

April 1981

Dear Alumni:

If you have not already heard, I am sorry to pass along the news that Henry Posey, Professor Emeritus, passed away at his home on January 8. Professor Posey had not been ill and had been coming to the office regularly. As I understand it, he simply had a massive heart attack while at home. At the time of the funeral, Mrs. Posey requested that contributions be made to a Henry Posey Memorial Fund in lieu of flowers. Any Alumni who wish to make contributions to this Fund can do so by mailing a check to the Department designated for the Henry Posey Memorial Fund. Mrs. Posey left the use of the funds up to the Departmental Scholarship Committee. In a future Newsletter, we will report on the use of the Fund to honor Professor Posey.

In the last Newsletter, I indicated we had revised the Forest Products curriculum and were awaiting final approval from the University Administration. This approval came several months ago, and the new Products curriculum is in effect. This curriculum is very much oriented to producing an employable individual at the BS level. Graduates of this program will have a good knowledge of wood as a material, along with appropriate courses in fields such as Business and Industrial Engineering. We feel the wood products plant managers of the future will more and more be Auburn graduates. A copy of the curriculum is included for your information. One of the problems we have always had with the Products program is securing a sufficient number of students to have a viable curriculum. Any assistance you can give use in steering interested prospects toward the Products curriculum will be appreciated.

If you would like to have brochures describing not only the Products curriculum, but also Forest Engineering and Forest Management, let me know and I will send you a supply.

The Department's undergraduate enrollment is down this year compared with the several previous years. The following tabulation compares the fall quarter 1980 undergraduate enrollment, by curriculum, with fall quarter 1979.

Major	Fall Qtr., 1979	Fall Qtr., 1980
Forest Management	251	204
Forest Engineering	22	41
Forest Products	7	12

We are quite pleased with the increased enrollments in Forest Engineering and Forest Products. We would like to see them larger, since we anticipate no employment difficulties for individuals receiving these degrees. We are not concerned about the decreased enrollment in Forest Management, since it is more in line with both employment opportunities and our teaching resources.

We have also been interested in increasing our graduate enrollment since this compliments our research program and persons with advanced degrees have had no difficulty finding employment.

Department of Forestry  
Auburn University  
Curriculum in Forest Products

FALL

WINTER

SPRING

Freshman Year

EH 101 English Comp.....3	EH 102 English Comp.....3	EH 103 English Comp.....3
HY 101 World History.....3	HY 102 World History.....3	HY 103 World History.....3
MH 161 An. Geom. & Cal.....5	MH 162 An. Geom. & Cal.....5	MH 163 An. Geom. & Cal.....5
BI 101 Prin. of Biology....5	BI 102 Plant Biology.....5	CH 103 Fund. of Chemistry..4
PE Physical Education..1	PE Physical Education..1	CH 103 Lab.....1
Elective (ROTC).....1	Elective (ROTC).....1	PE Physical Education..1
		Elective (ROTC).....1
<u>18</u>	<u>18</u>	<u>18</u>

Sophomore Year

CH 104 Fund. of Chemistry..4	CH 203 Organic Chemistry...5	PS 206 Intro. to Physics...5
CH 104 Lab.....1	PS 205 Intr. to Physics...5	ACF211 Prin. of Acct. I...4
MH 264 An. Geom. & Cal.....5	EC 202 Economics II.....5	IE 311 Eng. Statistics I...3
EC 200 Economics I.....5	IE 204 Computer Prog.....3	FP 311 Structure of Wood...5
SC 202 Appl. Speech Com...3	Elective (ROTC).....1	Elective (ROTC).....1
Elective (ROTC).....1		
<u>19</u>	<u>19</u>	<u>18</u>

Junior Year

ACF212 Prin. of Acct. II...4	FP 530 Solid Wood Products.3	ACF310 Managerial Cost & Budgeting.....4
FP 206 Wood Measurement...3	FP 473 Intr. to Wood Chem..3	ACF360 Prin. of Business Finance.....5
IE 323 Eng. Statistics.....5	FP 474 Wood Gluing & Coating.....3	FP 475 Wood-Based Panel Technology.....3
IE 320 Eng. Economy.....5	IE 333 Eng. Statistics III.4	IE 535 Linear Programming..4
	ME 205 Statics.....4	MN 310 Prin. of Management.5
<u>17</u>	<u>17</u>	<u>19</u>

Senior Year

EH 304 Tech. Writing.....3	FP 531 Mech. Prop of Wood.4	FP 535 For. Products Prod. Mgt. and Control...5
FP 525 Phys. Prop. of Wood.3	FP 533 Wood Drying Proc...3	MN 500 Indust. Relations...5
FP 532 Deterioration & Wood Treating Processes..3	FP 536 For. Prod. Mktg....3	Electives.....7
FP 442 Personnel Mgt.....5	FP 590 Seminar.....1	
Electives.....3	Electives.....4	
<u>17</u>	<u>15</u>	<u>15</u>

As you might gather from the above comments, employment prospects for forest management graduates, particularly at the BS level, have not been as bright as in previous years. The housing market and resulting depressed nature of the wood products industry is the primary cause. I am confident that once the housing market picks up our graduates will again have no difficulty finding employment. In the meantime, any assistance you can give in alerting us to employment opportunities will be appreciated.

We have recently added three new faculty members and all our vacant positions are now filled. W. L. Mills joined us last summer following completion of his doctorate in Forest Economics at Purdue. W. L. is originally from Selma and has a BS degree in Forestry from Auburn. He is teaching a Forest Problems course this quarter and developing a research program in the general area of timber supply from private, non-industrial ownerships.

Dr. Honorio Carino joined the Department on January 1. Dr. Carino is a native of the Philippines and taught forest products for 12 years at Los Banos University in the Philippines. Dr. Carino joins our staff after completing a Ph.D in Forest Products at the University of Minnesota with a minor in Industrial Engineering. He will be involved in teaching courses in forest products processing and control, as well as developing a research program in the same area.

Robert Tufts has been on the faculty for approximately two years as an Instructor. He completed the requirements for the Ph.D. in timber harvesting at VPI in December and, effective January 1, was promoted to Assistant Professor. Robert is teaching the undergraduate logging course this quarter, as well as developing a research program in the general area of harvesting equipment evaluation and reliability.

The rest of the Newsletter is devoted to messages from the faculty and comments you returned following receipt of the previous Newsletter. We are always interested in keeping up with our Alumni. Please take time to fill out the attached comment sheet and let us know where you are and how things are going.

Best wishes,

Emmett Thompson  
Department Head

## NEWS FROM THE FACULTY

Evangelos J. Biblis

One year's experimental data were collected and analyzed concerning the evaluation of different house construction for energy conservation project. The obtained results are interesting and indicate the following: Buildings with 2" x 4" wood stud walls (4" insulation) and wood framed floors (6" insulation) require 31% less energy to heat and cool compared with buildings with 4" concrete slab floors and insulated concrete block walls. Buildings with 3/4" polyurethane wall sheathing require 4.5% less energy to heat and cool than buildings with 1/2" plywood sheathing (all other factors the same). Buildings with plywood siding requires 10% more energy to heat and cool than buildings with brick siding (all other factors the same). Buildings with 2" x 6" stud walls and 6" wall insulation require 4% less energy to heat and cool than buildings with 2" x 4" studs and 3 1/2" wall insulation. Buildings with 1/2" wall insulation sheathing (blackboard) require equal energy to heat and cool than buildings with 1/2" plywood wall sheathing. Buildings with 2" x 4" wood study insulated walls on 4" concrete walls but wood framed floors with 6" insulation. Work will continue this year to obtain additional experimental data on all experimental buildings including two buildings that have been modified.

Work with the composite plywood panels proceeds satisfactorily. Testing plywood composites with southern pine veneer faces and S. pine and sweetgum unidirectionally oriented particleboard cores have been completed. Composite panels with S. pine veneer faces and unidirectionally oriented southern oak particleboard cores have been fabricated and will be tested. Experimental results of this project "composite plywood" will be presented at the annual meeting of the Forest Products Research Society, June 21, at St. Paul, Minnesota.

This year we have completed a study "An optimum solution for the Cut-to-Size particleboard panel problem" the results of which, we hope, will be of practical importance to the particleboard plants that produce cut-to-size customer orders for furniture cabinets, door core stock, shelving and countertops. Cutting the full size boards into cut-to-size orders can cause considerable amounts of waste, in certain cases up to 10% of the total production.

The following example, illustrates the economic significance of the results of our study: If the entire production of a particleboard plant with 70 million square feet capacity is cut-to-size, and if the value of the final product is \$175 per thousand square feet, the plant's loss would be \$122,500 for each percentage of board wasted. Thus, if the waste of cut-to-size operations in such a plant were reduced from seven to three percent, the net savings would be nearly \$500,000 per year.

Our study developed and experimentally verified a mathematical model that generates the optimal solutions for cut-to-size particleboard panels, in order to minimize total waste. The verification of the developed model was made using one real customer's orders from a commercial particleboard plant. The solution found by our model reduced the waste to only 0.63%. The average waste presently generated at this particleboard plant varies between 6% and 8%. In addition, our model generates smaller amounts of inventory in comparison to the inventory created presently by the manual scheduling techniques at the plant.

Conrad W. Brewer

I've been relatively busy since last summer with teaching some in the new camp at the Solon Dixon Center and with Silviculture this past fall at Auburn. We had a really fine group of students in Summer Camp -- they seemed to take their work seriously. I enjoyed seeing many of the Alumni during the tours that we had. It looks like we'll have between 40 and 50 students this coming summer in Camp. I had 70 students in Silviculture and they appeared to enjoy the course especially the labs (cut-and leave tests) as in the past. I've also gotten some new research underway with several companies in the west central part of the State. This has also given me a chance to meet more of the Alumni through my visits to their companies. The research involves natural regeneration of bottomland hardwoods in which I have a lot of interest. I am looking forward to the next year.

We have a lot of students that could use summer work. Let me know if you will be able to hire students this summer.

Gene E. Campbell

I guess we are still early enough into the year so I can extend new year's greetings to all of you. So, Happy New Year to everyone, and have a good and prosperous 1981.

First, on a personal note, the big news for my wife, Kris, and me was the birth of our first child on November 25, 1980. We have named him Scot Edward and everyone is doing fine, although a bit tired at times.

My current research activities include initiation of a study to explore production and supply relationships of nontimber forest outputs (as these relationships relate to timber production) and direction of a pulpwood transportation study for the American Pulpwood Association.

With respect to teaching, we (Warren Flick, W. L. Mills, and myself) have initiated a three-course graduate level sequence in forest economics and management. I had responsibility for the first course this fall. This winter, I am teaching forest management and administration, the course continues to be a challenging experience.

L. Earl DeBrunner

The first of the summer camp sessions at the Dixon Center proved to be interesting, and my part in it was most enjoyable. I am certain that we all learned a great deal from the experience and that next year's camp will be even better.

The fall quarter of 1980 presented an opportunity that was to be a most enjoyable one for my wife, Mae, and me. It was the first quarter in a number of years for which I had no teaching obligation. We took advantage of this fact and spent 30 days driving to the SAF meeting in Spokane, Washington. Sightseeing and visiting friends along the way, as well as attending the SAF meeting, proved to be most enjoyable and rewarding for us. Mae won a Baker Tree Stand in the Forestry Suppliers "Big Give-a-way" and I received a bow

saw. We enjoyed seeing some former students and a greater number of old classmates and other associates as well as friends from all over. To top it off, the meeting itself was interesting and informative.

Some of the other places that we visited included Fairplay (Colo.), Salt Lake City, Spokane, Priest River (Ida.), Eureka (Calif.), San Francisco, Las Vegas, Albuquerque, San Antonio, and New Orleans. We paid visits to a number of National Parks and National Forests (Saw Tom Olliff, '80, and Robin Johnson Klien - Dr. Johnson's daughter, while at Yellowstone), and tried our money and luck in a few of the monuments to the "one-armed bandits" of the West.

Over the New Year's, I spent 7 days at TVA's Land Between The Lakes with six Auburn Students and students and faculty from the University of Kentucky, University of Tennessee, Stephen F. Austin University, and Southern Illinois University taking part in the 5th Resource Management Consortium. This program allows students from the various schools to meet and interact in problem solving situations which are real, as the problems are proposed from real situations at the LBL. I think that all of the students have benefitted from their participation and I am certain that they have enjoyed the sessions.

Research for me has been limited, and will probably continue to be, but I am currently collecting data from a long term burning study to determine the effect on growth on the over story and on soil nutrients. It is likely that this area of study will continue.

I will take this opportunity to remind all of our readers that we do have a co-op program. If any of you are in a position to help us establish new cooperative education positions for our students, please contact me. I would be most happy to supply information on the program to anyone. It is a very beneficial program for both employers and our students.

#### Warren A. Flick

Our fall quarter forest economics class has kept me busy again this year. We had 70 students, 70 weekly quizzes to grade, 70 investment analyses, etc. Our class was quite good - I hope some of the students enjoyed it as much as I did. Our class size will get smaller next year, which will make things somewhat easier for us teachers. We are still doing some work on the forest economy of Alabama. We'll be working most of this coming year to publish more of the results. We've just about completed the model building aspects and we're now in a position to use the results. We also have some data on the financial attractiveness of growing longleaf pine in Alabama -- data from a class exercise -- and we'll be writing an analysis of them soon. Our graduate program in forest economics is flowering slowly, and we're quite happy about them. The current recession could easily double our enrollment. If you get back to Auburn, please be sure to stop in and say hello.

#### Mike Golden

Watershed management, a course many of you enjoyed (?) in previous years, is not required in the new forest management curriculum, so the classes no longer crowd room 221. It is the only undergraduate course I am currently teaching, except for a few days in summer camp biology. I do teach a graduate

course in forest ecology and head the summer camp coordination efforts. By the way, I think moving summer camp to the sophomore year has been a tremendous boost in our program.

More than half my time is now involved in research. Site classification, loblolly pine and yellow-poplar site index estimation, and study of forest communities of the Smokies and of Reed Brake Research Natural Area (Bibb County) are research areas I have been involved in the past two years. I now have a Research Associate, Chip Tuttle. We are getting a research program underway on loblolly pine regeneration. Our initial studies are concentrating on the effects of site preparation on the soil and on seedling survival and growth.

#### James F. Goggans

Work on our forestry tree breeding projects seems to go on season after season and year after year without easing or ceasing. Seasons and years become a long chain of shadowy memories. I know that 1980 is gone because it has become a memory and 1981 demands our immediate attention. Our tree improvement projects are growing and yielding results. We were expecting a good crop of loblolly pine seed from our loblolly seed orchards in 1980, however, drought and seed insects cut yields by 50 percent.

For those of you who are interested in white ash, the results of a three-year-old seed source test that we established near Tuskegee will be published soon in the Southern Journal of Applied Forestry.

During the past year a concerted effort was made to stackpile as many selected southern pine plus trees as possible for future use in our breeding programs.

Our research and breeding of improved varieties of Virginia Pine for use as Christmas trees and our research in the culture Christmas trees has attracted much attention lately. During 1980 we began the process of making plus tree selections of Virginia pine for use in breeding Christmas tree varieties.

#### Evert W. Johnson

Since I am no longer involved with research I cannot report major breakthroughs in our quest for knowledge. Instead I've been at the other end -- trying to figure out what other people have done so that I could write a text in forest sampling. It is difficult. At the rate of three days per page I don't move forward very rapidly. However, I did try out the first seven chapters of the book on my Sampling I class and the response was encouraging. Incidentally, the sampling courses have been upgraded to the extent that both differential and integral calculus are in common use. The students just love it. Ha. The photogrammetry course hasn't changed much. One doesn't tamper with perfection. All kidding aside, the students are still battling the radial line plot and the Kail Plotter and are still being taught that an aerial photograph is not a map. Do any of you ever heed that word after leaving AU?

## Rhett Johnson

The Solon Dixon Forestry Education Center opened officially on April 2, 1980 and since then has played host to a wide variety of users, including a highly successful summer camp session. Over the calendar year, 1980, the facility averaged 12.6 users per day and more than 500 other visitors stopped in to see the facility. Education, demonstration, and research in the forestry and wildlife fields form the backbone of the Dixon Center's programs.

The Dixon Center Forest contains more than 3000 acres and a diversity of timber types. The proceeds from the forest are to be used to finance other Center management operations. One improvement, shelterwood cut, has been completed and 96 acres cleared, site-prepared, and re-planted. Several research projects have been proposed utilizing the Center resources and a competition control study using herbicides and longleaf pine is underway. There is also an ongoing wildlife management program and check station data are collected as an inventory tool.

## Bobby L. Lanford

The forest engineering program is growing by leaps and bounds with enrollment up 100% over fall of 1979, the first time it was offered. Over 40 students are now in FYE (abbreviation for Forest Engineering), and Frank Corley, who transferred from Agricultural Engineering, is the first graduate as of the end of Winter quarter 1980. Students are finding FYE to be a difficult curriculum. Some are barely passing; others are changing majors, but there are some doing quite well. All seem pleased with their choice of fields. Anyone who graduates can be very proud of his accomplishment, and employers should find these graduates very cost effective additions to their companies.

Harvesting research has gained intensity this year also. A major project in thinning began as cooperative programs with American Can Company, Eaton Yale (Timberjack), and International Paper Company. Other support came from Sherer Timber Company, Nordfor, Franklin Equipment Company, Deere and Company, Durham Equipment, and Gafner Manufacturing. We tested various thinning alternatives including patterns and equipment to determine the most cost efficient ones that give the most desirable silvicultural treatment. Results to date are very encouraging, and we have developed methods which meet many of our objectives.

## Richard Martin

The past few months have kept me fairly busy. We finally got the timber sale on the forestry plots under way. About 1/3 of the plots will be cut this year. Hopefully, we can get the area regenerated and still hold enough large timber for teaching purposes.

In the fall I had the opportunity to mark a sale on the Agronomy Department's Plant Breeding Unit. The stand was primarily pine on a rich bottomland site and averaged about 70 years. Not much timber like that left. I'll be interested to see what kind of price it commands.

Ah. Planting season is upon us. Clean-up and planting at the Barbour County unit is now complete. Only a few more acres in the plots and at North Auburn to go. Dibble operation gets to be less and less fun as the years go by.

Ralph S. Meldahl

After teaching summer camp mensuration and forest mensuration twice I am beginning to feel at home here at Auburn. The new summer camp proceeded better than I (and probably most people) had anticipated. I did receive several comments (complaints) from students concerning too many calculations required per area cruised, but everyone spent alot of time in the woods and changes will be made as necessary. The Dixon Center is a perfect setting. Rhett Johnson did an admirable job and I am looking forward to improving and changing the mensi course.

My research is developing a little slower than I had hoped, but things are beginning to take shape. I am involved with a site preparation study with Mike Golden and Chip Tuttle that should be very fruitful. In cooperation with the Herbicide-Coop I am also starting a spacing-herbicide study north of Auburn which will hopefully determine the effects of spacing and competition control on loblolly pine growth and survival.

Since my personal interest lean towards growth and yield and simulation modeling I am trying to obtain data sets which could be used to predict growth under various stand conditions. Forest Service survey data is one possible source and I hope to get involved with Bobby Lanford's thinning research with American Can. If anyone knows of any CFI or other growth data that might be useful, please let me know.

W. L. Mills, Jr.

After an absence of eight years, I returned to Auburn University last June. The intervening years were spent with the U.S. Navy and with graduate studies at Purdue University. It is a pleasure to be back in the South where forestry is "big business". Following an amazingly fast seven months, I am feeling at home and settling into my teaching and research responsibilities. Winter Quarter, I am teaching a graduate forest economics course and the first quarter of the senior forest problems course. I will teach the second half of the problems course during Spring Quarter.

My research is still evolving. Its basic thrust will be to develop a better understanding of those factors which influence investment in timber production and timberlands. I, then, hope to relate these factors and their impact on investment to timber supply. The first step in this research is identification of factors which investors consider when making timber investment decisions. If any of you have any factors to suggest, let me hear from you.

David South

This past year, I have been kept busy with the duties of Project Coordinator of the Auburn University Forest Nursery Cooperative. This Cooperative (the only one of its kind in the U.S.) is conducting research with herbicides, fungicides, and organic matter in forest nurseries throughout the 13 southern states. During the year I visited 42 of the 63 southern nurseries and discussed weed control and other nursery management practices with the nurserymen. The Annual Report for the Cooperative took quite a bit of time to complete but was

ready for the Annual Co-op meeting which was held at Atlanta in October. In November, I studied for and completed my preliminary examination. All that is left is to find time to complete my Ph.D. experiments and write the dissertation. I had five papers published in 1980; two were in the Southern Journal of Applied Forestry, one in the European Journal of Forest Pathology, one in Weed Science, and one in the Canadian Journal of Forest Research.

#### R. C. Tang

A project concerning the design of full-sized wood composite I-beams was initiated last May. In this research, the engineering reliability of the designed structures, made of southern pine and low-grade hardwoods, will be investigated through mechanical testing and computer simulations. Short and long term tests will be conducted, destructively and nondestructively, under different environments to evaluate their serviceability.

Additionally, two projects in cooperation with the Forest Products Lab, USDA at Pineville, Louisiana were also initiated last September. One of them deals with the analysis of dimensional stability of wood-based composite boards under service conditions. The other one is to develop new techniques for measuring the tack properties of adhesives used in the wood composite panel industry.

#### Robert Tufts

Since the last newsletter, I have finished my dissertation, been graduated from Virginia Tech, and promoted to assistant professor. I have also completed a project on the cost of forestry equipment and the results will appear in either the May or August issue of the "Southern Journal of Applied Forestry."

This quarter I am teaching the course on harvesting and starting a project on equipment downtime. I will be soliciting support from industry in order to collect the data for this project. In return, we will offer a reporting service that will provide information on equipment availability, changes in failure rate, parts usage, and other valuable information. In addition to maintenance information, we will examine production rates and costs for selected pieces of equipment. If you are interested in participating in this project or desire further information, please contact me.

NEWS FROM ALUMNI

Steve W. Stewart - Class of 1974

I am in my sixth year of employment with Georgia Power Company in Columbus, Georgia, as the Columbus Division Forester. I, along with an assistant, maintain the rights-of-way on power lines in southwest Georgia.

Percy A. "Oppie" Bryant, Jr. - Class of 1971

After gaining 8½ years of experience in the Southern Forest Industry, I decided to go into business for myself.

The name of my company is Bryant Timber Company, Inc. and I am located at PO Box 417, Stockton, AL 36579. My duties vary, but I am mostly involved with consulting, logging, pulpwooding and real estate.

I am married. I have 3 boys, 1 girl and my wife is due again in November.

Roy Chancery - Class of 1979

Marina and I have a son, William Jacob, born April 12. We are living in Walker County, Alabama. Marina is the high school counsellor in Carbon Hill and I am employed by St. Regis Southern Timberlands, Cahaba District, Pensacola Region.

Wes Stephens - Class of 1978

Presently I am Branch Manager of F & W Forestry Service, Inc. in Macon, Georgia.

The Forestry Club is publishing the fourth volume of its yearbook, The Knothole. The members of the Knothole staff invite you to keep up with student activities by subscribing to The Knothole. Please fill the order form below and return with \$3.00 per subscription to:

'The Knothole'  
Department of Forestry  
Auburn University, Alabama 36849

Please make all checks payable to 'The Knothole'.  
Thank you for your support of this publication.

Sincerely,

The Knothole Staff

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
Street City State Zip

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Attention Alumni! The 1981 Auburn Forestry Alumni Association dues are now due. Make your \$5.00 donation payable to Auburn Forestry Alumni Association and mail to Route 7, Box 28, Selma, Alabama, 36701. Immediately after receiving your dues, I will promptly send you a 1981 membership card. Thank you very much, your donation will be greatly appreciated.

Sincerely,

Frank Walburn  
Sec-Treas. AFAA

The Forestry Club is now selling green & white caps with 'Auburn Forester' patches for \$10.00. The profit from this sale will go into a special equipment fund to purchase a new competition crosscut saw, bow saw, ax, and sharpening equipment to be used at Conclave. Please fill out the section below and return by May 31. Make all checks payable to the Forestry Club.

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
Street City State Zip

# of caps \_\_\_\_\_



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