean McManus was employed as manager of the Computer Cartography Laboratory. Tom Wells, Director of the Recreation Resources Service for the past two years, resigned to assume the position of Deputy Director of the North Carolina Division of Parks and Recreation. Professor Sondra Kirsch continued to serve as special assistant of the Chancellor.

Recreation Resources Administration gained much needed space as a result of the completion of the Natural Resources Research Center, formally named Jordan Hall. Dr. Devine realized the fruits of 13 years of labor with the development of a state-of-the-art computer mapping laboratory. The laboratory is designed to facilitate instruction, research, and continuing education programs related to the development and use of geographic information systems. The Recreation Resources

Service, the Office of Park and Tourism Research and the National Park Service Cooperative Studies Unit moved into space formerly occupied by the Biltmore Library.

Dorothy Cook and Brian Asbill were selected as co-recipients of the 1989 Outstanding Senior Award. Michelle Wells served as president of Rho Phi Lambda until her graduation in December of 1989, at which time the vice president of Rho Phi Lambda assumed that position. Lee-Ann O'Neal served as president of the Recreation Club. The North Carolina Recreator's Foundation awarded Jeff Green, a junior in RRA, a scholarship in recognition of his outstanding academic record and professional promise.

During the Fall semester, 15 students attended the North Carolina Recreation and Park Society annual conference in Virginia Beach, while ten students participated in the annual congress of the National Recreation and Park Association in San Antonio, Texas. Students assisted in coordi



Seated Left to Right: Rick Perdue, Shirley Harper, Beth Wilson, Roger Warren

Standing Left to Right: Phil Rea, Andy Cole, Larry Gustke, Robert Sternloff, Carol Love, Absent: Hugh Devine, Sondra Kirsch, Chrys Siderelis

nating educational exhibits and alumni functions at both conferences.

During the Spring of 1990, the faculty voted to submit a proposal to change the name of the Department to Parks, Recreation and Tourism Management. This name was chosen because it better reflects the activities and priorities within the

Wood and Paper Science Department Highlights

Dr. Richard Thomas

Construction of the Robertson Pulp and Paper Laboratory addition is proceeding ahead of schedule. Completion is presently scheduled for June 2, 1990. We expect to begin use of the new teaching laboratories and classroom in the Fall 1990 semester. The faculty and staff are eagerly anticipating the move and the use of modern laboratories. Dedication of the facility will be November 15, 1990. We encourage your participation in this event and will keep you informed as plans for the occasion are developed.

Faculty research activities continue to excel and attract both national and international attention. The high regard of the wood and paper profession for our program was illustrated by the selection of Raleigh as the site of the Fourth International Conference on Biotechnology in the Pulp and Paper Industry and the Fifth International Symposium on Wood and Pulping Chemistry for the first meeting of either of these symposia in the United States.

Both the quality and quantity of undergraduate students increased during this past year. Enrollment was up 17 percent to 211 students, of which 22 percent earned Dean's List status. Undergraduate curricula continue to undergo revision in order to meet the rapidly changing skills required of graduates. The Wood Science and Technology curriculum has been changed significantly and submitted to the university administration for ap-

Department, and hopefully will require less interpretation to the campus community and to potential students. In addition, the commercial recreation concentration will be changed to an option in tourism management, a broader term that includes commercial recreation.

proval. One of the obvious changes is the selection of a new name, "Wood Products," which more accurately describes the content of the program and the industry within which graduates seek careers. A revision of the Pulp and Paper Science curriculum will be completed and implemented for the entering Fall 1990 class.





Row 1 Left to Right: Richard Thomas, Josef Gratzl, John Heitman, Jr. Row 2: Ronald Pearson, Chen-Loung Chen, William Bryan, Nicholas Weidhass Row 3: Mryon Kelly, Robert Gilmore, Hasan Jameel, Tomas Joyce, Absent: C. A. Hart, Elisabeth Wheeler, Irving Goldstein, Hou-min Chang, Adrianna Kirman, Heinz Olf

Extension Forest Resources

Larry G. Jahn

For Extension Forest Resources, the year of 1989 was one of personnel changes. Mike Levi, Specialist In-Charge, was promoted to Assistant State Leader, CRD/NR. Larry Jahn was named Acting Specialist In-Charge. Dick Allison (Wood Products) retired and Joe Denig (Wood Products) resigned to accept a position in private industry. Efforts are underway to fill all three of these important positions. Despite the temporary loss in manpower, 1989 was still a successful one for Extension Forest Resources. The following are some of its highlights.

North Carolina received the Outstanding State Award for Christmas tree media advertising. The media package was a cooperative effort between Extension agents, Extension Forest Re-



sources, and the N. C. Christmas Tree Association. The USDA CSRS review of the Extension Forest Resources Management Section concluded "it is a highly successful program that is used as a role model by those in similar programs around the country." Leon Harkins was a recipient of the 1989 International Paper Company Foundation's Forestry Recognition Award for Extension Staff. This award is given for professional accomplishments and contributions to the 4-H program.

In 1989, extensive damage was done to timber and shade trees due to high winds, tornados, and Hurricane Hugo. Extension responded to these natural disasters in a variety of ways. In response to a call from the State Emergency Management Office, Extension assisted Winston-Salem State University in evaluation of tornado and wind damage of shade trees on campus. To help landowners cope with the extensive timber damage left by Hurricane Hugo, Extension mailed disaster aid packages to 28

counties and held six area meetings attended by 775 forestland owners.

A cooperative Atlantic white cedar planting demonstration project was initiated in the following counties: Bertie, Chowan, Jones, Pitt, and Washington. This is a cooperative effort between Extension, industry, governmental agencies, and private landowners. A three-part video series on deer management in the Southeast was completed.

Extension Forest Resources conducted general educational programs for natural resource agency people, forest landowners, Christmas tree growers, forest industry representatives, students and faculty. These programs included workshops, seminars, short courses, agent training tours, demonstrations, guest lectures, etc. Approximately 13,700 individuals were contacted at 255 separate events. In addition, Extension Forest Resources responded to several thousand telephone calls and written inquiries.



Seated Left to Right: Leon Harkins, Jill Sidebottom, Rick Hamilton
Standing Left to Right: Ron Phillips, Bill Swint, Jim McGraw, Steve Hanover, Bill Gardner, Ed Jones, Larry Jahn

Secretaries



Forestry: Jean Counihan, Judy Rogers, Debbie Cox



Hardwood Coop: Robin Hughes



Forestry: Peggy Arnold



Dean's Staff: Charlotte Swart, Jackie Albert, Debbie Cross, Ruth Allen, Sue Rudy, Nancy Roberts, Virginia Woodruff

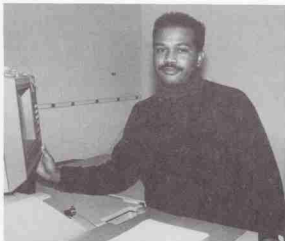


Extension: Sylvia O'Connell, Laura Terry, Elga Hahn



Recreation: Miriam Everett, Reggi Powell

Staff



Xerox Technician: Brian Wright



Recreation Resources Service: Leigh Baggs, Terry Patterson



Wood and Paper Technologies: Willard Dudley, Millie Sullivan, Linda McMurray, William Wyatt, Vann Moore, Donna Burns, Tony LaPasha



Computer Coordinator: Liz House



Librarians: John Abbott, Pamela Rowlands, Yvette Modica



RRS: Scott Payne

Cooperatives

Air Resource Research Consortium

Jim Woodman

The Air Resource Research Consortium (A.R.R.C.) Program is a research and technical services program of the College of Forest Resources. It receives all of its financial support from grants, contracts, and cooperative agreements with federal, state, and private organizations. The focus of all research and service activities is on developing a better understanding of how man-induced changes in the chemical and physical climate are affecting terrestrial and aquatic ecosystems.

The A.R.R.C. Program is the successor to NCSU's Acid Deposition Program (ADP) which was established by a cooperative agreement with the U.S. Environmental Protection Agency in 1979. NCSU's A.R.R.C. Program staff has a close working relationship with the scientists working at NCSU in the USDA's Agriculture Research Service Air Quality Research Program and the Forest Service's Southern Commercial Forest Research Cooperative. It is a participant in a formal consortium agreement between ARS, the Forest Service, and NCSU. Approximately 60 percent of the funding base for the A.R.R.C. Program comes from contracts and agreements related to this consortium agreement.

The main objective of A.R.R.C.'s new research program is to develop a multidisciplinary

program centered around effects of atmospheric changes on terrestrial and aquatic ecosystems. It is actively recruiting a consortium of scientists from NCSU and neighboring institutions who are interested in developing comprehensive proposals which meet the goals of federal government agencies and industry in these subject areas. The A.R.R.C. Program will provide leadership in organizing these teams and writing the proposals. It will also provide administrative and coordination support for funded projects. Scientific staff will be added to the extent that existing talent is not available within the area and as funding and facilities permit.



Row 1: Phyllis Garris, Susan Spruill, Cari Furiness, Harriet Stubbs, Romona Logan, Mable Bullock
Row 2: Walter Heck, Nell Gilliam, Clara Edwards, Kim Joyner, George Hess, Jorge Sierra, Beverly Bahin
Absent: Sus Metlarz

CAMCORE

Joe Peters

The CAMCORE Cooperative was formed in 1980 in an effort to promote gene conservation of coniferous species. The objectives of CAMCORE are to preserve, test, and utilize the coniferous resources of Central America and Mexico for the purpose of improving the productivity of forest lands in the tropics and subtropics. Field crews in Honduras, Guatemala, and Mexico are working to

collect seeds from endangered species and provenances, and the cooperative distributes the genetic material to its members for ex-situ preservation and testing. Initially, CAMCORE only worked with coniferous species. However, preservation activities have expanded to also include hardwood species. Seeds from nearly 5,000 mother trees of 20 species of conifers and hardwoods have been collected in 175 locations in Central America and Mexico by the cooperative. More than 1,000 hec-

Cooperatives

tates (2,500 acres) of genetic tests have been established by CAMCORE members in Brazil, Colombia, Costa Rica, Guatemala, Honduras, Mexico, South Africa, and Venezuela. The cooperative has grown to include private forest industries and government forestry organizations in nine countries. Membership in the cooperative is open to any company or organization willing to share in the cost and effort of carrying on the work of the cooperative.



Bill Dvorak, Jeff Donahue, Claudio Balocchi, Liz Shaw, Rita Barrera, Lilia Barrientos

Forestry Engineering

Forest Engineering research studies were started at the Colleges of Forest Resources, Agriculture and Life Sciences, and Engineering in the early seventies. The first research project was directed toward the development of a semi-automatic, bare-root seedling tree planter (BRAT). A patent license agreement in 1983 with the J.E. Love Company was acquired for the production of the BRAT tree planter. Work is in progress for the development of devices for automatic feeding and sorting of bare-root seedlings using vision systems and robotic control. In addition, several research projects have been conducted over the past 15 years to study the capability of skidders, the instrumentation of vehicles and development of sensors for ground speed measurements, and systems for harvesting oak-gum bottomland hardwoods under extreme wet conditions. Work is in progress for optimizing machine systems and for the development of harvesting regimes for bottomland hardwoods based on the two-year machine productivity measurements and regeneration and soil recovery data. The recommended system(s) will have the least impact on future regeneration.

In addition to the research activities, there are two courses offered in the Fall Semester: FOR 423 "Machinery Systems in Forest Resources" and

FOR 580 "Soil—Machine Interactions in Forestry Operations" opened to advanced undergraduate students. Several machine systems are tested in the laboratory and the field in addition to visiting field operations. The goal of the teaching activities is to provide information based on field experience so that students develop an appreciation and basic understanding of equipment selection and operation.



Abdul Tohmaz, Awatif Hassan

Cooperatives

Faculty involved in the program are Dr. Awatif E. Hassan and Abdul S. Tohmaz, a research assistant who joined NCSU in November of 1989. Other cooperating faculty members are Dr. Joe Roise on the harvesting project and Dr. Henry Bowen, BAE, on the automatic tree planting project. Graduate students are Deborah Murosky, MS Forestry, and Rakesh Gupta, MS Operation Re

search. Several undergraduate students have contributed to the success of our research projects. Their effort is welcomed, and without their support, data collection would have been impossible. We, the Forest Engineers at NCSU, welcome comments, ideas, and constructive criticism. We are also eager to know all about the students' activities.

Hardwood

Russ Lea

The Hardwood Research Cooperative was founded in 1963 as an outgrowth of the Tree Improvement Cooperative. The initial efforts in the Hardwood Research Cooperative were tree selection with eventual establishment of seed orchards. Following intensification of forestry in general, the cooperative concentrated on plantation management, species-site relationships and hardwood nursery management. For the Hardwood Cooperative, all cooperators are treated equal, regardless of size, age or state of expertise, and all are assessed the same fee for membership. All members are expected to operate at a designated level of activity, and all are required to share in the research results and new germplasm. Research results are made available to the public and form the core for a dynamic continuing education and extension program.

Our research effort is spread across intensively managed short rotation energy plantations to long rotation management of natural stands. Recent priority is being given to management of wetland forests and developing an interactive growth and yield model for natural hardwood stands.



Tommy Tew, Tim White, Russ Lea, Denny Mengal, Doug Fredrick, Roman Tseng

Small Woodlot

Carlyle Franklin

The mission of the Small Woodlot Forestry Research and Development Program is to develop cost-effective technology for the management of nonindustrial private forest lands and to develop incentives which will encourage landowners to apply this technology to their woodlands. The incentives for landowners to practice forest

management must be in place before the application of proven technology. Incentives for improved management fall in two broad classes: 1) those which involve financial gain and 2) those which provide aesthetic fulfillment in its broadest perspective. Technology for management of small woodlots must be applicable at costs which the landowner is willing to pay and must offer reasonable assurance that the stated objectives can be

Cooperatives

accomplished. This implies that a wide range of management goals and investment limitations be available. Much is already known about alternative silvicultural practices and their probable outcomes, but only the most intensive practices have been widely applied under modern economic and environmental constraints. The challenge for us is to research, compare, and demonstrate a wide range of cost-effective technologies, with special emphasis on minimizing the investments that are required during establishment and early management phases of the rotation.



Martha Miller, Rob Wilson, John Giorgino, James Jeuck, Dennis Hazel, Carlyle Franklin

NCSFNC

Lee Allen

NCSFNC is a university — industry cooperative research program with the goal of developing technology to manage nutrient and moisture availability of loblolly pine stands for enhanced growth and value. Presently, the program is supported by twelve forest industry members with over 75 active field trials examining silvicultural treatments applied at time of planting and in established stands. Recent program findings include: the identification of large areas of phosphorous deficient upland sites on the Gulf Coastal Plain, the strong coupling of stemwood production — leaf area and nutrient availability and the identification of silvicultural treatments to achieve old field productivity on site prepared land.



Andy Gillespie, Travis Wilson, Jane Mudano, Steve Colbert, Jon Anderson, Lee Allen, Ed Lunk, Mike Huster

Tree Improvement

Robert Weir

The North Carolina State University — Industry Cooperative Tree Improvement Program is completing its 34th year of continuous operation. Starting in 1956 with eleven charter members, the program has grown to 29 industry and state forest

service organizations that operate 41 active program units. This is a splendid example of an industry, government, and university partnership in action that has worked effectively to meet the important challenge of developing the genetic potential of our forest trees.

The cooperative is truly a research and

Cooperatives

development program. Program members manage over 20 million acres of forest land, grow 630 million genetically improved seedlings per year and plant over 900 thousand acres per year. This effort comprises 40 percent of the trees planted annually in the nation. Since the program began, members have planted over 10 million acres with genetically improved trees. The genetics program costs about \$5 extra per acre of plantation; thus total investment to date exceeds \$50 million, and the value return at harvest time is expected to exceed \$1.5 billion.



Addie Clark, Jean Pittman, Chris Hunt, Floyd Bridgewater, Bob Weir, Jerry Sprague, Steve McKean, Vernon Johnson

Biotechnology Department

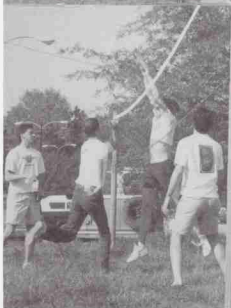
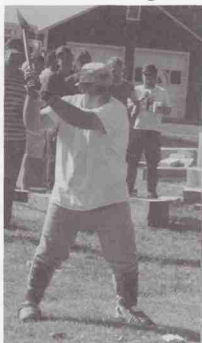


Scot Liepack, Cherly Giles



l to r: Seated Anne Stomp, Ben Bergmann, John Persons, Zenn-Zong Chen

Clubs and Organizations



Forestry Club

Steve Hyde

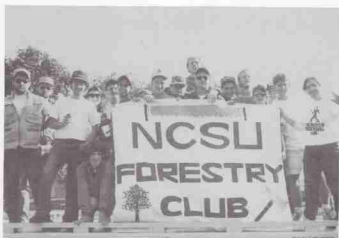
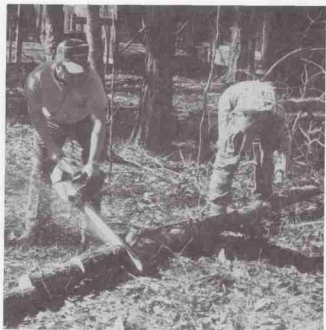
The past year encompassing Fall 1989 and Spring 1990 has been very productive for the Forestry Club. During the Fall, activities included the Crabfest competition at West Point, Virginia, where the club took second place, and the annual Rolleo at Hill Forest where the senior team took first place. Along with the competition, the club performed their yearly service project, Woodchop, which saw one of the best turnouts ever.

The Spring semester has been spent in preparation for the 33rd annual Conclave. Tom Margo has been the driving force in getting the team ready. The club will make a 17-hour drive to Mississippi State University for the competition. The NCSU Forestry Club expects to have a strong team and to place high in the overall team rankings.



Row 1: Robie Currie, Randy Bryd, Fred Hampton, Philip Whitlow, Melissa Dewey, Steve Daniels, Fred Schatzki, Chris Gray, Anna Beam

Row 2: Jeff Beutel, Deborah Nahikian, Robbie Binns, Dr. Farrier, Thomas Hoffer, C. K. Greene Mike Petruncio
Railing: David Powell, Tom Margo, Patty Luhman, Andy Meadows, Rhett Bost, Steve Hyde, Chris Cobb, Wyatt Latimer, Matt Vincett, Jack Thomas, Yohan Mosely, Eugene Raynor, Paul Eriksson, Van Sparrow, Chris Stewart, Bruce White

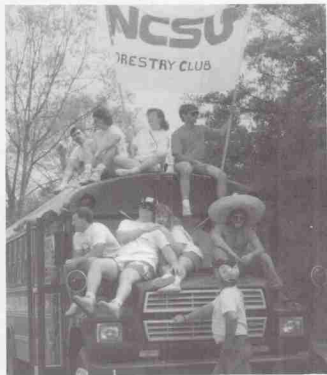


Clemson Conclave '89

Ed Sontag '89

Morale was low and interest was waning as the Woodsman Team prepared to head to the Palmetto State for the 32nd annual Conclave hosted by Clemson. Some events lacked competitors until just days before we were to leave. Seniors were under pressure to complete projects and underclassmen lacked guidance, but WE did it!! Somehow the Woodsman Team pulled through. Finishing third overall and second in technical events was a feat comparable to Bob Beamons longjump record or the '83 Wolfpack basketball team winning the national championship. How could an over-stressed, underprepared bunch of drunks pull off such a feat? Not even one of Bill Smith's linear programs could figure that out.

To sum it up, it was a team effort. Once given a little shove, Wolfpack pride took over. A strong showing by Jon Bograd in dendrology and Phillip Whitlow in pole classification helped in the technical events. Shelley Peterson, with only days notice, placed a strong sixth in the perennial headache — photogrammetry. Paula Troxell provided a surprising fourth place finish in wood identification. Look out next year.



Physical events were as exciting as always. Even with a sophomoric crew, we still did extremely well. Frank West led off what proved to be a banner day by placing second in archery. And if David Powell and Phillip Whitlow keep working on the chain throw, they are going to be good; mark my words. Arguably the biggest surprise was Steve (Slug-toes) Hyde's second place finish in log burling. I taught that boy everything he knows. Shelley Peterson and Patty Luhmann, one veteran and the other a rookie, had an outstanding cut in womens crosscut and placed third.

Non-point events were as dramatic and exciting as the point events. Timmy McCracken (alumni '87) is still looking for the shoulder he threw out during the keg toss. Jamie Shern realized that to beat me in the mop bucket races he would have to gain 100 pounds. My personal favorite, and a victory I will relish until death, was the NCSU vs. Arkansas bus sprint to the banquet.

A little mush if I may. I have never seen a group of people rally like the 1989 Woodsman Team did. It was an honor to be a part of it.

Good Luck at Mississippi State.



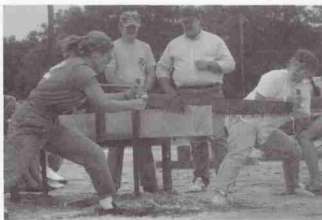
Roanoke Rapids

Steve Daniels

The annual Roanoke Rapids trip began with a bang this year. Of course, that bang was the sound the bus made as it backfired. It was our signal that we were about to stall. I don't think anyone counted the number of times we stalled, but I do know it took at least three hours to get there. However, this adversity was not enough to stop Rodney Buchanan, our fearless busdriver. We arrived at the lodge before Virginia Tech, so we claimed the choice beds, a sign that things would get better. We swapped stories a while with Virginia Tech when they arrived and then went to sleep.

Dawn broke clear and crisp (but seemingly hours too soon). We made it out to the Day in the Park field and began setting up. We had quite a bit of audio competition from the "Breeze Band," who insisted on playing for hours, but we finally got

things underway. Though many Woodsman Team members were not present, a successful team was formed. We won almost all of the events. Several people had personal bests, and others were first time performers. We won the competition and had a great time. Hopefully, we can get more people involved next year.



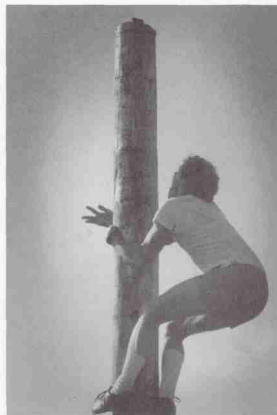
Crabfest

Randy Witt

Once again, the NCSU Forestry Club made its yearly trek to challenge West Virginia and Virginia Tech at Crabfest in West Point, Virginia. NCSU's best woodsmen were chauffeured to the competition aboard the College of Forest Resources finest luxury busline. We made excellent time, thanks to David Powell's not-so-short but scenic shortcut, and arrived at our campground just in time to enjoy the pregame festivities that night.

The next day we called upon the support of the locals as we participated in a parade through the town. We arrived back at the competition area and polished up on our weak events before the competition time.

Overall, we gave an outstanding performance, and the competition was close, although a ref's incorrect call after Rodney Buchanan's direct hit in pole felling left many of us disappointed. This was soon forgotten as we met our friends from other schools back at the campground and literally stuffed



ourselves with three bushels of crabs. We all had a great time, and for some seniors it was a final time to see many of the friends they had made during the years. For underclassmen there's the hope of seeing new friends next year. We said our good-byes and left with a proud second place. With high hopes of winning next year, everyone is anxiously awaiting our next visit to West Point, Virginia.



Rolleo 1990

David Powell

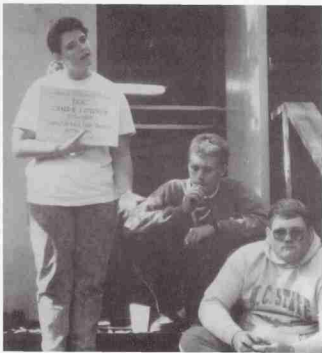
People are scurrying hither and yon, the air has taken on a distinct chill and the hardwoods have changed to their brilliant fall colors. The faculty and students begin to feel the electricity and power of the interclass rivalry known as Rolleo. Not only does this magical weekend provide plenty of opportunities to chat and visit with old friends



who always seem to appear for the last weekend in October, but Rolleo delivers plenty of competition for the individuals who have come to challenge their peers in acts of brute strength and finesse. For some, Rolleo is an opportunity for the wide-eyed freshmen to meet and compete against those upperclassmen they see and hear moaning at the BS table every day!

The 53rd Rolleo, again held at Camp Slocum, delivered the promised excitement and old friends. The events started just after sun-up with the knife and axe throw. After mutilation of a fine poplar stump with these dangerous weapons, the shrill ring of cross-cut saws and the sharp crack of axes hitting wood began. It's time, boys and girls, to break a sweat and cheer the participants in their

efforts of winning one of the coveted Rolleo plaques. At noon, the dinner bell rang to announce that lunch was ready. The mad scramble towards the dining hall was surpassed only by the ensuing scramble to the lovely shores of Slocum Pond to watch those crazy boys and girls (Go Amy!) freeze to death vying to stay on the log. Log birling, perhaps the most popular spectator sport, has also become a great competitive sport for Rolleo participants. After the official competition was completed, everybody, except for the faculty wanted a chance to dethrone Steve and get him wet. The club succeeded, and he as well as anybody else in the water



SAF National Convention

Paul T. Eriksson

Shelley Peterson, Steve Hyde, Jeff Beutel, and Paul Eriksson attended the Society of American Foresters National Convention in Spokane, Washington from September 24th to 27th. Discussions about the future role of students in the national organization were conducted, as well as the creation of new opportunities for the local student chapters to contribute to the national organization. The students were able to attend a trip

can attest that it's damn cold! Maybe next year the faculty will muster up the courage to challenge the deft feet and unerring balance of the students. Oh yeah, don't forget your anti-freeze!

The afternoon was filled with more events such as log rolling and speed chopping. Our hats off to Steve, who stepped in and kicked ass after the speed chopping god Tom Margo was injured. Watch out, though, because the latest news to hit the street is that the big dawg is back and ready to do Conclave!

The evening after the events needs no coverage, and it will suffice to say it's a good thing these boys and girls are in the woods away from society.

So remember students, faculty and alumni of the College of Forest Resources, smile, loosen up and mark your calendars for the date of next year's Rolleo so that you too may experience Rolleo Mania.



to observe forestry operations on a national forest in the inland empire region. They also attended activities held for the members such as the main meetings, working group sessions, and social events. A big hit at the convention, which most of the students went to, was the Jim Stafford concert held on the night of September 26th. Students from N.C. State and the other SAF student chapters exchanged ideas and souvenirs to remember the convention. Overall for the students, the convention was a learning experience as well as an enjoyable time.

Recreation Club

Lee-Ann O'Neal

This year the Recreation Club's philosophy was to introduce students to professional skills and pertinent topics of Parks and Recreation through various activities and service projects. Through fellowship and projects the members of the Rec Club grew professionally and personally to reach these goals. Recreational activities ranged from football games, weekend get togethers and going through Delano's ropes course.

Participation in various sport activities such as football, volleyball, basketball, and softball has kept our intramural teams working hard for a championship title, while emphasizing the fact that everyone is given the chance to play.

Our Adopt-A-Highway project section along Reedy Creek Road has seen faithful Rec Club members along the road, doing their part to keep Raleigh an attractive place to live and attend school. Our other major project this year was the Halloween Trail at Durant Nature Park. Rec Club members presented interpretive skits concerning natural history and legends from previous centuries to Raleigh youths. The stories presented by the Rec Club members not only educated and interested the

youths, but served as the club's fund raiser this year. Other activities we were involved with this year were selling new Recreation Club T-shirts, the March for Parks and a one day conference with recreation students across the state.

The Recreation Club officers would like to express their thanks to Leigh Baggs as the club adviser for her guidance in another successful year.

We hope that next year's officers, with the help of the students, will keep the Recreation Club a learning experience for all majors.



Kneeling: Nelson Cooper, David Smith, Gary Mills, Rusty Brame
Standing: Randy Vest, Robert Hodge, Pat Murray, Chuck Stichweh, Jill Shumate,
Paul Eriksson, Kris Martin, Jamie Lowman, Todd Hogue, Krista Hull, Paulette Barrett,
Chip Futrell, Jerilyn Highfill, Lee-Ann O'Neal

1989-1990 OFFICERS

Pres.	Lee-Ann O'Neal
Vice Pres.	Paulette Barrett
Sec.	Gina Fuller
Treas.	Jamie Lowman
For. Coun. Rep.	Jill Shumate

Ride TheWave/Va. Beach

Lynn Alender, Paulette Barrett, Kris Martin

The Recreation Majors Club sponsored some of its members to the joint state conference of North Carolina and Virginia, in Virginia Beach, VA. For the first time in the history of the conference, students had the opportunity to present a session. With Dr. Beth Wilson as the adviser, four seniors -- Ward, Lynn, Paulette, and Kris -- developed and presented a session on teen programming. Many thanks to Dr. Wilson for her guidance and spirited participation in the session. It was a GREAT success with a standing room only crowd!

The conference also had many other educational sessions which everyone benefited from. The N.C. Parks and Recreation Society sponsored a luncheon for all student members from NCSU, UNC, UNC-W, and UNC-G. It was interesting to compare different programs and meet

other students (even those from Carolina!). Socials were offered every night which allowed students to interact with professionals. NCSU held an alumni luncheon which brought together students and faculty to meet alumni and other guests. The educational sessions and opportunity to meet professionals and attend job marts, combined with the beach sand and ocean waves, made the three days worthwhile. The conference was one that we will not soon forget!

STUDENTS ATTENDING FROM NCSU

Lynn Alender
Paulette Barrett
Julie Beaver
Jill Brooks
Kris Martin
Maria Smith
Ward Swann

Rho Phi Lambda

Phil Campbell

Rho Phi Lambda began the 1989-90 school year by holding the Fall Initiates Smoker at Amedeos. Kris Martin and Sue McCormick were our new members for the Fall Semester. We continued our service project on the "Adopt a Highway Program" by picking up trash on one crisp December morning.

The Spring Semester found us without a president due to Michelle Wells' graduation. At our first meeting of the semester we elected Michelle Rodriguez to the position. Smedes York was our speaker at the Annual Recreation Spring Banquet sponsored by Rho Phi Lambda on April 19, 1990. We also held initiation for our Fall and Spring inductees.



Lynn Alender, Kris Martin, Sue McCormick, Michelle Rodriguez, Phil Campbell, Roger Warren

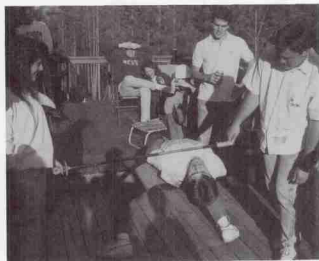
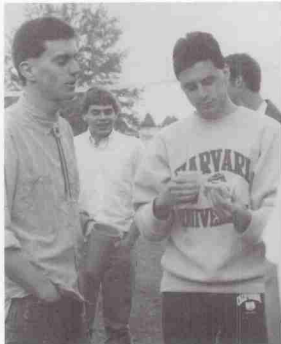
The 1989-90 student chapter has gotten off to an exciting start this year. The group has been active in national and local activities. It has brought in many people from the paper industry to speak about various aspects of the industry. This fall, the chapter attended two local section meetings. This gave the students the opportunity to interact with people in the industry and to hear technical papers presented at the meetings.

The chapter received a cash award from the National TAPPI for boosting its membership more than any other school in its division.

The chapter's social calendar, which is supported by its own fund raisers, included the annual fall picnic, midnight bowling, block seating to football games, and putt-putt golf. NCSU TAPPI now looks forward to another successful semester.



Row 1: Wade Harris, Kevin Grammelspacher, Melinda McDaniel, George Jones, Rich Williams, Robert Cumbee, Chavanda Jacobs, Mark Best, Heidi Masser
Row 2: John Michael, Scott Hamilton, Jack Robinson, John Graves, Greg Fullenwider, Jim Bradberry, Derek Owen, Tim Wilde, Mitch Malcolm, Joey Albright, Doug Estridge



Summer Camp

Rodney Buchanan, Fred Hampton, Robie Currie

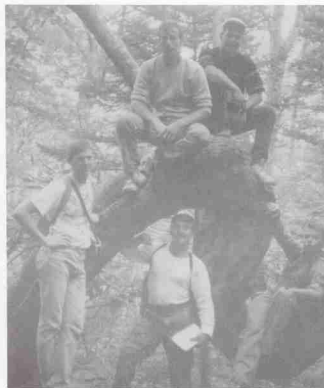
While May 15th may have marked the beginning of the average vacation, for most CFR students, it is a date that will always be remembered. You see, for us — the few and the proud — this day marked the start of our long journey into the Summer Camp Zone! Summer Camp, that blissful ten week stroll in paradise, gives us foresters our first taste of what we can expect in the future, plus a little practical experience to boot. We learned about good forest practices and were exposed to equipment that many of us had never even seen before. You know, I really did think a chain had links in it! "Is cruising timber anything like cruising for chicks?"

Those of you who went to Summer Camp will remember these significant quotes and events.

"Rustic but modern!"

Thanks Mike for showing us how to cruise Rougemont!

Oh no! Fred's playing the piano again!



The Gayla Event every Thursday night.
Is he drunk again?

Hey boneheads! Who flushed his size 32 undies?

Check this out! Redbeard into face #\$\$@* & ** painting.

Henry's possum is loose again.
Sir Richard Rose strikes again. Hey Fred how's that head!

"If you can't handle your beer, keep it in the cabin."

Ugh! bug samples.
Man, dude's big!

B.O. Plenty.
Flying chairs — Oh #\$\$%! It's Mr. Jervis. "Better cut that out. What's that noise!"
The mattress warbler.

"Will you do somethin' fo me?"
How 'bout some volleyball in the rain.
Kirsten, Paula and Amy lost their pants on Harper's Creek!

John found Tony Wenedell's stolen bluejeans that Kirsten and Paula confiscated.
Redbeard, will you leave Gisele alone!
Tony and the ticks!

HERO
Batman strikes again.

As most people know, during Summer Camp this year, our teacher and friend Dr. Donald H. J. "Doc" Steensen passed away. For many of us who are transfers, he was our first instructor at N. C. State. He will be missed by those that knew him. And those that didn't missed out on a man that always had time for his students.

Along with the stories, we experienced Jordan Lake. We saw the colony of bald eagles and enjoyed ten weeks of hard work and play, good and bad times. But Summer Camp did come to an end after ten weeks. What an experience!



Southern Log'n Demo

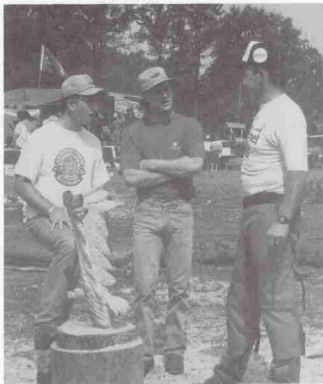
Barbara Boothroyd

Someone famous once said, "We reap what we sow." Reaping — that's exactly what the crowd of onlookers saw in many forms at this year's Southern Log'n Demo held at the Dail family farm in Lenoir County, N. C. Loggers want production in the woods, and they got what they came for: information and demonstrations on the state of the art tractors, trucks, total tree harvesters, tires, turbo-charged chainsaws, portable chippers, and delimiters were just a few of the types of forestry equipment displayed at this year's demo.

But not all information was concerned with equipment. Problems and procedures dealing with Best Management Practices of streamside management zones were addressed by representatives of the N.C. Forest Service. Threats from gypsy moth invasion to N.C. were explained by agents of the N.C. Dept. of Agriculture. And if you always wondered just what the Dept. of Transportation inspected logging trucks for besides non-functioning speedometers, you could walk through a very interesting DOT truck inspection with the guidance of a state trooper.

The FOR 473 class, a.k.a. registration and/or parking attendants, was a welcome sight and was rewarded for its efforts by being treated to dinner and lodging by Earl Deal.

This year's Southern Log'n (you gotta love that spellin') Demo was thoroughly enjoyable and the BBQ wasn't bad either. (And that's from the mouth of an anonymous quasi-vegetarian) ! I commend the organizers and the participants on the super show.



SAF Regional Meeting

Melanie Burke

This year's annual meeting for the Appalachian chapter of the SAF was held in January at the beautiful resort of Pinehurst, North Carolina. The theme for the event was Forestry in the 1990's - A Changing Environment.

Activities began Wednesday, January 24th, with a preconference workshop on wetlands. Our own Dr. Doug Frederick and Dr. Russ Lea, along with Clemson's Dr. Hook, discussed wetland characteristics, regulations, and Best Management Practices.

Thursday's session was moderated by Dean Larry Tombaugh. Topics of discussion included conservation of biological diversity, natural diversity and the status of longleaf pine, conservation activism, mixed pine/hardwood management, and status of intensive forestry in pocosins. NCSU's Dr. Gene Namkoong spoke on the impact of forestry activities on genetic diversity.

Following the awards luncheon and afternoon business meeting was a student forum. Students from NCSU, VPI, and Clemson learned about forestry and the job market in Latin America.

A second general session was held Friday until noon. Speakers from NCSU included Dr. Phil Doerr (on the Endangered Species Act) and Earl Deal (on logging). Dr Art Cooper adjourned the meeting with closing remarks as acting chairman of the Appalachian Society.



Xi Sigma Pi

David Powell, Melanie Burke

Xi Sigma Pi is an honor society composed of students and faculty from the College of Forest Resources. Throughout the year, the society hosts several activities.

In the Fall, the annual fellowship dinner was held at the Faculty Club. Prospective initiates met and socialized with faculty and student members. Several weeks later, thirteen new members were initiated into the society. Former Dean of the College, Dr. Eric Ellwood, spoke to the group about his recent trip to Sweden and forestry education programs in that country.

During the Spring, the society holds a spring picnic at the Schenck Forest. During this time, new officers are appointed. Officers for this past year were:

David Powell - Forester
Jeff Buetel - Assistant Forester
Melanie Burke - Ranger
Scott Hamilton - Treasurer

This past summer we lost a friend and faculty advisor to the society, Dr. Donald "Doc" Steenson. This year's advisor is Dr. Richard Braham.



FPRS



Front: Reynolds Trull, Stacy Johnson, Jim Synder
Back: Gary Poindexter, Jack Ragan, Jay Borrell, Gary Jenkins, Clyde Arnette

Forestry Council



Seated: Anna Beam, David Powell, Jay Rubino, Jill Shumate
Standing: Kevin Gramelspacher, George Joncas, Wyatt Latimer, Phil Campbell, Jeff Beutel

Recreation Interns



Row 1: Sheri Malinowski, Jill Brooks, Joe Campbell, Kevin Young, Gina Fuller, Paulette Barrett, Lee-Ann O'Neal, Lynn Alender Row 2: Todd Hogue, Ward Swann, J. R. Moss, Chris Snow, David Ploeger, Mark Woodrow, Greg Rowe, Brett Williams, Dubie Picquet, Curt Klausner, Roger Warren (adviser), Michelle Rodriguez, Anna Beam

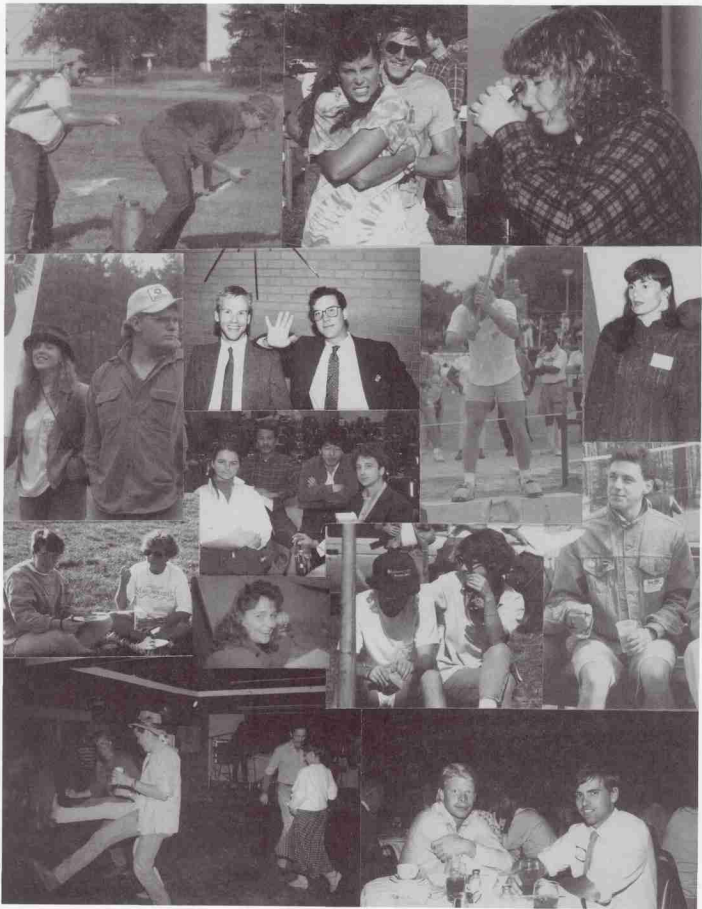


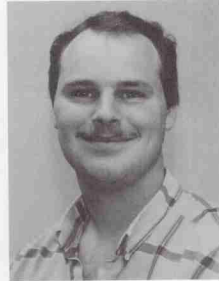
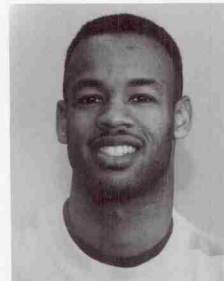
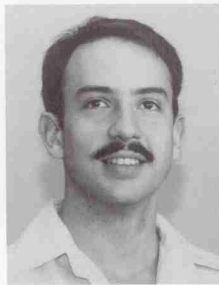
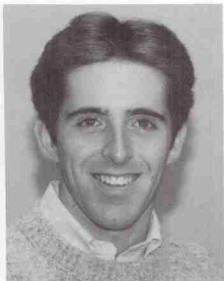
College of Forest Resources Scholars:

Clifford Walt Ackerman
Christa Mary Arboit
Gary Norman Boettcher
Eric David Carlson
Janice Ruth Cecil
Christopher Neil Coker
Danny Floyd Fulmer
Cobb Mac Golson
Derek Evans Halberg
Thomas Walter Harrill
Douglas Jerome Hewett
Michael Todd Holt

Yen-Ling Lai
Jimmy Dwight McKinney
Kevin Todd Minnick
Jennifer Michelle Parr
John Charles Single
Lee Ashley Robertson
Edzel Scott Taylor
Scott Douglas Tingle
David Devon Walters
Charles Phill Warriner
Randall Thomas Witt
Brian Glen Zehner

Graduating Seniors

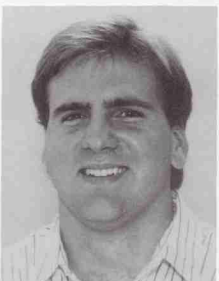
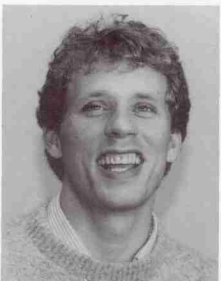
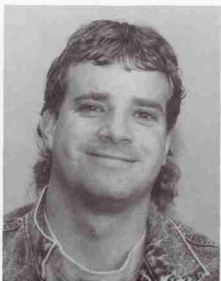
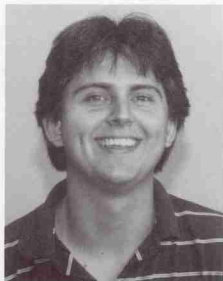
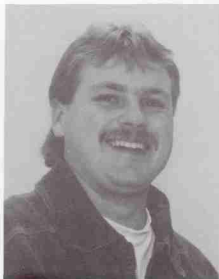
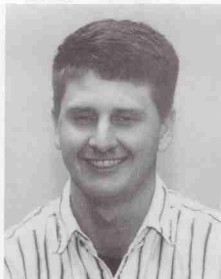




Jeff Landon Beutel
Barbara Ann Boothroyd
Jerold Marcellus Bryant

Melanie Ann Burke
Chris Cobb
Michele Spersud

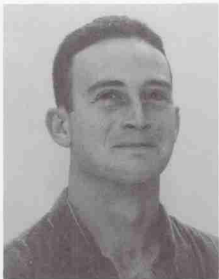
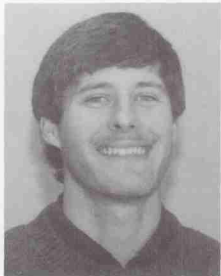
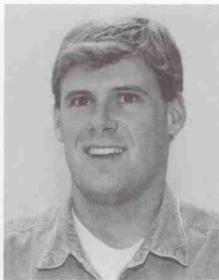
Paul Timothy Eriksson
Eduardo Luis Garcia
Scott Patrick Gottfield



Paula Annette Gray
James William Hauser
Larry Steven Hyde

Robert Billy Kidd
John J. Klischies
Wyatt Ashley Latimer

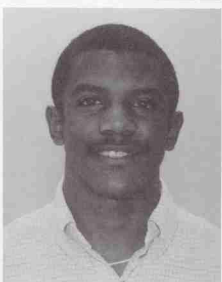
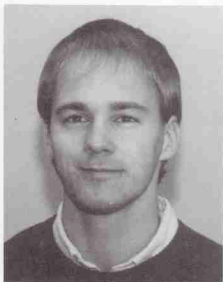
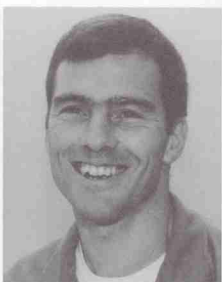
James Eugene Malpass, Jr.
Deborah Nahikian
Victor Haynes Parrish



Rachelle Ann Peterson
David Bruce Powell, Jr.
Eugene Gerald Raynor

William B. Rudd
Vann Sparrow
Forrest Henry Teague, Jr.

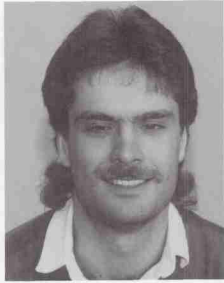
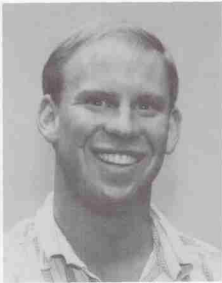
Thomas Dale Thrash
Mark Donovan Tippett
Randall Frank West, Jr.



Charles Anthony Wisecal, Jr.
Kevin J. Gramelpacher
Chavonda Janeva Jacobs

Joan Renee Lee
Andrea Leigh Nelson
Paulette Thomas

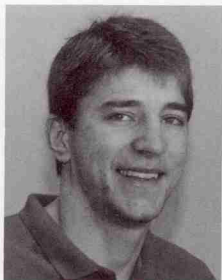
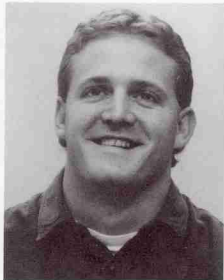
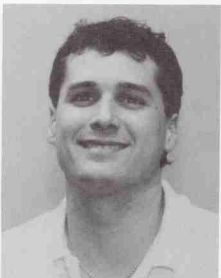
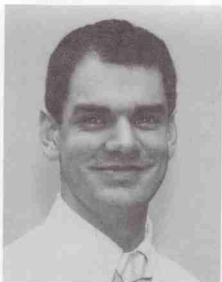
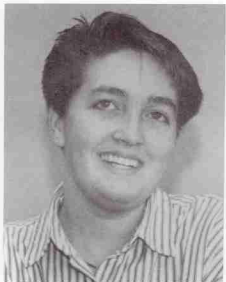
Albert Keith Williams
DeNorris Williams
Deboran Lynn Alender



Jill Michele Brooks
Paulette Lynn Barrett
Anna Catherine Beam

Joseph S. Campbell
Margaret Mitchell "Phil" Campbell
Gina Lynette Fuller

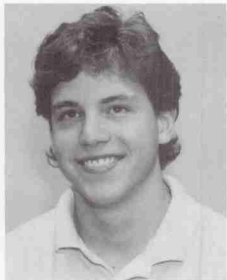
Todd Daniel Hogue
Gregory George Linkner
Sheri Malinowski



Lee-Ann T. O'Neal
Michelle Rodriguez
Christopher Morgan Snow

Ward Graham Swann
Brett D. Williams
Jay Dwight Borrell

Gary Neil Jenkins
Stacy Gardner Johnson
John Michael



Seniors Not Pictured:

Conservation

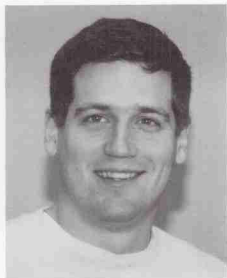
Christopher Frank Dumas

Forestry

David Vernon Dry

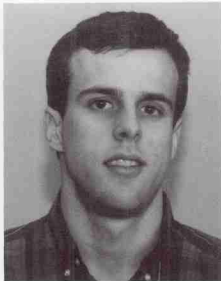
Pulp and Paper Technology

Matthew Wilson Barbour
Kevin Cornell Christian
Robert Shean Cumbee
William Gregory Fullenwider
John William Graves
Scott Alexander Hamilton
Sylvia Ellen Kirsten
Mitchell Alan Malcom
Retha Jeanette McRae
Heidi L. Musser
John C. Single
Ronald Bowman Tucker



Recreation Resources Administration

Richard Floyd Baker
Gregory Richard Kasten
Curtis Mark Klausner
Gregory Allen Rowe
Greg Gerald Sanders
Tonia Michelle Wells
Mark Allan Woodrow



Wood Science Technology

Harold Dixon Herman, Jr.
Bernard Thomas Rose
James Edward Rubino

Roger Gary Poindexter
Jack Merritt Ragan, III
Tayla Rachel Selbst

James Alexander Snyder
Paul X. Taylor
Reynolds Wallin Trull

Senior Superlatives

Conservation

Dumas, Christopher Frank
Wilmington, North Carolina

Forestry

Beutel, Jeff Landon
Raleigh, North Carolina

Forestry Club, Forestry Council; Secretary and Representative, SAF Chairman, Xi Sigma Pi
Xi Sigma Pi Scholarship

Boothroyd, Barbara Ann
Asheville, North Carolina

Xi Sigma Pi, Forestry Club, Intramural Softball, Forestry Council, Student Senate, Co-op ITT Rayonier
James L. Goodwin Scholarship

Bryant, Jerold Marcellus
Georgetown, South Carolina

Omega Psi Pi; President, African-American Student Advisory Council; Executive Board Member, National Pan Hellenic Council, African-American Heritage Society, Black Student Board
Conger Scholarship

Burke, Melanie Ann
Decatur, Alabama

Forestry Club; Secretary and Program Director, SAF, Pinetum Photographer, Xi Sigma Pi
Goodwin Scholarship
Goodwin Work Scholarship

Cobb, Chris
Tarboro, North Carolina

Forestry Club
Turrentine Scholarship

Michele Spersrud
Raleigh, North Carolina
Forestry Club, Woodsman Team, SAF; Co-Chairman, Forestry Council Representative, Earth Day Coalition, Co-op U.S. Army Corps of Engineers, Pinetum; Photographer
Biltmore Work Scholarship

Eriksson, Paul Timothy
Ledgewood, New Jersey

SAF, Forestry Club, Rec Club; Secretary, 1986 Conclave, SAF Assistant Chairman, Forestry Council; Vice President
James W. Goodwin Scholarship

Ferdon, Kathleen Turner
Raleigh, North Carolina

Garcia, Eduardo Luis
San Juan, Puerto Rico
Forestry Club, U.S. Army

Gottfield, Scott Patrick
Hope Mills, North Carolina
Forestry Club, Delta Upsilon Fraternity

Gray, Paula
Eden, North Carolina
Forestry Club; Secretary, Xi Sigma Pi, SAF
Phillip Morris College Scholarship
Rockingham County Garden Club
Turrentine Scholarship
Dean's List

Hauser, James William
Raleigh, North Carolina
Forestry Club, Student Newspaper, Xi Sigma Pi, Pinetum

Hyde, Larry Steven
Andrews, North Carolina
Forestry Club; President, Tree Job

Chairman, Woodsman Team, Intramural Softball

Kidd, Robert Billy
Siler City, North Carolina

Forestry Club; Vice President, Woodsman Team Co-Captain, Intramurals; Basketball, Softball, Football, Inter-
university Christian Fellowship, Co-op
Brunswick Pulp and Paper, Georgia -
Pacific

Klischies, John J.
Westhampton, New Jersey
Intramurals, Forestry Club

Latimer, Wyatt Ashley
Wilmington, North Carolina

Malpass, James Eugene, Jr.
Delco, North Carolina
Forestry Club, Hunting, Fishing

Nahikian
New Smyrna Beach, Florida
Forestry Club, Waterski Club
James Goodwin Academic Scholarship

Parrish, Victor Haynes
Raleigh, North Carolina
Xi Sigma Pi
Work Study Scholarship

Peterson, Rachelle Ann
Asheboro, North Carolina
Pinetum Editor, SAF Representative to
Forestry Council, Forestry Club; Vice
President and Secretary, SAF, Woods-
man Team, ASFC; Treasurer, Rec Club,
4H Collegiate Club, Earth Day Coal-
ition, Alpha Gamma Rho; Rhomate Vice
President, NCSU Flag Squad, Co-op
N.C. Forest Service, Exchange Trainee
to Finland
Forestry Scholars Program

Powell, David Bruce, Jr.
Franklin, Virginia
Tree Job Chairman, Forestry Club;
President, Xi Sigma Pi; Phi Lita Sigma;
Residential Scholars Program
Johnathan Wainhouse Memorial Schol-
arship

Raynor, Eugene Gerald
Grantham, North Carolina
Forestry Club
Turrentine Scholarship

Rudd, William B.
Greensboro, North Carolina
Forestry Club; 1987 Conclave, 1987
Tree Job Chairman, SAF, Basketball,
Golf, Tennis

Sparrow, Vann
Belhaven, North Carolina
Forestry Club; Sargent-at-Arms
SAF

Teague, Forrest Henry, Jr.
Goldsboro, North Carolina
Forestry Club, Alpha Gamma Rho,
SAF, Xi Sigma Pi
James L. Goodwin Scholarship

Thrash, Thomas Dale
Asheville, North Carolina

Tippett, Mark
Greensboro, North Carolina

West, Randall Frank, Jr.
Andrews, North Carolina
Forestry Club, Xi Sigma Pi
James L. Goodwin Scholarship
Harshaw Scholarship

Wisekal, Charles Antony, Jr.
Perry, Georgia

Pulp and Paper Technology

Barbour, Matthew Wilson
Raleigh, North Carolina

Christian, Kevin Cornell
Providence Forge, Pennsylvania

Cumbee, Robert Shean
Supply, North Carolina

Fullenwider, William Gregory
Lewisport, Kentucky

Gramelspacher, Kevin
Tell City, Indiana
TAPPI, Intramural Sports
Pulp and Paper Foundation Scholarship

Graves, John William
Pensacola, Florida

Hamilton, Scott Alexander
Clyde, North Carolina

Kirsten, Sylvia Ellen
Raleigh, North Carolina

Jacobs, Chavonda Janeva
Augusta, Georgia
Women's Track, New Horizons Choir
Pulp and Paper Foundation Scholarship
Dean Ellwood Scholarship
Athletic Grant
Minority Grant

Lee, Joan Renee
Seaboard, North Carolina
TAPPI

Malcolm, Mitchell Alan
Centerville, Georgia

McRae, Retha Jeanette
Wilmington, North Carolina

Michael, John Gerhard
Warner Robins, Georgia
Volleyball Club; President, TAPPI;
Publicity Chairman
Four Endowed Foundation Scholarships

Musser, Heidi L.
Clifton Forge, Virginia

Nelson, Andrea Leigh
Macon, Georgia
TAPPI, AICHE, Peer Mentor, Red
Cross, Racquetball
Pulp and Paper Foundation Scholarship
Dean's Minority Scholarship
Jacque's Foundation Scholarship
Who's Who Among College Students,

Single, John C.
Atlanta, Georgia

Thomas, Paulette
Jacksonville, North Carolina
TAPPI, Alpha Zeta Fraternity, Peer
Mentor, Residential Scholars

Tucker, Ronald Bowman
Browns Summit, North Carolina

Williams, Albert Keith
Roanoke Rapids, North Carolina
TAPPI, Swimming, Chess, Golf, Cross
Country Running
GTE Gold Scholarship
Pulp and Paper Foundation Scholarship

Williams, DeNorris
Nashville, North Carolina
TAPPI, Intramurals; Softball, Basket-
ball
Pulp and Paper Foundation Scholarship

Recreation

Alender, Deborah Lynn
Savannah, Georgia

Recreation Club; Secretary, North Carolina Seniors Games, Rho Lambda; Treasurer, Rho Phi Lambda, Phi Kappa Phi

Barrett, Paulette Lynn
Aurora, North Carolina

NCRPS, Recreation Club, Volleyball, Softball
Texas Gulf Scholarship

Beam, Anna Catherine
Rutherfordton, North Carolina

NCRPS, Recreation Club, Forestry Council Representative, Forestry Club, Woodsman Team, Conclave '90, Pinetum; Assistant Editor '89, Editor '90, Alpha Phi Omega National Service Fraternity; Vice President
Dean's List

Brooks, Jill Michele
Kings Mountain, North Carolina

Recreation Club, Intersvarsity Christian Fellowship, Marching Band, Backpacking, Hiking, Scuba, Horseback riding

Campbell, Joseph S.
Chapel Hill, North Carolina

Varsity Soccer, Spring 1988
Dean's List
Candidate for Alpha Zeta

Campbell, Margaret Mitchell "Phil"
Raleigh, North Carolina

Recreation Club; President, Rho Phi Lambda; President, Forestry Council; Vice President and Treasurer
NCRPS Scholarship

Fuller, Gina Lynette
Selma, North Carolina

Recreation Club; Secretary, Farm House Little Sister

Hogue, Todd Daniel
Raleigh, North Carolina
Recreation Club

Linkner, Gregory George
Rockville Centre, New York

Varsity Wrestling; Four times lettered

Malinowski, Sheri
Greensboro, North Carolina

Recreation Club, Intramurals, U. S. Naval Reserves

O'Neal, Lee-Ann T.
Louisburg, North Carolina

Recreation Club; President and Treasurer, Intramurals

Rodriguez, Michelle
Raleigh, North Carolina

Rho Phi Lambda; President, Recreation Club, Volleyball Club
Gamma Beta Phi Honor Society

Snow, Chris Morgan
Mount Airy, North Carolina

Recreation Club, Camping, Hiking

Swann, Ward Graham
Winston-Salem, North Carolina

Recreation Club; President, Rodeo Club, White Water Extraordinaire

Williams, Brett D.
Tulsa, Oklahoma

Recreation Club, Intramural Sports Clubs

Wood Science Technology

Borrell, Jay Dwight

Roanoke Rapids, North Carolina

FPRS; President and Program Director,
Forestry Council; Vice President
Hielig-Meyers Foundation Scholarship

Jenkins, Gary Neil

Gastonia, North Carolina

FPRS

Johnson, Stacy Gardner

Kinston, North Carolina

FPRS

Poindexter, Roger Gary

Troy, North Carolina

FRPS

Weyerhaeuser Scholarship

Ragan, Jack Merritt, III

Raleigh, North Carolina

FPRS, Delta Upsilon, Residential
Scholars Program, Xi Sigma Pi
Thomas Forshaw Jr. Scholarship

Selbst, Talya Rachel

Israel

Phi Kappa Phi

Weyerhaeuser Foundation Scholarship
Eugene Wengert Scholarship

Snyder, James Alexander

Monroe, North Carolina

FPRS

Taylor, Paul X.

Burlington, North Carolina

FPRS, Delta Upsilon

Trull, Reynolds Wallin

Henderson, North Carolina

FPRS; Vice President, Intramural Cross
Country

Roy M. Carter Endowed Scholarship



Melanie Burke: Head Photographer

Patrons

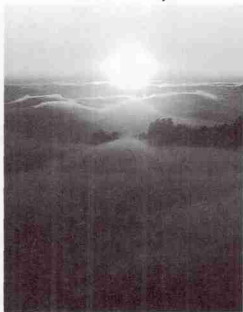
ADKINS, CHARLES E.	1972	FRYE, JOSEPH T. , JR	1939
ALLEN, SCOTT C.		GARDINER, THOMAS B.	1935
AMICK, GWEN W.	1988	GARNETT, JOHN E.	1986
ASHCRAFT, DAVID		GERBER, THEODORE E.	1940
BARBER, JOHN C.	1950	GIBBS, GEORGE S.	1957
BAREFOOT, A. C.		GLASS, GEORGE G., JR	1968
SAMUEL CLARK BEAVANS, JR	1987	GLOVER, GERY A.	1980
BENTON, R. TRENT		GRADY, CHARL ES R.	1958
BLANCHARD, H. C.	1963	GUETH, CHARLES M., III	1981
BLOOMER,LAWRENCE J.	1969	GURGANIOUS, JOHN H.	1977
BOST,RONALD M.	1960	HARMAN, GLENN S.	1975
BOYCE,STEPHEN G.	1949	HARRIETT, REBECCA L.	1979
BOYETTE, ALLEN C.	1961	HARRIS, RICHARD W.	
BRADFIELD, JOHN		HARTSFIELD, MARSHALL B.	1982
BRIONSON, ROY L. , JR		HATLEY, CLYDE W., JR	1984
BRAHAM, RICHARD R.		HEITMANN, JOHN A., JR	1966
CAIN, ELWOOD S.		HERLEVICH, V. W.	1948
CALLAHAN, WILLIAM S.	1967	HINSON, THOMAS	
CANAL WOOD CORP.		HOLCOMBE, ROBERT A.	1944
CANTLIFFE, LAWRENCE R. , JR		HOWELL, JERRY F., JR	1963
CARPENTER, JERRY	1977	HUBBARD, JAMES B.	1938
CAVANAUGH, MARTYN J.	1950	HUGHES, JOSEPH H.	1967
WALLACE G. CAWTHORNE & ASSOC.		HUNEYCUTT, JOEL A.	1964
	1960	HUNTER, JEFF N.	
CLARK,E. CALVIN , JR	1965	JACKSON, G. E.	1935
COBB,DR. FIELDS W. , JR.	1955	JENKINS, WILLIAM A.	
COMFORT, C. W. T	1935	JERVIS, LARRY G.	1966
CONNER, BUDDY W.	1963	JOHNSON, MICHAEL L.	1971
COOK, DOROTHY C.	1989	JOHNSON, VICTOR C.	
CRAFT, ARCHIE C.	1949	JONES, GARY H.	1974
CROKER, THOMAS C. , JR	1933	JONES, J. WILSON, JR.	1956
CUNINGHAM, HENRY	1961	JORDAN, R. B., III	
DAYVAULT, N. E.	1948	KELLY, MYRON W.	
DIMODICA, JOSEPH P. , II	1985	KILIAN, LEONARD A., JR	
DORSEN, ROBERT	1947	KILLGORE, TERRY JOHNSON	1956
DUNCAN, DOUGLAS V.	1977	KING, JACK C.	1965
EDWARDS, ACIE C.	1950	LAMPE, JOHN G.	1958
ERICSON, ERIC H. , JR	1941	LILES, FRANKLIN T.	1975
ETHERIDGE, JAMES N.	1943	MACE, SAMUEL V.	1961
FOOTHILLS FORESTRY & SURVEYING		MAIMONE, ROBERT A.	1988
FORT, STEPHEN R.		MARTIN, ALLEN L.	1956
FORTNER, MR. & MRS. L. SCOTT	1984	MARTIN, HARTWELL C.	1939
FRANKLIN, B. D.	1948	McCRARY,JOHN M.	1974
FRANKLIN, E. CARLYLE	1963	MCMINN, J.W. /SKYLINE TIMBER	1988
FREEMAN, MIKE H		McNATT, JAMES D.	1960
FREULER, ANGIE		MEBANE, TONY	1985

MEHDIZADEH, PRAVIZ , DR.	1966	SWANSON, STANLEY R.	1939
MITCHELL, BARRE R.	1963	TAYLOE, RALPH P.	1973
MORRIS, DONALD J.	1930	TISSUE, O. C., JR	1953
MOULTHROP, GRAYDEN B.		TOWNSEND, JOHN E.	1970
NELSON, LARRY W.	1972	TUGWELL, E. GERALD	1980
NICHOLSON, JOHN E. A.	1954	VANN, ROYCE	
NONEMAN, ROBERT L.	1949	VAUGHN, JOHN DEAN	
PARDUE, JEFF	1978	WALLINGER, R. SCOTT	1960
PARRISH, GEORGE F.	1971	WARD, MELVIN F.	1950
POST, DANIEL	1981	WATKINS, MARK D.	1983
POWELL, CHESLEY E.	1975	WELCH, R. V.	1959
PRIDGEN, JIM	1960	WELLS, J. J.	1954
RAPER, CHARLES F.	1954	WENTWORTH, DAVID F.	1954
RAYMOND, A. G. & CO.	1969	WHELESS, JAMES H.	1953
REID, JOSEPH B.	1952	WHITFIELD FORESTRY CONS.	
ROSS, E. L.	1959	WHITFIELD, STEPHEN A.	1982
ROWE ,FLOYD	1951	WHITE, BENNETT B.	1954
SAUNDERS, SUSAN		WILBOURN, JED. WILBOURN,	1972
SCHOWALTER, ROBERT C.	1968	WRIGHT, HARRY R.	1935
SCHULTZ, GARY C.	1965	YOUNCE & RALPH LUMBER CO.	
SELDON, CHARLES W., III	1960	ZIMMERMAN, GARY	1972
SELTZER, EDWARD N.	1948		
SHAFER, CHARLES H.	1931		
SHELBY, C. E., JR.	1961		
SHERRILL, JACK	1972		
SHOTWELL, JAMES F.	1965		
SHUGART, A. G.	1934		
SIMONSEN, KAI E.	1988		
SMITH, GEORGE E., JR	1938		
SMITH, LEWIS J.			
SMITH, MICHAEL D.	1977		
SMITH, WALTON R.	1934		
SONTAG, EDWARD	1989		
STAFF, MARC L.	1969		
STEVENSON, JAMES C.	1957		
STROUP, THOMAS F.	1965		
STUART, ADRIAN			
SUMMER, T. LARRY	1959		



Jim Hauser, Production Editor

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<i>Greenville, NC - (919) 830-0010</i>	<i>New Bern, NC - (919) 637-6799</i>	<i>Wallace, NC - (919) 285-2190</i>
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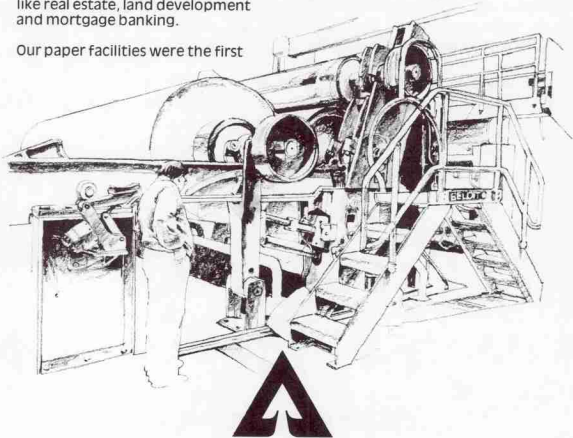
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would like to congratulate all seniors upon their graduation and wish each of them a successful career in the Forest Products Industry.

The N.C. Forestry Foundation is a private support organization which provides funding for scholarships, tutoring, recruiting, faculty research, and other general financial support for the college. This year the Foundation awarded forty scholarships to North Carolina State University forestry undergraduates.

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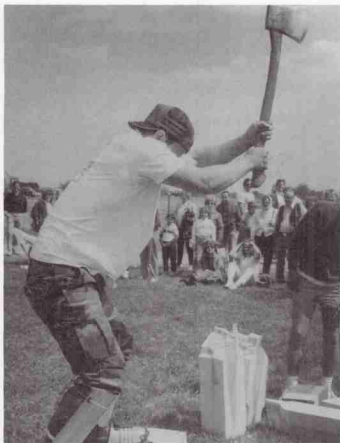
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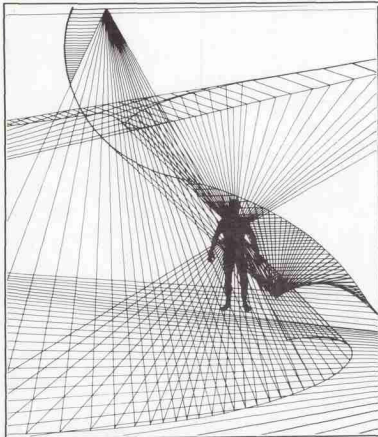
Waverly, Virginia 23890

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Steve Daniels and Melissa Dewey: Business Managers, Layout Artists



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Assistant Photographers: Randy Byrd
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Rain Forest Devastation, Greenhouse Effect, Spotted Owls, Red Cockaded Woodpeckers, Yellowstone Park Fire...

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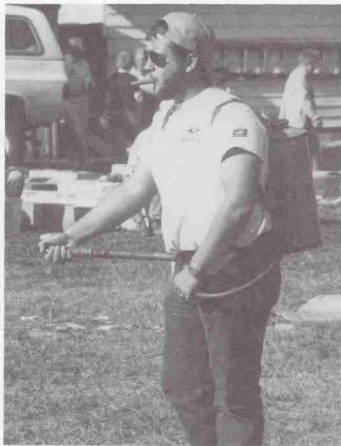
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Anna Beam: Editor-in-Chief



Editor's Note

This has been an educational year for me as editor. There were many things that I had to learn by making mistakes, but they were good for me. I learned a great amount of patience. Also I found out how tough it is to coordinate events with a staff. To get us together as a whole was a major undertaking but we accomplished it.

There are few thank you's I need to make:

- To Dean Tombaugh for always checking on the **Pi-ne-tum's** progress.
- To Gary Blank, who told me to be confident in endeavors involving the **Pi-ne-tum**.
- To Charlotte Swart for being my "mother". Thank you especially.
- To my staff, I could not have put it together without your hard work and dedication.
- To Leigh Baggs, Terry Patterson and Tom Wells for letting me blow off steam and aggravating me til I turned red in the face.
- To all of the contributors too numerous to name.
- The 1990 **Pi-ne-tum** patrons and advertisers.
- The Forestry Council.

It has been hard to follow in the footsteps of Shelley Peterson. She did such a fine job as editor for the past three years. I sincerely hope the **Pi-ne-tum** you have read is as fine of a product as you have found in the past.

Sincerely,

Anna C. Beam

Anna C. Beam
Editor-in-Chief



