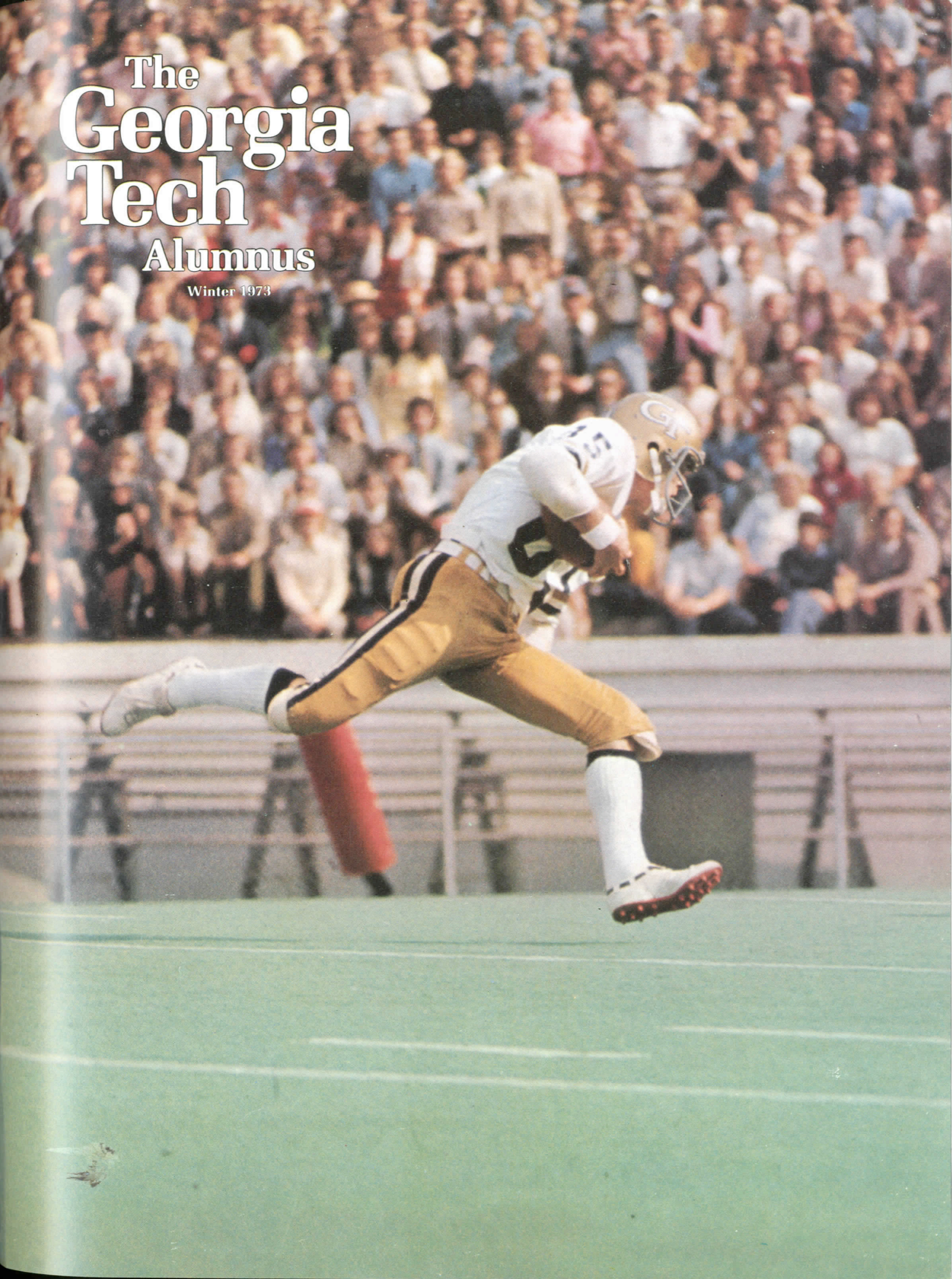


The Georgia Tech

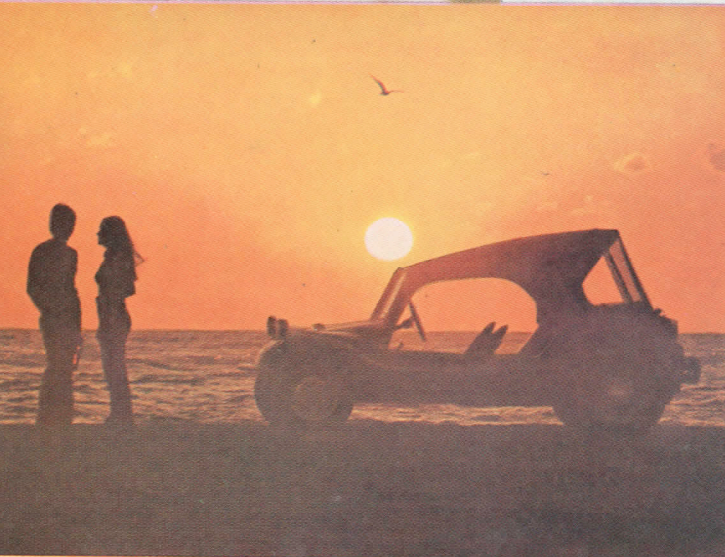
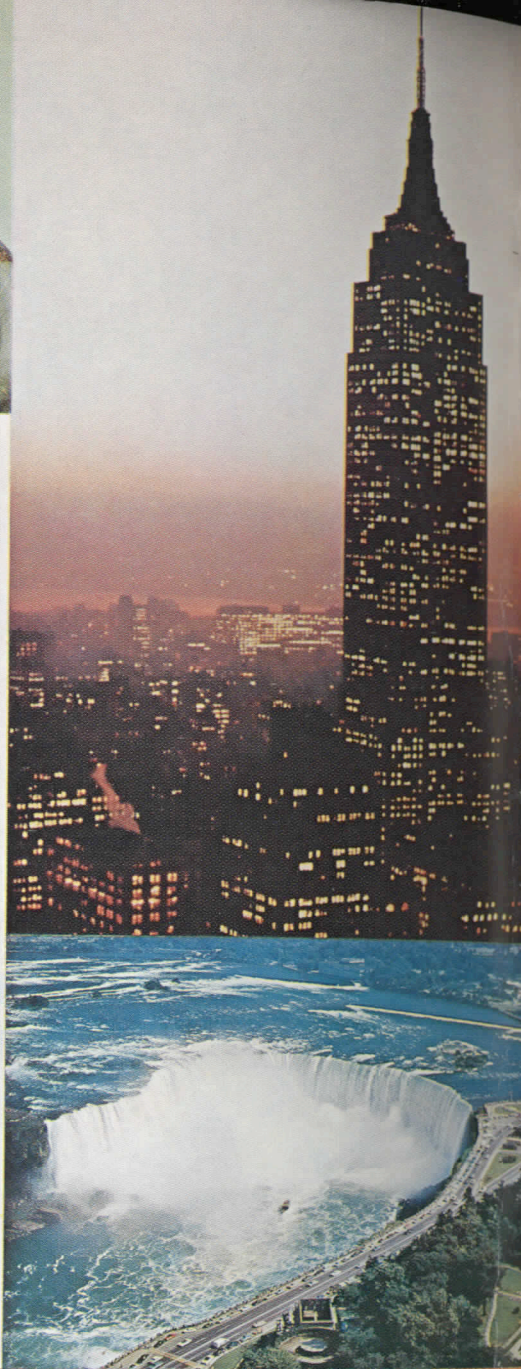
Alumnus

Winter 1973





There are more than 3,000 canyons in the world—but only one they call Grand. When you come across the real thing—on the road—or right out of your refrigerator, you know it.



It's the real thing. Coke.

Trade-mark®

COPYRIGHT © 1971, THE COCA-COLA COMPANY. "COCA-COLA" AND "COKE" ARE THE REGISTERED TRADE-MARKS WHICH DISTINGUISH THE SAME PRODUCT OF THE COCA-COLA COMPANY.

The Georgia Tech Alumnus

Vol. 51, No. 2

Winter 1973



photo by Deloye Burrell

Cover: Robinson giving it all he has—typical of his team.

The Character of '72.	2
The Origin of the Quick Kick.	6
The Mark of a Teacher.	9
New Vectors at the Crossroads of a Career.	12
Thermopylae or Therapeutic?.	18
A New Professional Horizon.	22
The Best of Griffin.	26
Club News.	28
Letters.	30

GEORGIA TECH NATIONAL ALUMNI ASSOCIATION

Officers and Trustees: J. Frank Stovall, president/Thomas V. Patton, vice-president/L. Travis Brannon, Jr., vice-president/John O. McCarty, treasurer/W. Roane Beard, executive secretary/George H. Brodnax III/Roger H. Brown/J. Doyle Butler/Joseph F. Darsey/George A. Ewing/Jere W. Goldsmith/L. P. Greer/Morris E. Harrison/John S. Hunsinger/Robert R. Jinright/A. J. Land/P. Harvey Lewis/J. Charles Lockwood/David D. Long, Jr./James P. Poole/James W. Summerour/Wm. J. VanLandingham/Norman J. Walton/Richard K. Whitehead, Jr.
Staff: Lester McTier Anderson, director of annual giving/Robert H. Rice, director of programs/Mary G. Peecks, director of alumni placement.

GEORGIA TECH FOUNDATION, INC.

Officers and Trustees: Hal L. Smith, president/L. L. Gellerstedt, Jr., vice-president/Robert H. Ferst, treasurer/Joe W. Guthridge, executive secretary/Jack Adair/Ivan Allen, Jr./John P. Baum/D. Braxton Blalock, Jr./Fuller E. Callaway, Jr./Oscar G. Davis/Paul A. Duke/Dakin B. Ferris/Alvin M. Ferst/Jack F. Glenn/Henry W. Grady/Ira H. Hardin/George H. Hightower/Julian T. Hightower/Wayne J. Holman, Jr./Howard B. Johnson/J. Erskine Love, Jr./George W. McCarty/John J. McDonough/Walter M. Mitchell/L. Allen Morris/Frank H. Neely/William A. Parker/Hazard E. Reeves/Glen P. Robinson, Jr./I. M. Sheffield, Jr./Charles R. Simons/John C. Staton/Frederick G. Storey/Howard T. Tellepsen/William S. Terrell/Robert Tharpe/William C. Wardlaw/George W. Woodruff/Charles R. Yates.

GEORGIA TECH NATIONAL ADVISORY BOARD, 1971-72

Marvin Whitlock, chairman at large/Frank J. Whitley, vice-chairman, Houston/Marion W. Boyer, New York/Dan H. Bradley, Savannah/Chester C. Courtney, at large/Charles K. Cross, Columbia/James F. Daniel, III, Greenville/Paul A. Duke, Atlanta/Dr. Wadley R. Glenn, Atlanta/Joe M. Haas, Dallas/Gratton Hammond, Jr., Orlando/Frank P. Hudson, Atlanta/Frank W. Hulse, Birmingham/Raymond A. Jones, Jr., Charlotte/A. Scott Kelso, Houston/Thomas H. Kenton, Jr., St. Louis/John R. Kinnett, Jr., Columbus/David S. Lewis, Jr., St. Louis/James B. Lindsey, Bakersfield/Frederick H. Martin, Huntsville/Joe K. McCutchen, Rome-Dalton/William R. McLain, Nashville/L. Allen Morris, Miami/A. J. Mundy, Jr., at large/Dorroh L. Nowell, Jr., Augusta/John Oster, Jr., Milwaukee/Charles T. Oxford, Albany/S. B. (Skeet) Rymer, Cleveland/Ben H. Sloane, Austin/Jackson S. Smith, Jr., New York/Charles A. Smithgall, Gainesville/Michael E. Tennenbaum, New York/R. W. VanLandingham, Tampa/William A. Verlander, Jacksonville/Charles M. Waters, Jr., Alexandria/J. William Welch, Augusta/Thomas R. Williams, Cleveland/John W. Young, at large.

THE STAFF

Ben L. Moon, editor
 Susan R. Norton, editorial assistant
 Mary Joanne Smiley, class notes
 Sue Entekin, club news
 Susie Wallgren, advertising
 John Stuart McKenzie, design consultant

Published four times a year:

fall (Nov. 1), winter (Feb. 1), spring (May 1), and summer (Aug. 1) by the Georgia Tech National Alumni Association, Georgia Institute of Technology, 225 North Avenue, N.W., Atlanta, Georgia 30332.

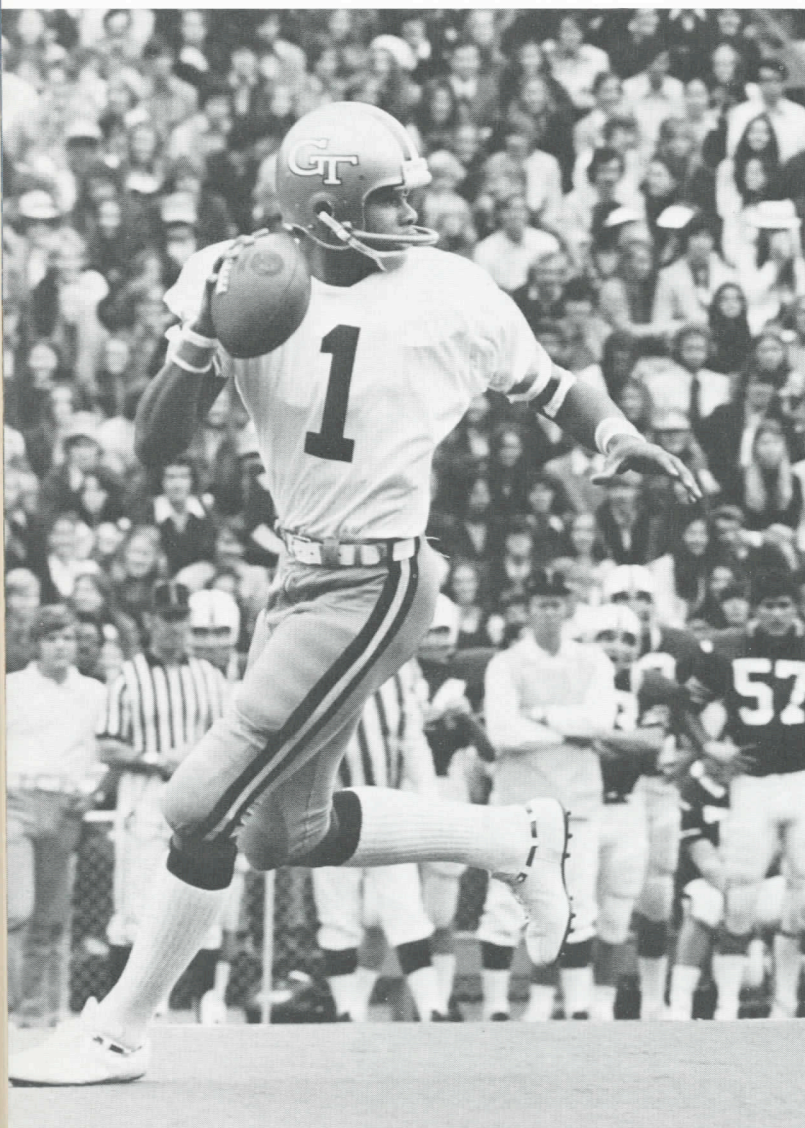
Subscription price \$1.00 per copy. Second class postage paid at Atlanta, Georgia.

The Character of '72

You learn a lot from your first year . . . you learn a lot from every year of coaching. I think I'll be a better coach next year.

We were, of course, disappointed in our first game. We knew that we had a big challenge before us, but we had hoped we could meet it. In reality, with a new staff it was asking an awful lot of our football players to get ready to play a team of Tennessee's caliber on national

As starting quarterback for all but the last game of the season, Eddie McAshan set 12 new records, set three negative records, and tied one record—truly one of Tech's best and most active quarterbacks.



television. Although we played well, we made some mechanical mistakes. As I look back on that game, probably my biggest fault was that we were too tight; I didn't have them relaxed and loose enough. We fumbled the ball some five or six times and we gave them some turnovers, which you can't do against Tennessee, although we didn't play all that badly. This team showed me that after that game they were able to come back and play well. The thing that this season showed me overall, in fact, is that this team can come back. We never lost two games straight—every time we would lose a game or play a poor game, we would come back the next week and make up for it. I think that shows character, and I think character is what won for us in the long run.

I measure this season, really, as a great season. I think greatness is achieved when a team does unexpected things or accomplishes more than they are supposed to be capable of. And this football team I think achieved some things that will mark it as a great football team, although if you look at the season just on the basis of a won-and-lost record it would just be a good one. I label them great as individuals and as a team whether anybody else believes that or not. I think they did prove an awful lot to themselves and to the nation on national television in the bowl game.

Our big game in the middle of the year of course was Michigan State, which we won. Michigan State was nationally ranked at the time, and a pretty good football team, and we won. From that time on everyone realized we had the potential to be a good team.

As far as spectators are concerned, I don't think you could beat the Rice game. You never like to have a tie, but the way we achieved it, coming from behind . . . that last drive was exciting.

We almost beat Auburn; I'll have to take some of the credit for that loss. I think we played well enough to win. In a couple of situations if we could have made the first down, possibly we could have won that ball game. We were leading up until two minutes to go in the game. I think

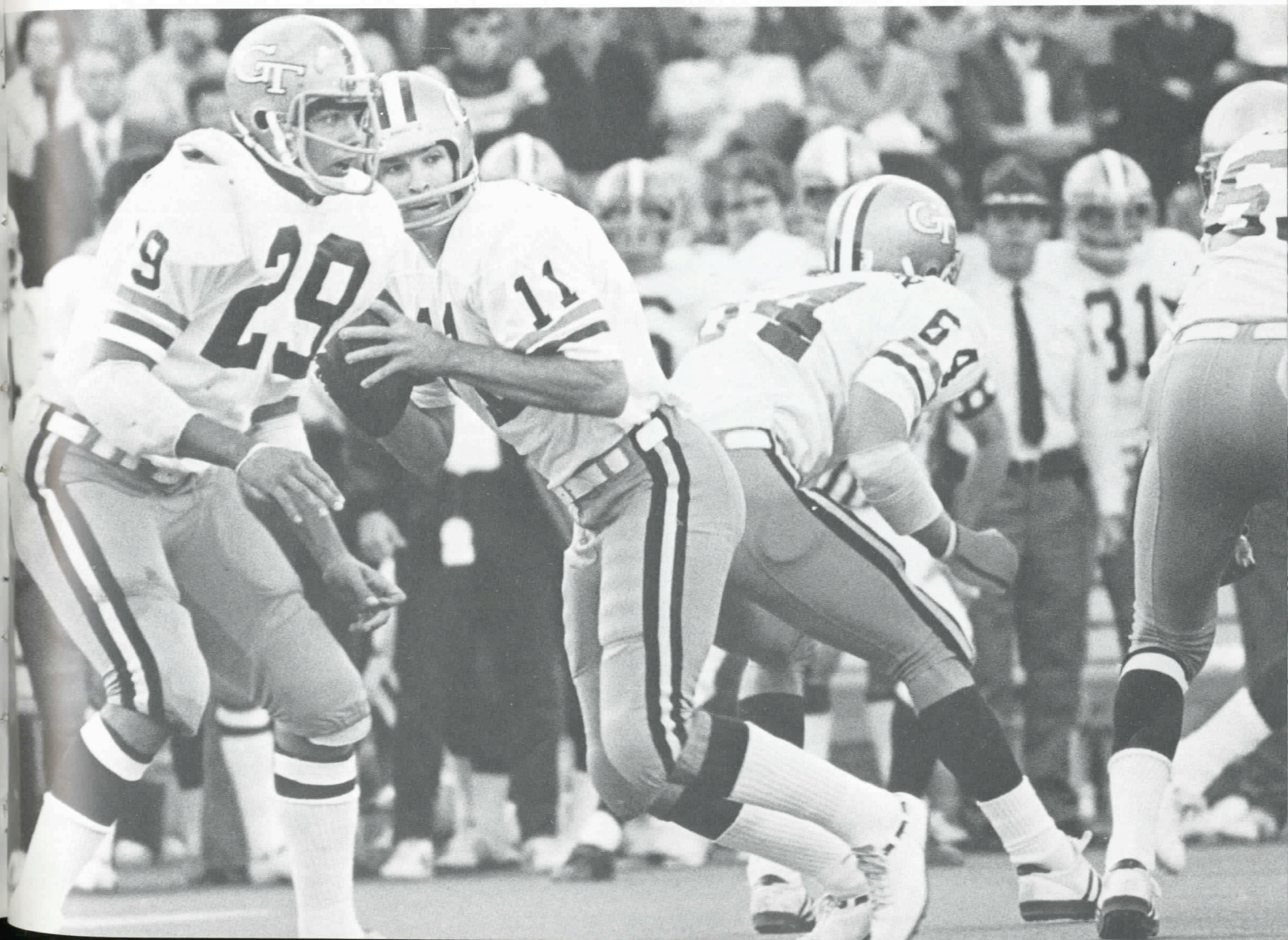
By **BILL FULCHER** as told to **BEN MOON**

Auburn was one of the finest teams in the nation.

The big disappointment in the year was the Duke game. We were in bowl contention, we went to Durham, and we played our poorest game. You always have a game like that somewhere during the year, and you just hope that you can win in spite of it. But the next week we did come back, we did play well against Boston College and Navy, and we ended up with the Liberty Bowl bid.

So that about characterizes the season . . . of course, we were disappointed in the final at Georgia and did an excellent job in the preceding games. He is a fine young man; suspending him for breaking team rules was an unpleasant thing that I had to do as a football coach. We will do everything we can to help Eddie in his professional football career, if he so desires, but right now we're going to (Continued on next page)

Junior quarterback Jim Stevens was Tech's man of the hour for the Georgia game and the Liberty Bowl after McAshan's suspension. He was named Most Valuable Player in the Liberty Bowl after setting a pass completion record for the bowl—80 percent.



The Character of '72 *Continued*

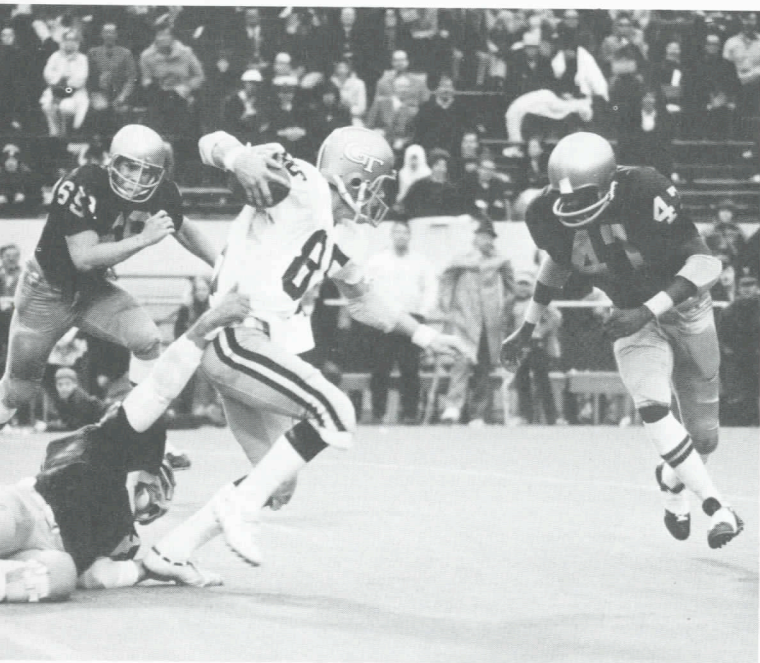
encourage Eddie in every way to complete his studies and graduate from Georgia Tech. Georgia Tech wants to help him, I want to help him, and we hope that Eddie will take advantage of the help that is being offered.

But I was very pleased with the effort put forth in the Liberty Bowl. I think personally it's one of the biggest wins in Georgia Tech's football history. I think it was one of the most exciting bowl games all season, and we found out it had one of the highest viewer ratings of any of the bowls.

I promised the fans and the alumni an exciting, and colorful, and hopefully winning football team; we were colorful, and exciting, and we did end up with a winning season. And one thing this team achieved, and I think it was deserved, is that in the final ratings we were picked in the top twenty. We were *number* twenty, but we were in there. I think this was an achievement in itself, and next year we'll be shooting to be in the top ten.

Both Maxie Baughan and Steve Sloan did just a super job, but I have to mention the whole

A fantastic pass receiver and runner, Jim Robinson was a major secret of Tech's success. Here he encounters three tacklers in the Navy game; he shakes off all three, carrying one a short distance on his way across the goal line.



staff. Maxie came in from the pros, which are a little bit different, and Maxie and I both knew that he was going to have to make some adjustments. But he did it beautifully, and with coaches Jerry Glanville and Bob Williams and Bill Lewis did one of the finest defensive coaching jobs in the country. Maxie is a very close personal friend of mine, and he feels the same way I do about Georgia Tech.

And then Steve would have to get, if there were such a thing, assistant coach of the year. He developed an offense that set all sorts of records . . . it was a high-scoring offense, having some twenty-six points a game. Then we lost our first-string quarterback; both Jim Stevens and Steve worked hard to get ready for Georgia and for the bowl. To take a relatively inexperienced boy like that and for him to complete twelve out of fifteen passes in a bowl game—he threw one of those away, on purpose, and the other one was dropped; he could have had thirteen or fourteen or fifteen very easily—it was just an amazing coaching job. My hat is off to the entire offensive staff—Steve, Rex Dockery, Bud Casey, and Jack Williams.

I take very little credit for the bowl game because I was involved in other things during that week. My assistant coaches did an excellent job in preparing our football team, both psychologically and physically. And of course Jim Stevens came through like a champ.

I'm not going to talk about next year right now, except to say this—we had a pretty good freshman team, and I think we're going to get some help from it. Dick Bestwick did an excellent coaching job, though we probably don't have the super athletes on the freshman team that some people might think when they hear of its 5-0-1 won-lost record. But we think some of those boys have a chance to play.

We didn't lose very many seniors, but the boys we did lose were real football players and real leaders. We hope to build on what we had this year. We've got a tougher schedule, and it should be an interesting spring practice because boys will be fighting for the starting role in a number of positions.

But this year's recruiting has been good, and I think the next month will determine whether it will be good or very good. We have a chance to get some very fine football players.

We're looking forward to a good year. □

RESULTS OF THE 1972 SEASON

	Tech	Opp.
Sept. 9	*Tennessee.....	34
Sept. 11	South Carolina.....	34
Sept. 23	At Michigan State.....	21
Sept. 30	Rice.....	36
Oct. 7	Clemson.....	31
Oct. 21	At Auburn.....	14
Oct. 28	Tulane (Homecoming).....	21
Nov. 4	At Duke.....	14
Nov. 11	Boston College.....	42
Nov. 18	Navy.....	30
Dec. 2	At Georgia.....	7
	253	196

*Game was nationally televised.

INDIVIDUAL PLAYER HONORS 1972

Elected Permanent Co-Captains: Defensive End Brad Bourne and Offensive Tackle Rick Lantz.

All-America: Defensive Halfback Randy Rhino.

Associated Press All-Southeastern Independents: Defensive Halfback Randy Rhino, Offensive Split End Jim Robinson, Offensive Tackle Rick Lantz.

TECH PLAYERS RANKED

NATIONALLY IN STATISTICS

Randy Rhino: 1st (national champion) in punt returns with 25 for 441 yards, 17.6 average and 1 touchdown. Also his 96-yard punt return for a touchdown against South Carolina was the longest single return of the season nationally.

Randy Rhino: 8th in interceptions with 8 for 171 yards, 22.6 average and 1 touchdown.

Eddie McAshan: 18th in total offense with a net 7 yards rushing and 1756 passing... 1763 total.

Eddie McAshan: 19th in passing with 125 of 241 for a net 1756 yards, 16 touchdowns, had 17 intercepted.

Jim Robinson: 21st in pass receiving with 48 caught for 812 yards, 16.9 average and 9 touchdowns.

Bobby Thigpen: kicked 54 consecutive points after touchdowns during his career before missing in the Navy game, the fourth best mark ever nationally.

GEORGIA TECH INDIVIDUAL RECORD HOLDERS

Quarterback Eddie McAshan: Passing—Most attempts season, 241; most attempts career, 698; most completed season, 125; most completed career, 360; most yards game, 371; most yards season, 1756; most yards career, 4080; most had intercepted game 5 (tie); most had intercepted season, 21; most had intercepted career, 52; most touchdown passes thrown game, 5; most touchdown passes thrown season, 16; most touchdown passes thrown career, 32. **Total Offense**—most yards game, 365; most yards season, 1763; most yards career, 4262. (15 school records).

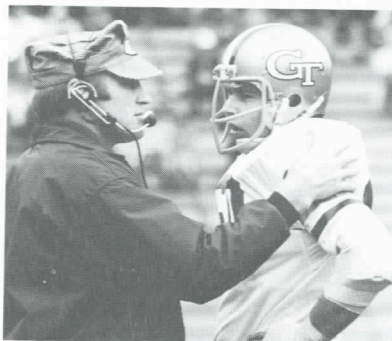
Defensive Halfback Randy Rhino: Punt Returns—most yards season, 441; longest single return, 96 yards. **Pass Interceptions**—most in a game, 3 (tie). **Touchdown Saving Tackles**—most season, 10.

Split End Jim Robinson: Pass Receiving—most touchdowns season, 9; best average per reception season, 16.9 yards.

Place-kicker Bobby Thigpen: Conversions kicking—most consecutive made career, 54. **Field Goals**—most in a game, 3 (tie).



Randy Rhino, the All-American sophomore, made long run-backs his trademark.



Bill Fulcher gives much credit to his assistant coaches for creating a team with a will to win. Maxie Baughan and Bruce Elliott, above, exhibited typical rapport.



Rhino's charged-up running style promises to make the next two seasons even better for Tech.



Bruce Elliott's interception for a touchdown against Navy—just one of the plays that made this team one of the nation's most exciting.



Beau Bruce and Mike McKenzie, made life tough for teams such as Auburn.

Buck Flowers and The Origin of the Quick-Kick

by Lynn Hogan

The year was 1919. The Yellow Jackets, who had floundered the week before (against Washington & Lee), took the ball with their backs to the south goal line. Georgetown, which the week before had beaten Navy, crouched before them. Tech shifted into running formation. Buck Flowers stepped into position, took the snap, and swung his kicking leg—all in the same motion. Seconds later Georgetown was pinned back to the north goal line, and minutes later Tech had run a touchdown.

Buck's surprise quick-kick, catching Georgetown flat-footed, had gone for a record 85 yards, and it had put Tech in scoring position. From then on, a fired-up Tech team went on to win 27-0 in what many remember as one of the best games ever played by a Tech team.

Flowers' feat became legend, and like all golden moments of memory, this one, too, had its background. It all began in 1917 when Davidson

(which then played the big ones in football) twice came to Grant Field, first to play Tech, and then to play Auburn. With Davidson came a sensational sophomore already a runner fast and elusive; at safety, a swift and sure tackler; and, as a kicker, the quickest and longest Atlanta fans had seen. The soph's name was A. R. Flowers; he came from Sumter, South Carolina, and he was called Buck.

By the time Davidson returned to Grant Field to play Auburn, Buck's kicks were averaging 50 yards—and to this day, those who saw him can remember no other punter who could take a snap and kick a spiral so quickly. Too, those who saw him also left the field with two convictions: that he would become one of the long-remembered backs (50 years later he was named to an All-South team), and that he had, in large measure, what some sports writers then called "box office" appeal, but what in recent years has been tabbed charisma (and not always too aptly—remembering the word's root). But, be that as it

I'm an old New Orleans newsman—for years retired. I was never a sports writer; too my phrasing faculties have grown as rusty as my typing fingers. So, I'm hoping that one of your sports writing chaps can take the attached notes and do a story as it should be done. (Looks pretty good to me as is. Tampering would spoil the immediacy of Mr. Hogan's personal observations.—ed.)

I believe the story of the Flowers 85-yard quick-kick of 1919 should be recorded because it's the story of a dramatic moment in Tech grid history—and of one of the best games ever played by a Tech team.

I saw Buck's 85-yard kick, and also his play in 1917 with Davidson against Auburn. I believe he was the original quick-kicker. Like Dean Griffin, I never saw or heard of a pre-Flowers quick-kick. About 30 years ago I heard Coach Alex say that Buck was Tech's greatest kicker. I asked if Flowers was the original quick-kicker. He replied "so far as

I know," or words to that effect. I realize now that my question was not specific (was Buck the first quick-kicker ever? Or was he the first quick-kicker at Tech?), but it was my belief that Coach Alex meant to say that, so far as he knew, Buck was the first quick-kicker ever. Too, in the years following Buck's 85-yarder, I discussed it with several coaches. After half a century I can recall nothing specific that was said—but I would have remembered if one of them had said he saw, or knew of, a pre-Flowers quick-kick. (I tried to check back with four of those chaps. The principal one I wished to reach had died, and the second—long out of sports—had only "vague remembrances of who was using the quick-kick" at the turn of the 1920's. Two others I am still trying to reach—for whatever they can remember.)

George Griffin and Judy Harlan, among others, can verify my recollections about Flowers' kicking style and the 85-yard "quickie".

Yours, Lynn Hogan

Buck Flowers is now a retired insurance executive living in Birmingham, Alabama. He is a member of the outstanding Class of 1922, which celebrated its fiftieth reunion during homecoming 1972.



may, charisma Buck did have—in great measure.

In 1918 Buck moved to Tech to pursue engineering studies. With him he brought that particular style of kicking which had become his trade-mark. And out of that fast punt was to come, in 1919, the surprise quick-kick, on first or second down, from running formation.

Who conceived the quick-kick, which was to set opponents far back on their heels? Generally the impression was that the kick was a Heisman innovation—along with the jump shift and the “I”. But Flowers’ memory today is that the idea was Coach Alex’s (then Heisman’s chief assistant, and in 1920 his successor as head coach).

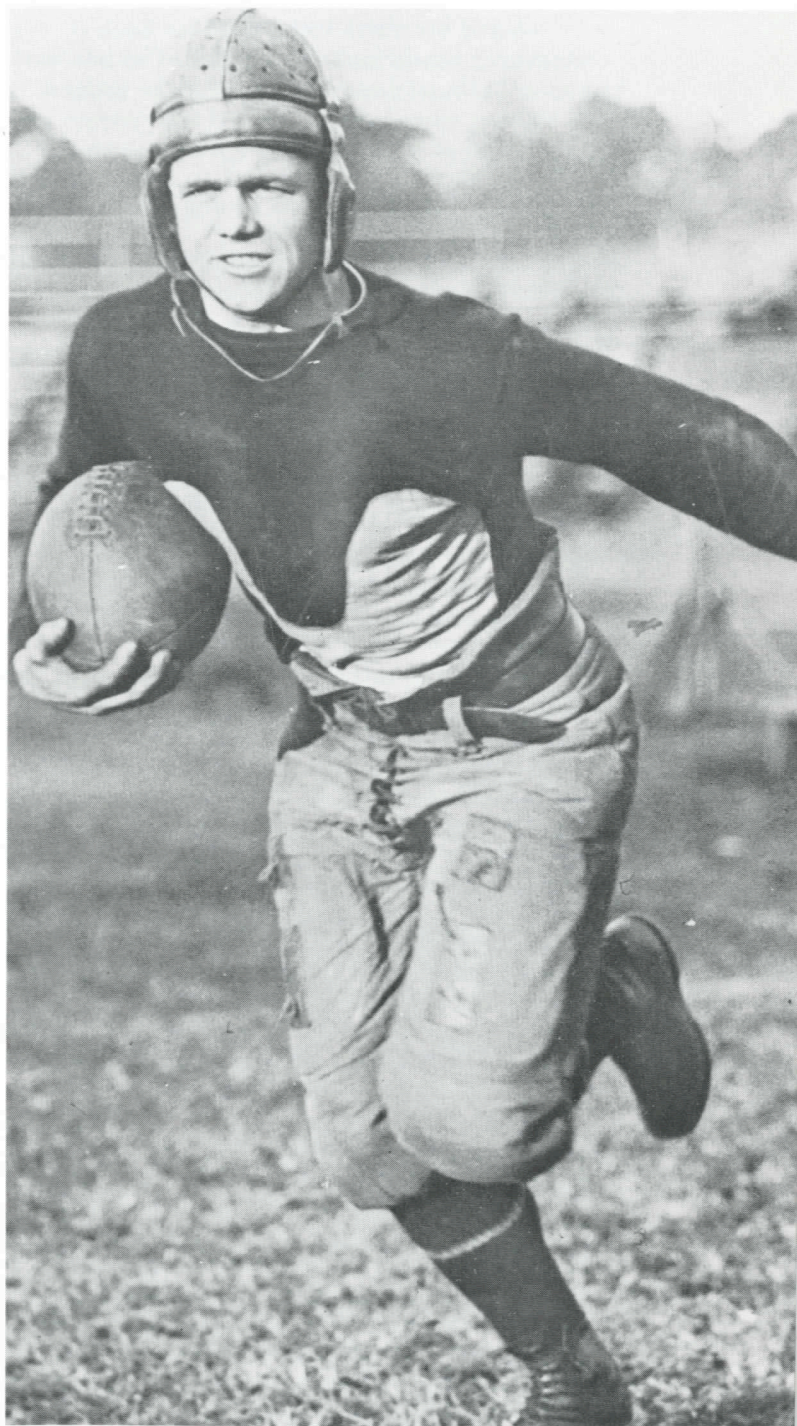
Was Flowers the original quick-kicker? Apparently so thought Coach Alex, who called Buck the greatest punter Tech ever had and the best back he (Alex) ever coached. And today Dean George Griffin, who played under Heisman, says he never heard of a quick-kick until Buck began them in 1919.

With sharpened skill, Flowers repeatedly used the quick-kick in 1920—and it remained an effective weapon in the Tech arsenal through the mid-1920’s, as Dr. Sam Murray (Tech fullback, 1923-26) recalls. In the 1930 era Tulane used the quick-kick with success, with Wop Glover as the kicker, and in the 1933 period Abe Mickal used it at LSU.

But with changing play patterns, the quick-kick gradually fell into disuse. For one thing, its success depended upon deception and speed of execution—and not all good punters had the Houdini-like quickness of a Buck Flowers; nor could they, in haste, always boot the long ball, as Buck could. Too, with the increasing frequency of pass plays, defensive patterns spread wider and deeper. But in the 1970 Cotton Bowl game when Notre Dame saw Texas defenses pulled in close, the Irish caught them off guard with a surprise kick on first down—which really was not too quick since it involved double handling of the ball. But even then it showed that, give certain circumstances, the quick-kick still can be effective.

Recalling today how his kicking style developed, Flowers also gives a clue as to

(Continued on next page)



Buck Flowers *Continued*

why some of his quick-kicks went for such distance: "I would kick a low spiral. The ball was rounder in those days; thus, if it hit the ground just right, it would pick up speed and really travel." And as to speed of execution, Dean Griffin's memory is: "Buck lined up with his right foot back, took the snap and swung his right leg, all in the same motion."

The fast punt (the Flowers product at Davidson in 1917) was intended, of course, to lessen chances of blocking. As Flowers recalls its development: "Coach Bill Fitzer of Davidson had more to do with developing my kicking than any of the three coaches under whom I played. He would work with me for 30 to 45 minutes before the other players reported. His idea, and it worked, was not to try to kill the ball when contact occurred, but to concentrate on timing. When Davidson played Auburn at Grant Field, my punts averaged 50 yards. I had trained to take only a step and a half before contact, and that is why I could get a punt off so quickly."

In 1919 Coach Alex, studying the Flowers kicking style and speed of execution, conceived the idea of the quick-kick. "It was used," Flowers recalls today, "on first or second down, when we were in our own territory. The idea was to catch the defensive team flat-footed, expecting running plays. I would kick a low spiral. In most of my kicking from regular punt formation, I would stand about 12 yards back and aim always for the sideline, between the 10-yard line and the goal line. This helped my punting average."

Here's a postscript to the story of Buck Flowers' inaugural quick-kick of 1919; in the same game, just a little later, came what some of us remember as the most spectacular play of his career.

Whenever old Tech men gather, stories are told of his legendary runs and of kicks that had to have been seen to have been believed—for Buck became the man of legend who unfailingly could bail Tech out of a jam with a long will-o'-the-wisp-like sprint or a tape-measure kick. But usually unmentioned are some crucial defensive plays. And it was just such, in that Georgetown game of 1919, that some viewers recall as his greatest.

Because of his durability through playing years, Flowers became known as something of an iron man. Hearing of all of this, a young newsman some 25 years ago asked Buck if he had ever missed games because of injury. Buck answered that he had—in 1919 the latter games. Recalling those stories of his durability, the newsman asked if the 1919 injury was the result of anything unusual. "No, I was just hurt in a play," Buck was quoted as having replied. But—to those who saw that injuring play, that quotation (legendary or not) was the understatement of a grid decade. Here's what happened.

Tech was leading 7-0 (on a score set up by Buck's 85-yard quick-kick), and Georgetown, on third down, faced long yardage. Perhaps suspecting that they might kick, Buck drifted into medium-deep safety. But Georgetown didn't kick. Big Johnny McQuade (about 205) spun off left tackle, broke through the Tech secondary, and roared goalward. Between him and pay dirt was one man—Buck Flowers (154). And straight toward McQuade streaked Flowers—much like a jet-propelled bulldog charging headlong into a rampaging bull. The collision was something awesome. We wondered if either could rise. McQuade did, slowly. Buck didn't.

Moments later, a shaken Flowers was helped to the bench. With collarbone shattered, he stayed on while the Engineers, fired up by his feat, stopped Georgetown cold. Then he saw his teammates gather momentum and go on to down (27-0) the team that the week before had toppled Navy.

Buck, of course, was out for the rest of the season. He came back in 1920 stronger, faster, and more elusive than ever—for his greatest year. But for some of us who remember, that touchdown-saving tackle of 1919 was his most memorable play.

When asked today about his achievements of half a century ago, Buck ticks off names of teammates and adds, "without their help a little fellow never could have made it." But for men who remember, and particularly for all who were little fellows 50 years ago, Buck was the golden boy... the symbolic figure... the David felling the mighty Goliaths. □

The Mark of a Teacher

By W. Carl Biven, Professor, College of Industrial Management

In the fall quarter of 1972 the Industrial Management College held four seminars on teaching methods for graduate teaching assistants and faculty. Each seminar began with brief opening comments by a professor in the College. The following remarks were made at one of the seminars by Dr. Carl Biven, Professor of Economics.

I must begin by saying that I feel terribly presumptuous. Good teaching is a difficult and complex skill, and it is impossible to feel comfortable about trying to tell others how it is done. At the same time I think it is immensely helpful for us to discuss teaching problems among ourselves.

Good teaching begins, I think, with proper attitudes, and the most important of these is respect for students. Institutions of learning are involved in the most human of human action, the process of thought. It is the ability to think that distinguishes man from the animal kingdom. When man uses his capacity for intellectual activity he is doing that thing which most expresses his humanity. Even the least gifted of students is doing something remarkable as he works at his studies. I remember seeing some years ago that moving photographic exhibit assembled by Carl Sandburg's brother-in-law, Edward Steichen; an exhibit entitled "The Family of Man." A selection of these photographs was later published in book form and was widely distributed. Sandburg did the captions that accompanied the pictures. The theme of the exhibit, as the title suggests, was about what human beings all over the world have in common—birth and death, marriage and children, laughter and sorrow. I remember particularly two photographs, placed side by side in playful contrast. One was a facial shot of Albert Einstein in his office at the Institute for Advanced Study in Princeton,

gently tugging at his mustache in deep contemplation of some theoretical problem; the other, a picture of a boy about six years of age staring in deep concentration at the problem $2 + 2$ on a blackboard. The depth of the thought may have been different, but Einstein and the child were both doing the thing that man does when he functions at the highest levels of his capacities. I don't wish to sound maudlin, but a faculty should have a reverence for what goes on in the classrooms.

One of the most practical results of honest respect is good communication between the instructor and the members of a class. An instructor who has it presents class material carefully selected with the students' needs first in mind and not his own interests alone. There is also a willingness to genuinely listen to students.

A faculty should have a reverence for what goes on in the classrooms.

Nothing can kill off initiative like contempt. I don't say it is impossible for a haughty instructor to be a great teacher. Good teachers come in a wide variety of styles and techniques. A professor unusually gifted and with total dedication to the search for truth might be able to get away with a contemptuous attitude. The story goes that Thorstein Veblen spent the first few classes of a new semester driving students out of his classes with his impossible behavior. After the class roll fell to a small number of dedicated souls, Veblen would relent and carry on with the course. It is possible for a Thorstein Veblen to get away with this type of nonsense, but there are not many Thorstein Veblens. The rest of us have to begin with a healthy respect for the young minds with which we work.

(Continued on next page)

The Mark of a Teacher *Continued*

An instructor should not be a pompous ass.

A second quality that good teachers have is a certain basic modesty. Putting it negatively, an instructor should not be a pompous ass. If a teacher is all hung up in proving how smart he is, a relaxed exchange of ideas with students is impossible. Having a mature sense of one's own importance leads to certain *does* and *don'ts*, the most important of which is "don't pretend." You are supposed to be competent in your area of specialty but not infallible. In every class there are some students with a higher I.Q. than that of the instructor; the instructor simply has the advantage of a head start. You may be asked a question occasionally that you can't answer on the spur of the moment. If a teacher repeatedly does not know the answer, of course, he should not be teaching. But for a good teacher to be stumped occasionally hurts nothing. Students respect honesty and will respect an instructor who says he would like to think about the question until the next class. The teacher's hesitance may even increase the students' own self-confidence as he realizes that learning is not easy for

Students respect instructors who are tough if they are also competent and fair.

anyone but requires continuous effort, even for specialists in a field.

A third quality of good teaching is fairness. Students respect instructors who are tough if they are also competent and fair. This means, among other things, that quizzes and exams should have some relation to class activity. If an instructor spends class time on certain matters and then quizzes the students on something completely different, he is being unfair. People who do this type of thing are known among Tech students—for those of you



Dr. W. Carl Biven is popular among Tech students, who have voted him several awards for teaching excellence.

who are new to the faculty—as “shaft profs”.

Questions in general should be of reasonable difficulty. Flunking half the class doesn't prove anything about a person's virility, and

Flunking half the class doesn't prove anything.

even less about his competence as an instructor. One would think, logically, that if half a class flunks, the instructor is simply not doing his job.

A *final* quality we would all expect in a good teacher is enthusiasm for his subject. Successful learning involves, apparently, more than an exercise in deductive logic. It requires enthusiasm and curiosity. Students catch enthusiasm from a good instructor and if the instructor is intellectually dead, the students

Enthusiasm is one thing in which young instructors have an advantage

are likely to be also. Enthusiasm is one thing in which young instructors have an advantage. It is not easy to maintain motivation after one has been in a classroom for twenty years. New instructors for whom appearance in a classroom is a fresh experience should have little trouble passing on to students their own sense of excitement. I have seen some first-rate teachers at Tech. Among them I would place some graduate teaching assistants who made up for a lack of experience and depth with a remarkable sense of dedication.

These four qualities in summary, I would emphasize: respect, basic modesty, fairness, and enthusiasm. Few people are superior in all four. Good teachers possess these qualities in different combinations, but good teaching starts with them and can compensate for imperfect classroom techniques. I have seen teachers dull in appearance and tone of voice, completely without charisma, but with so

much integrity and respect for learning that generations of students remember them.

Although I think that techniques are less important than attitude, I want to make a brief comment about them. Whatever may develop later in terms of teaching technology, the technology available at the moment is relatively simple—the lecture supplemented by simple visual aids. In the criticism of higher education in the last several years, the lecture has received a lot of bad marks. In my own view, some of this criticism is misplaced. Properly used, the lecture is a tremendously effective pedagogical tool.

The key thing a student gets from a lecture is not a collection of facts or even familiarity with a body of analysis. It is an example of how a logical mind works. If you will pardon my developing this thought with a personal example, I recall wondering, when my first child was old enough to start brushing her teeth, how in the world one teaches a small child to use a toothbrush. Actually it is a simple matter. You place a stool in front of the wash bowl for the child, get a toothbrush for each of you, and tell the child to do like daddy is doing. As you make the vertical and horizontal motions the child does the same. Imitation, of course, is a large part of the learning process. A child learns to brush her teeth by observing her parent. A student

You teach students to think by repeated exposure to people who think logically.

learns to think by observing a good instructor. It is a fascinating thing to see a good lecturer play with ideas, analyze them, handle the subtle overtones of ideas in contrast. You do not teach a student to think by requiring a formal course in logic. You teach students to think by repeated exposure to people who think logically. A lecture accomplishes this objective, of course, only if it is well prepared, carefully thought out, and rehearsed. □

New Vectors at the

By Susan

"Construction Engineers. Rapidly expanding national hotel and motel chain needs immediate help in building new locations. Degree or compensating experience required. To 16K."

Six months ago, 25 unemployed aerospace engineers would not

have thought twice about a career in construction engineering. Today, 23 of them are employed in areas related to the construction industry.

The 25 men involved were all members of a federally funded short course conducted this past

summer at Southern Technical Institute in Marietta, Georgia. The purpose of this course, sponsored by the United States Department of Labor, the National Society of Professional Engineers, the Technology Mobilization Re-employment Program (TMRP), the Georgia Tech National Alumni Association, and the Georgia Tech Department of Continuing Education, was to "determine if it would be possible to select, retrain and place unemployed aerospace/defense engineers in the fast-growing single-family and multi-family housing industry." Studies have indicated that the housing industry will be called upon to build or renovate more than 26 million housing units within the next ten years. Through the retraining of engineers in this field, their training and experience will be directed toward the nation's need for more efficient and scientific housing production.

Over 2,500 engineers, including 500 unemployed aerospace/defense engineers listed on the rolls of the Georgia Employment Security Agency and 200 southeastern area engineers from the National Registry for Engineers files, were contacted concerning this pilot program. From that group 100 applications were received of which 24 were selected by the screening committee. Selection was made according to the individual's ability to supervise and get along with people; his interest in



Crossroads of a Career

Norton

transferring skills to the housing industry; and his acquired knowledge, training, and experience. One candidate who did not qualify under the TMRP regulations personally paid Southern Technical Institute for his tuition, making an official roster of 25 students.

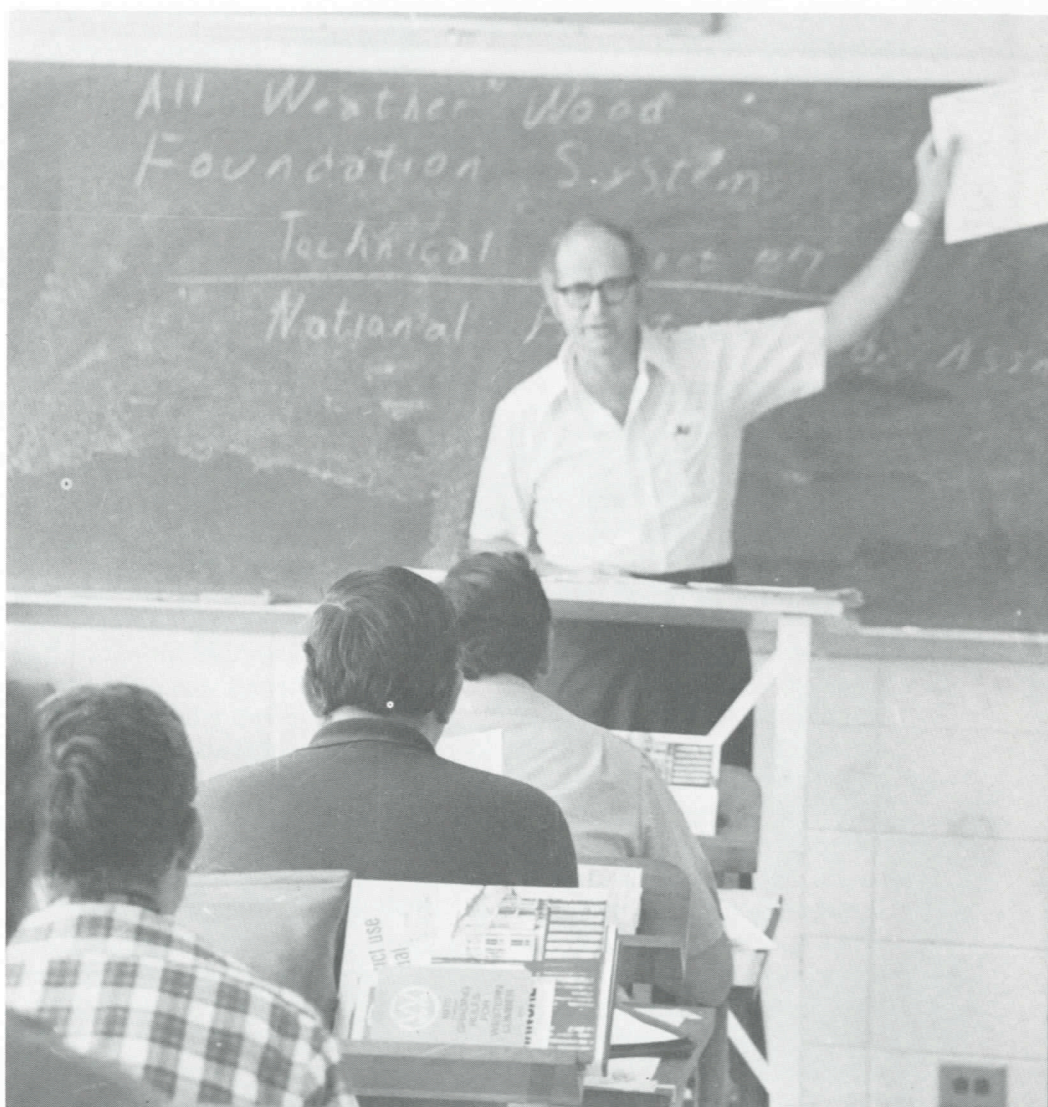
The average age of the group was 45.6 years; the youngest was 29, and oldest 64. Included in the group were two retired military officers and two degreed lawyers formerly employed by the aerospace industry, but most were degreed engineers. The consensus of the group felt that the aerospace industry no longer provided the opportunity it once had and that the residential building industry would provide job security as well as a comfortable income. Diverse in age, interests, and experience, all of these men were bound by one common denominator—the sudden sag of a highly paid professional career. All in the same predicament, yet each unique.

—Tom Tabor is 48 years old and a 1950 Industrial Management graduate from Tech. He had spent twenty years at Lockheed in engineering—12 years in industrial engineering, 2 years in management, and 6 years as a project engineer. Several years ago, he was sent to London as a member of the design consulting team to train over 800 Englishmen for the C-5 project. Recently his position was

downgraded to an hourly position at a rate of \$4.80 per hour. He has four children; two in college, one in high school, and another in elementary school. His wife works part-time as an Eastern Airline reservationist. He had considered working in Miami and commuting

to Atlanta on the weekends to be with his family.

—William H. Lamkin is 57 years old, a University of Alabama graduate. In September of 1971 he was laid off from Lockheed where he had worked for 8½
(Continued on next page)



New Vectors *Continued*

years. He had previously worked at Cape Kennedy on the Atlas-Agena unmanned flights. He's a bachelor and desires to stay in middle management.

—W. D. Yeats attended Allied Institute of Technology. He is a self-employed building specialist. After being laid off from Lockheed, he entered the old family trade he inherited from his father. He enrolled in the course to bring himself up-to-date on the latest information in the construction and housing fields.

—Thomas E. Brazil is a '65 I.M. graduate from Tech who had worked at Lockheed for 8 years as an engineering control coordinator. He has a wife and three children, and was given three weeks notice before he was laid off from work.

These men, like the other 21, are all educated, intelligent men with families and responsibilities. All were anxious to resume work. As might be expected, the opportunity to enroll in the construction course and change one's vocation after so many years of experience brought mixed feelings—an enthusiastic response, but doubt as well.

The educational phase of the program was designed to provide a basic core of courses that would supplement and develop the engineering and supervisory knowledge the student had developed through prior training experience. In addition to the basics, the program offered subjects such as accounting, plans, specifications, materials, financing, subcontracting, labor relations, and surveying. On-the-job field training was not available because of the limited duration of the course (only six

weeks), but was promised on an informal basis by the employing firms. To add incentive for the hiring employer, one-third of the engineer's salary was to be funded by the federal government during the first 20 weeks of employment to cover on-the-job training.

Many of the students liked the idea of the course, but pessimistically thought the actual result—the obtaining of jobs—would be the same they had faced since first out of work: nothing. It was true that because of the highly technical education of the group, more stimulating discussions were conducted than in normal classroom situations. Nevertheless, some members of the class felt it occasionally necessary to voice opinions and ask irrelevant or intangible questions to prove that knowledge—perhaps the over-reaction of a slightly bruised ego. The men fought their way through a tough psychological adjustment.

The course itself was by no means a breeze. It was difficult for the instructors to revamp their teaching styles to the level of men long out of school who had grown rusty in classroom fundamentals. Also, for several class members it was difficult to have teachers who were many years younger than they... a situation not often encountered in the industry where they had once been employed.

All in all, the results of this pilot course brought positive responses from the students, instructors, and employers. Since the demand in the residential construction industry for technical personnel is so great, class members averaged five interviews

each before accepting permanent positions. One third of the class went into business for themselves as developers, contractors, and subcontractors. Of the 24 employed after the course, only one did not enter the construction industry; he returned to the aerospace industry. After completion of the course, the average salary of the class is \$10,550-plus; the lowest salary is \$8,000, the highest \$16,000-plus.

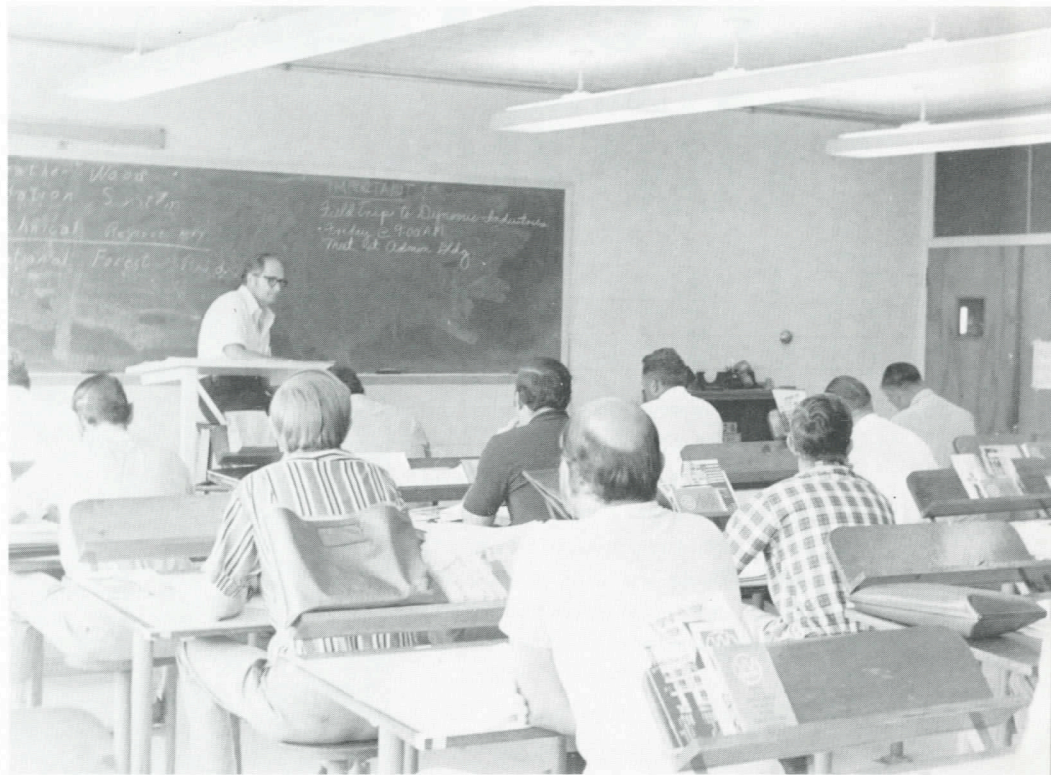
According to related studies and research, it should be possible to place 200 retrained aerospace/defense engineers every year for the next three years in the residential construction industry throughout the United States. Follow-up programs have been recommended by the retrained students as well as by employers in the construction industry. Their recommendations indicate that a co-operative program in which students alternate between classroom work and on-the-job training would be most practical and helpful. Student selection should be based upon a medical examination; past supervisory experience in aerospace/defense work; experience that is applicable to some phase of the construction industry; if possible, some exposure to the construction industry; and a definite interest in working in residential construction.

An additional pilot course conducted this summer on the Georgia Tech campus was designed to retrain aerospace engineers in traffic engineering and urban transportation. With the population growing and increasing numbers of cars on our roads, there is an urgent need

for engineers trained in traffic safety and transportation planning. All 23 of the men enrolled in this course received jobs with salaries ranging from \$10,000 to \$15,000 per year. The demand for engineers in the field already exceeds the supply of qualified men, and it is predicted that the positions available in the United States during the years 1973-75 will number 2,000. The employing agencies have taken great interest in the traffic and planning program, and have taken an active part in the screening of candidates and in curriculum committees.

Informal surveys conducted among other unemployed aerospace/defense engineers indicates a great interest in future programs of residential construction and traffic engineering. In turn, the housing developers and builders and the governmental transportation agencies continue to request the resumes of the pilot program graduates.

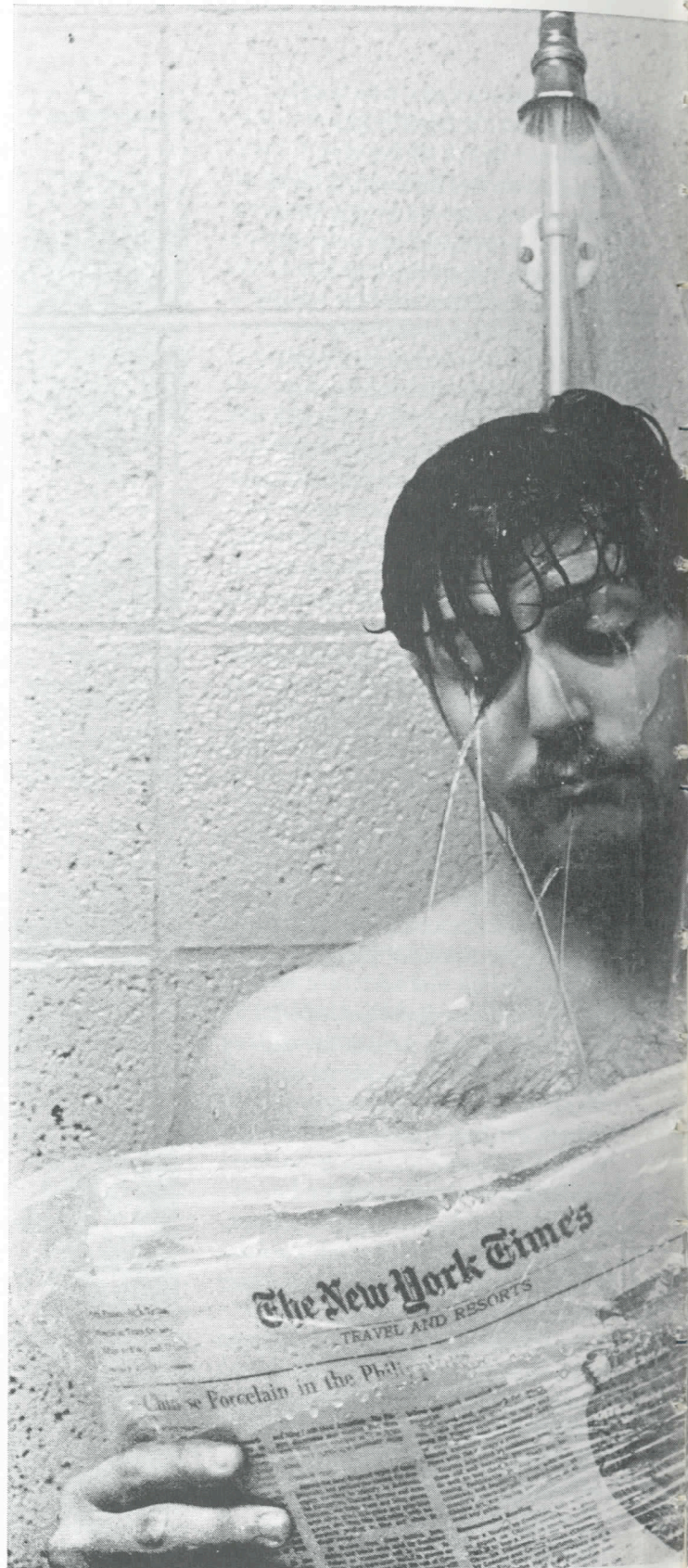
It is obvious that the demand for this program is real, for the housing industry builds thousands more units each year and the urban transportation situation seems to grow more complex. With the unique psychological preparation and technical knowledge such courses can provide, it is hoped that most unemployed engineers will find new careers no matter what their previous specialization may have been. Who knows . . . through retraining and an open mind these men may find their basic education has a degree of flexibility they never suspected. □



The adjustment to the classroom was difficult for men long in professional life, but the effort paid off—all received good jobs, only one in a field not related to the training.



**We keep
the news
fit to read.**





Each Saturday night *The New York Times* wraps up the news.

Then FMC wraps up *The New York Times*.

Thanks to a mechanized system we designed, built, and installed, the country's largest Sunday edition is mailed the world over, carefully protected from the elements by a see-through wrapper.

This is just one of many unusual jobs taken in stride by FMC.

If you want to carry it, warehouse it, package it, or whatever, chances are FMC has handled a similar job.

You may still recall by tomorrow that we're into machinery; but how in the world can we get you to remember that we're also a very large chemical company, too?

Or that we are a major factor in alleviating the world's food problems through our involvement in every phase of agriculture: pumps and irrigation systems, pesticides and fertilizers, food processing and packaging equipment, even seeds.

Or that we're one of the country's largest producers of rayon, acetate, and polyester fibers.

Or that we even make sewage treatment equipment, fire engines and railcars.

Being a diversified company means it's hard to have one all-encompassing image. But it does give our people an unusual variety of ways to improve man's welfare.

If doing worthwhile things is your bag, write or ask your placement director for the descriptive brochure "Careers with FMC." FMC Corporation, One Illinois Center, 111 East Wacker Drive, Chicago, Illinois 60601.

We are an equal opportunity employer.



FMC CORPORATION

**You'd be surprised
at all the things we do.**

The Change in the Greeks — Thermopylae or Therapeutic?

By Garry Bledsoe

Often when I tell people that I work with fraternities, I am asked how fraternities are doing. Many interested Alumni are asking the same question.

Fraternities in general are doing quite well this year. In discussions with the leaders of many national fraternities, I have learned that on the whole, pledging of new members shows an increase of 10-15% over last year's figures. Most indicate that 1970 or 71 was the low point in a trend which began with the radical life style so dominant on many campuses across the country.

The late fifties and early sixties were periods of unprecedented growth for the fraternity system. Many colleges and universities that had never had fraternities or only had a few chapters invited fraternities to begin operations on their campuses. Many of these were so-called emerging campuses. Some had been small teacher-training institutions or regional colleges. Some were private schools experiencing new growth and prosperity. Many simply recognized the need that organized groups such as fraternities and sororities could fill for their students.

The number of campuses with national fraternities grew from 468 in 1954 to more than 556 in 1964. Altogether more than 1,300 new chapters of fifty-six national fraternities were added to the rolls during that decade, the relatively few chapters that folded received much national publicity. Once again the cry of "fraternities

are dying" spread across the land, as it had periodically since 1776, when the first American college fraternity was founded in a small Williamsburg, Virginia tavern. As is often the case, bad or sensational news receives much more attention than good or orderly events. The closing of chapters on some campuses and the discontent of vocal minorities and individuals led many to believe fraternities had little or nothing to offer and that students were no longer interested in membership. It was during these times that the system grew so rapidly.

When the University of California at Berkeley erupted with the birth of popular student radicalism, a new rationale for opposing fraternity life began to be heard on campus. Fraternity life was termed "irrelevant, archaic, passe," as were many traditional student activities.

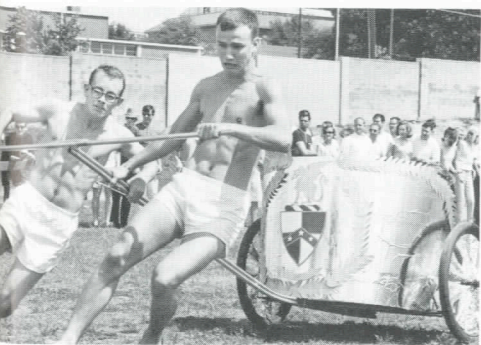
Fraternities, having overcome most of the obstacles raised by old membership selection procedures and restrictions, faced the new challenge of proving their merits as "socially relevant" organizations. Many chapters went to extraordinary lengths to show they were not establishment oriented. It is unfortunate that these attempts often led to a breakdown in chapter cohesiveness due to disregard for the basic elements of fraternal association. Some chapters become totally externally oriented instead of giving primary consideration to the interests and needs of their members.

Leadership based on popularity was the rationale by which decisions were made. Often the concepts of mutual respect, consideration for one's brothers, the good of the chapter, and efforts toward friendliness were disregarded when everyone was doing their own thing. Thus these chapters really were irrelevant to their members. In such chapters it was difficult, even if some effort was made, to recruit new members. The fraternity wasn't much different from any other group of students. Severe financial problems resulted for chapters which failed to adjust to smaller membership. All of this combined with the shattering impact of drug use by some students, and the staggering conflict caused by the controversy with those opposed to use and possession in the chapter house.

In the past two years these trends began to be reversed and chapters are now evaluating their worth in terms of service to campus, community, and their own members as an affinity group. The marijuana question has been answered successfully by many chapters, and finances are based upon realistic membership and chapter programs and upon increasingly efficient management. While Georgia Tech never experienced the extremes of campus change, many Tech chapters were nevertheless influenced by events at other schools. Under the leadership of a re-organized Interfraternity Council, changes have been made

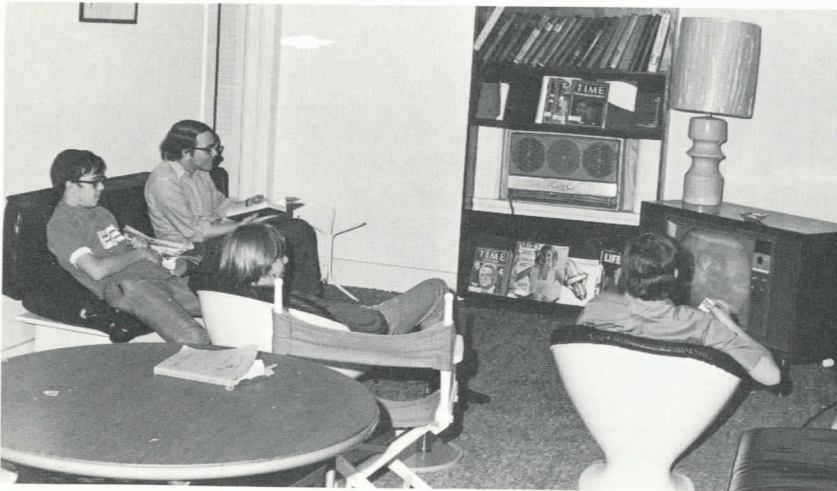


Fraternities haven't changed that much: Greek Week chariot races and tug-o'-wars, parties, TV lab, family-style meals, intramural sports. Fun hasn't gone out of style. But in recent years fraternities have also taken on a new maturity and a sense of responsibility that give even greater depth to the relationships they offer.



The Change in the Greeks

Continued



in the rush program, pledge or member education program, food services, and money management system. Leadership development programs are offered to interested members. The open rush system at Tech, whereby rushees may visit at any time, offers opportunities to avoid some of the stereotypes that many prospective members held about the fraternity system. The diversity of interests found among Tech's national fraternities, now numbering twenty-eight plus two sororities, does much to encourage continued participation by Tech students.



The fraternity system has faced the fact that today's Tech students have alternate choices in their campus life style. Dormitories following the lead of fraternities, other improved living conditions, acceptable food service, organized campus social and political involvement, some self-government, open houses, and well organized intramural athletics. The non-fraternity student can avail himself of numerous leadership opportunities through student government and the programming of the Tech Student Center. Many social activities and programs are offered for all students through the Student Center and other groups; anyone can stay busy without fraternity membership.

Considering the number of alternatives available to Tech students, fraternities must show prospective members that fraternity membership provides unique opportunities and experiences that are not obtained without the assistance and

support of their fraternity. Tech fraternities have continued to be an important element in campus life with more than 90 percent of campus leadership positions being filled by students with fraternity affiliations. About a third of Tech's undergraduate student body belong to fraternities.

Solid guidance and support by alumni advisors and house corporation officers often has a direct bearing on the success and stability of a chapter. Undergraduates often only consider the generous financial support of their alumni, but a more important function is the mature leadership from close alumni interaction, which provides continuity and direction to the undergraduate chapter.

Fraternities continue to be leaders in activities familiar to most alumni. They constitute the majority of organizations participating in the Ramblin' Reck parade, and most build elaborate Homecoming displays. They enter cake and tricycle races as well as "Homecoming Dog" or "Anything" contests. Fraternities are continually called upon to provide valuable manpower in collecting money for the Heart Fund, March of Dimes, United Appeal, and many other worthwhile community organizations. They still do unusual things such as playing football for 243 hours straight to raise \$3,000.00 for Muscular Dystrophy, or kidnapping the Lieutenant Governor to collect a food ransom to give at Thanksgiving to needy families, or spending the day cleaning and painting the Animal Shelter, or playing basketball with Tech's

football coaches and the Playboy Bunnies to raise funds for community benefits.

Fraternity members are daily found sponsoring and coaching all kinds of athletic teams for underprivileged children. An impressive percentage give blood in the Tech-Red Cross Blood Drive. Many fraternities have found real meaning in their brotherhood when they work hard for others and then work equally hard at enjoying fraternity social life together.

Fraternities remain primarily social in their activities, which include ski or beach weekends, formals of all kinds, all of the intense Tech intramural athletics, costume and game parties, and even good, old-fashioned beer busts. There is one essential difference in fraternity activity today for many groups. It is no longer necessary that everything fraternity brothers do be organized or sponsored by the fraternity. It may be offered by the Wesley Foundation, the Student Center, the Atlanta Ski Club, or any organization. It may not be organized at all, such as tubing down the Chattahoochee. Whether it's social life or social service, eating at the house, or enjoying T.V. lab together, many Tech students find their lives enriched and their education enhanced by the experiences to be found in their fraternity membership.

It is important to realize however, that today fraternity

life is more often considered simply a part of collegiate life and not the essence of it. Many critics of the fraternity system claim support for feelings that members do not feel their chapters are important since many members no longer give total allegiance and effort to the chapter. It is significant that the role fraternity plays today in a student's life is much more mature and realistic than when he gave his all exclusively for his chapter.

It is in anticipation of continuing alumni, administration, and national fraternity support that the outlook for Tech fraternities appears to be encouragingly bright. As young men come together to share friendship, ideas, and social and community activities in the context of fraternity brotherhood, the future of fraternities is indeed assured, for they will continue to offer an excellent opportunity to meet the needs of people in the educational process.

Some will be interested to know that three fraternities closed at Berkley have reopened this fall and that the number of pledges there has almost doubled over last year. That at Wisconsin, pledging increased by more than twenty percent and that everywhere there seems to be new interest in establishing or re-establishing fraternity chapters. Once again fraternities are emerging as campus groups able to flex and change to make the collegiate experience a better one. □

A New Professional Horizon

By Ben L. Moon

Fifteen years ago Dr. Benjamin Mays, then president of Morehouse College, approached officials at Georgia Tech about the feasibility of a joint program between the two schools that would allow interested Morehouse students to study engineering. His inquiry never bore fruit.

Today, the seed he planted is flourishing in the form of a dual-degree program between Georgia Tech and the four undergraduate colleges of traditionally black Atlanta University Center (graduate-level Atlanta University is not included). Part of Tech's expanding dual-degree plan, which now involves more than 60 colleges, the AUC program was approved by the Board of Regents in January of 1968 and initially funded by a \$265,000 grant from the Olin Corporation (January-February 1968 *Georgia Tech Alumnus*). During the past four years more than \$700,000 has been poured into the program by various corporations and foundations, \$500,000 of it in the past nine months—*none* of it government money. Most of the money has been earmarked for scholarships for qualified students who otherwise might not be able to attend college.

The original program included all engineering curricula at Tech plus a limited number of science curricula. Recently the program was expanded to include management curricula, all master's degrees, the engineering technology degrees of Southern Technical Institute, and a joint

enrollment program in architecture. Basically, the students attend their first college for three years then transfer to Tech for two final years of professional training. The relative locations of the two schools make them uniquely suited to such a cooperative arrangement. Almost since the inception of the program, students from Morehouse, Clark, Spelman and Morris Brown have made the short journey down Northside Drive to take courses at Tech that weren't offered at their respective schools.

Five years later, about 182 students are in the "pipeline"—170 at Atlanta University Center, and 12 full time at Tech. The fall of 1972 saw the largest group enter as full-time juniors at Tech, and winter of 1973 will bring an additional five. Of these students 17 percent are female; and, typical of AUC students, they are from all over the country, 40 percent from out of state. Ultimate plans envision a total of 600 enrolled in the program at AUC and Tech by the 1975-76 school year. Even conservative estimates would make Tech among the largest producers nationwide of black engineers—perhaps even *the* largest.

Now that the program has been in operation several years and the first large group of students has entered Tech, does it seem to be a success? This question was posed to Dr. Charles W. Merideth, coordinator of the program at AUC, and his answer was an unqualified "yes."

"The program has a number of unique advantages," according to Merideth. "One is its flexibility. A student can pursue the program for several years, taking several courses at Tech, then if he decides engineering is not for him he can graduate in one more year from his first college. Or, if he gets really enthusiastic about engineering and does well, he can work toward the M.S. at Georgia Tech, bypass the B.S. entirely, and receive the B.A. from his first college."

According to Dr. F. W. Schutz, Georgia Tech coordinator of the program, additional options are constantly being added to the program that would tailor it to individual interests. It's a smorgasbord.

Another advantage is that many students who prefer to attend a traditionally black college can do so and receive a professional engineering degree as well. "They can have their cake and eat it," asserts Merideth.

"I think the biggest advantage is that it spreads out a double shock for many students. The transition from high school to college is a shock for anyone, and black students often have the additional shock of adjusting to an unfamiliar, predominantly white cultural environment. With the dual degree program he has a chance to adjust to college and get his academic world in order, often after graduating from a weak high school, before the difficult adjustment to a traditionally white institution. (Continued on next page)



Engineering Graphics Professor Jack Nevitt was among a number of Georgia Tech faculty members who taught special courses at AUC as preparation for the dual degree students' eventual transfer to Tech.

A New Professional Horizon *Continued*

FINANCIAL SUPPORT TO THE DUAL DEGREE PROGRAM
RECEIVED BETWEEN SEPTEMBER 1, 1971
AND SEPTEMBER 18, 1972

	Current Year Amount	Future Commitment
Sloan Foundation	\$ 15,850	
Olin Charitable Trust	83,333	
Olin Charitable Trust	30,000 ¹	60,000
Kaiser Aluminum & Chemical Company of California	4,000	
American Cyanamide Company	3,000	
Honeywell Corporation	2,000	
Koppers Foundation	2,500	
Westinghouse Foundation	5,000	
U. S. Steel Foundation	20,000	
Alcoa Foundation	10,000	
Monsanto Company	1,000	
General Electric Foundation	6,000 ²	24,000
Olin Charitable Trust	30,000 ³	
IBM Corporation	25,000 ⁴	50,000
E. I. DuPont De Nemours & Company	10,000	
Mobile Oil	3,000	
Stauffer Chemical Company	1,400 ⁵	
Stauffer Chemical Company	3,400 ⁵	
Singer Company Foundation	1,000	
Esso Education Foundation	25,000 ⁶	
Esso Education Foundation	75,000 ⁷	
Quaker Oats	2,500	5,000
Eastman Kodak	10,000	
Anonymous Gift	10,000	
Total	378,983	139,000

Grand Total Committed—\$517,983

¹First installment of a three-year grant of \$90,000.

²First installment of a three-year grant of \$30,000.

³Grant for the development of a documentary on the program for presentation at the White House Conference on the Industrial World Ahead, February 7-9, 1972, in Washington, D. C.

⁴First installment of a three-year grant of \$75,000.

⁵For Dual Degree students at A. U. C.: \$3400 at G.I.T.

⁶Grant for general operation of program.

⁷Grant for construction of a center at A.U.C.



Dr. Charles Merideth, AUC's coordinator of the dual degree program, received his Ph.D. in chemistry from Berkeley (rt.).



The proximity of the Tech campus made the dual degree program even more attractive to the AUC students.

"And for Georgia Tech, the program is a source of good students. It attracts blacks into engineering who may never have considered the field, whether because of financial problems or because they have misgivings about the rigor of the curriculum. The program is especially a source of future graduate students for Tech, for traditionally a high percentage of AUC graduates go on to graduate school."

Isaac Halls from Morehouse, who enrolled full time as an M.E. major at Tech in the spring of 1972, mentioned other advantages offered by the Tech-AUC plan that would be difficult to match elsewhere. He came from an all-black high school in Cross, South Carolina, and feels that coming from a basically different culture directly into Georgia Tech would have been more difficult than the transition from high school to Morehouse to Tech, which he reports was "not difficult," having been a math major at Morehouse. "Some things like heat transfer are new, of course." But in addition Isaac rates the proximity of the two campuses and the availability of the Atlanta black community as two factors contributing to ease of social adjustment. "There you have two outlets. I maintain a number of friendship ties at AUC as well as throughout Atlanta. I don't think I could have gone to a predominately white school in, say, Nevada." In general Isaac feels it is easier for blacks to get a foothold in the South professionally, and that the South is in a positive social transition. "The North is almost to the point of no return."

"Without the dual degree program I could never have gone

to Tech, financially or academically. After an academically weak, all-black high school, a black college gave me time to mature."

After completing his M.E. degree, Isaac plans to work toward a graduate degree in management. When he first entered the program in the summer of 1971, Isaac "was discontented with the prospects for a math major. I didn't want to teach, didn't like all the theory, and decided engineering would offer an opportunity to use my math in an applied way."

One facet of the program Merideth would like to build is the finding of summer employment in engineering for students in the program. During the summer of 1972 Isaac Halls worked at Oak Ridge, Tennessee. "Last summer was the first time I had ever been in contact with engineers," Isaac points out. Few blacks have fathers, relatives or friends who are engineers, and the field is completely foreign to them. "I enjoyed the work, and the experience taught me that continued growth in the profession requires management training." He feels that one of the most important things industry can do for the program is to give black students opportunity to have contact with professional engineers, to either become excited about the field or decide it isn't for them.

About the only suggestion Halls has for improvement of the program is to "improve the social and cultural communications between the two schools, to let AUC students get a better look at Tech before they enroll full-time. They might have less anxiety about making the transfer if they

had a better prior understanding of Tech." Moves are currently in progress to accomplish that end.

The overall conclusion would have to be that the AUC-Georgia Tech dual degree program is a success. One mark of success is emulation, of course, and the University of Delaware and the University of Dayton are currently among schools planning to establish similar programs. Vanderbilt and Fisk already have a program in operation. But Georgia Tech's was the first, is the biggest, and by all indications will remain the biggest.

How about jobs for the graduates? According to Merideth, "there will be many, many more jobs than graduates. Atlanta's rapid transit system (MARTA) alone will need 1,000 engineers by 1976, and they've already committed themselves to 30 percent of them being black."

Such quota systems are objectionable to many. How will the black engineers feel? If they are like Isaac Halls, they will be pretty solid, practical-minded men and women, proud of their professional ability to the extent that they resent preference and see it for what it is.

"I know I will probably be in demand, and of course I feel good about it. But I don't want an unfair advantage on the basis of race alone—that can only result in a pseudo position without an integral function in the organization and without power of position. It would be fake."

And he and his colleagues at Atlanta University Center and Georgia Tech are very real. They are assets to the engineering profession and to the society they will help to build. □

The Best of Griffin

Babes in the Woods

When the eligibility of Buck Flowers and Griffin ran out Coach Alex offered me the job as freshman coach and Buck the job as assistant backfield coach at the wonderful salary of \$75 a month. Don't laugh, because this was back in 1920-21 when money was real money and \$75 was not to be sneered at.

Anyhow, that \$75 looked like a million to us, so nothing would do except to run down to George Muse's store, still about the leading men's store in Atlanta, and buy about \$150 worth of clothes. We were really going to knock the gals' eyes out.

Little did we realize that a day of reckoning would soon come. The first of the month rolled around, the bills arrived, and our hearts sank. We went to Alex's office on the second floor of the YMCA to talk the matter over. While we waited on him to return to his office nothing occurred to us that would solve the situation, so we sat there holding our heads and wondering what would happen next. Finally the door opened and Alex walked in. He greeted us, then we just lapsed into a period of silence. Alex asked what was the matter with us, and at first we said nothing. He then said he knew darn well something was wrong and that we might just as well get it off our chest.

What a welcome sound. We gave him the full load. After listening to our story he said he was going down tomorrow and pay the bills, and that we were not going to get any more money the rest of the year. If we needed money we had to go and see him. This was terrible, but to get out from under we agreed.

It was a tough life. I can see old Flowers now, walking in and asking the coach if he could have a dollar to have a date. Alex would say "I'll give you fifty cents" and Buck would tell him he couldn't have a date on fifty cents. Alex would say "yes you can. Street car fare is 5 cents; that's 10 cents to get you to town. The movies are 10 cents; that's 20 cents to see the show. Street car fare back is 10 cents more for the both of you, and that leaves you a dime to buy your girl a Coca-Cola." Buck would take the fifty cents, and with his head hanging would go out and do the best he could.

One day I found the old book where Alex kept our accounts, and I turned it over to the library. Under Flowers you would find "Date—50 cents" plus a few other items. Under Griffin—I didn't waste my money on the gals—you would see, "Pajamas—\$1.00," "Shirts—\$1.50," etc. At the end though we were rich.

The Visit to Snooky Woods

One day during Spring football practice, Ralph McGill, then sports editor of *The Atlanta Constitution*, came by the dressing room. It was raining cats and dogs when McGill came in, and Alex was sitting there talking to Hal Voorhees who was then general manager of A. G. Spalding for this district. I was track coach at the time and we were going ahead with practice under the stadium, so I had a ringside seat.

Finally McGill said "well, you can't have football practice today and I have three tickets to the Atlanta Theater to see Snooky Woods so let's go down." (Snooky was a stripper, appearing at the Atlanta Theater.) Alex said he couldn't go and Voorhees said he had to take his wife to a tea at four o'clock. Well, McGill started pleading and Alex weakened under the strain and said he would go. Voorhees was still holding out, but with two of them on his back, he finally gave in. He called his wife and told her how sorry he was but the traveling auditor from Spalding's had just come to town and wanted to go over some tax matters. With that they were off to see Snooky. Well, that was hunky dory and nothing was said about the matter. They even visited Snooky backstage after the show.

Next morning the fat was in the fire. Alex—this being before he was married—walked into the dining room, and found his mother reading *The Constitution*. Mrs. Alexander was a former school mistress, and giving Alex that old eagle eye asked "William, who is this Snooky Woods?" Alex looked over her shoulder at the paper, which was turned to the sports page, and his eyes glazed. McGill had written a two-column story covering a fourth of the first sports page about the men's visit to Snooky Woods.



Alex grumbled something, swallowed a cup of hot coffee and beat it out of there as soon as he could. He arrived at his office and the phone was ringing. He picked it up and there was Voorhees on the other end asking Alex to come out to his house at once. His wife was saying she was going to divorce him. Well, after two or three days things became normal again, but you could never get Alex or Hal Voorhees to ever go near the Atlanta Theater again.

The Ghost of Peters Park

Stumpy's bear, as you know, had a home under the East Stand when he was not operating with boys, and in the evenings he was chained up to keep him from wandering around the neighborhood. On occasion he was not chained properly or managed to break his chain, and when he did, particularly in the evenings, he liked to wander down through Peters Park which at that time was quite a nice residential section.

One night one of the ladies heard a noise on her back porch, and she got up and went back to the kitchen to investigate. She looked out the back door, which was half glass, and saw this terrible monster trying to get into her refrigerator. She let out a terrible scream and fainted dead away. Her old man was reading the sports page and, being deeply engrossed, didn't make a move. The daughter, realizing that something had happened to her mother, rushed to the kitchen, saw this terrible apparition, and keeled over with a scream.

By this time the father realized something out of the ordinary had happened. He walked back to the kitchen and saw his wife and daughter on the floor. He glanced out the kitchen door and there was Mr. Bear. He rushed to the telephone, called the police department, and told the lieutenant that there was a bear on his back porch. The lieutenant scoffed at him and said "sir, you have been drinking; go back and take another look." The gentleman meekly returned to the kitchen, came back, and said "he's still there and big as a house." By that time the lieutenant realized what was going on, because old brother

bear was always giving them a little excitement. He called the patrol car and told them Stumpy's bear was loose again down in Peters Park, to go down, and pick him up, which was not hard to do. Mr. Bear was returned home.

A Couple of Shorties

When Sam Murray was playing fullback on the team back in 1925 and 1926 he was rooming with Karl Nixon and Shorty McLellan. Shorty was later manager of the football team. Sam and Karl were always playing tricks on Shorty, and one day they nailed the door up on him in Knowles. It was night and Shorty couldn't get in. Finally he decided he would get even with those two devils, so he got a bucket, filled it with water, borrowed a chair, and dumped the bucket of water through the transom. He did this about a dozen times, and finally Karl and Sam opened the door to let him in. Much to Shorty's dismay he saw his trunk, a big, old-fashioned one, full of water. His Sunday best was floating around.

That was too much. He knew of a room that had an empty bed down the hall, so he immediately moved out. Well, he was gone about a week and while Sam and Karl were out one day he moved back in. The guy he roomed with at the time had not had a bath in over a month, one of the first hippies, and he couldn't stand it any longer. But we are happy to say that after that Sam and Karl let things alone. After graduating from Tech Sam attended medical school. Many years later, when Shorty needed a serious operation, Sam was his first thought; Sam went down and pulled him through.

These tales were taken from Dean George C. Griffin's book, Griffin, You are a great disappointment to me. Quite appropriately, the book is not for sale—like the tales, it is "priceless." It is given as a gesture of appreciation to Tech people who have become "Friends of George" during the annual Roll Call campaign through a gift of \$100 or more.

Club News



GREATER ATLANTA

On October 12, 1972 the Greater Atlanta Georgia Tech Club honored new inductees into the Georgia Tech Athletic Hall of Fame. The Hall of Fame is a major activity of the Greater Atlanta Club, and induction of new members is an annual affair. A dinner was held at Aunt Fannie's Cabin near Atlanta featuring a star cast of Georgia Tech athletic personalities—Athletic Director Bobby Dodd, Head Football Coach Bill Fulcher, and Chief Sackbrain George C. Griffin, just to mention a few. Other honored guests who were recognized and applauded included many of the members of the coaching staff

on all sports. Each coach inducted the honoree for his sport. The inductees are shown, left to right, front row: James K. Luck, Jr., IM '48, inducted as a baseball player and coach; Robert W. (Buck) Murphy, IM '40, inducted as a football player; M. F. (Mickey) Sermersheim, IM '51, basketball; A. J. (Gus) Merkle, '26, football; back row: Carl H. Vereen, IM '58, track; Neil M. (Hawk) Cavette, IM '41, basketball; Dr. John H. Ridley, Chem '35, golf; William Clay Matthews, IE '50, wrestling; and Lawrence H. (Larry) Caghan, '65, swimming.

GREATER COLUMBIA

The successful reorganization of The Greater Columbia Georgia Tech Club was completed on August 3, 1972 when 85 enthusiastic Tech men met at the Town House Motel in Columbia, S.C. The meeting was highlighted by Coach Bill Fulcher as guest speaker. Coach Fulcher brought the alumni up to date on Tech's football prospects, the coaching staff, and what the future holds for Tech in the areas of scheduling, recruiting and requirements. Others in attendance from Tech were Roane Beard, Executive Secretary of the National Alumni Association; Bob Rice, Assistant Executive Secretary of the National Alumni Association; and Steve Wilkerson, Director of Resources Development. The Alumni Association Certificates of Achievement were given to two past presidents of the club, Bill Rodgers and Bob Paschal, for their past service to the Columbia Club. Elected as club officers for the 1972-73 year were Charles K. Cross, President; Arthur C. Martin, Vice President; and Robert L. Hale, Secretary-Treasurer.



Shown above at the Columbia club meeting are Charles K. (Pete) Cross, new president; G. William (Bill) Rogers, program chairman; coach Bill Fulcher; Robert S. (Bob) Paschal, past president; and Dr. Hugh W. McClure, a local minister.

CAPE KENNEDY

The Cape Kennedy Georgia Tech Club of Brevard County, Florida held its fall meeting on November 18, 1972. The theme of the party was "Casino Night" with each alumnus purchasing chips to use on the tables. The money raised during the party is used to fund the \$500 scholarship the club will present to a future freshman student during the spring. The club's winner of the scholarship this spring was Miss Debra Propst of Titusville, the first girl to win the scholarship.

The club officers for the 1972-73 club year are:

President, Chuck Taylor, EE '62;
Vice President, Bill Trammel, IE '59;
Treasurer, Richard Lackey, IE '69;
Secretary, Dan Wallis, EE '65.

COLUMBUS

Georgia Tech Alumni of Columbus, Georgia held their annual barbecue Thursday, August 10 at the United Oil Farm. Head coach Bill Fulcher with head defensive coach Maxie Baughn represented the coaching staff. Roane Beard and Bob Rice the Tech alumni office.

More enthusiasm was evident this year than has been displayed in many years. The new Tech enthusiasm resulted in the

highest attendance ever at a Columbus meeting; 140 alumni and guests were present.

Coach Fulcher gave a brief talk concerning Tech's football team for the coming year, the need for better athletic facilities in the near future, and the philosophy of the coaching staff. A question-and-answer session followed. Great appreciation was extended to Bill Fulcher and Maxie Baughn for taking time from their busy schedule to be in Columbus.

New officers were elected for the 1972-73 year: Ed Griffin—President; Heidt Heal, III—Vice President; and Lynn Page—Secretary/Treasurer. Harry Boyce, Jr., outgoing President, presided at the annual meeting.

GREATER CHICAGO

The Greater Chicago Club met on August 8 to hear Coach Bill Fulcher review football prospects for the 1972 season. This meeting was the initial "get-together" for the reorganized Chicago Club, and over sixty alumni and their wives were at hand for the occasion. Club officers and principal committee chairmen elected for the year were: William A. Walters, President; Stanley N. Holditch, Vice President; Thomas C. Denmark, Secretary and Treasurer; Winston L. Duke, Chairman-Programs and Special Events; and Theodore R. Wirtz, Chairman-Meeting Arrangements.

GREATER HOUSTON

On Thursday, October 5, 1972 Coach Bobby Dodd, Athletic Director of Georgia Tech, was the principal speaker to the Greater Houston Georgia Tech Alumni Association. His wife, Alice, accompanied him. Approximately 150 Greater Houston Georgia Tech Alumni, their wives, and guests attended this meeting, which was held at the Inwood Forest Country Club in Houston. This was the largest attendance of any Greater Houston Alumni meeting to date. The annual high school orientation program was planned for November 18, 1972 with Tech Registrar Frank Roper and Co-op Director Jim Wohlford to be present.

MIDDLE TENNESSEE

John McKenna, Associate Director of Athletics at Tech, kicked off the July 17 meeting of the Middle Tennessee Georgia Tech Alumni Club with a discussion of the Athletic Program at Tech and its monetary problems. He also talked about the new football coaches and team prospects. The dinner meeting was held at the Arnold Center Officers' Open Mess where 22 members attended with their wives and dates. Alumni elected as officers for the 1972-73 year were: President, Jerry Sourlin; Vice President, Pat Cassidy; Secretary/Treasurer, Greg Klein; and Program Chairman, Bill Rothe.



Fiftieth Anniversary Reunion of one of Tech's greatest classes—1922.

MOBILE

The Georgia Tech Alumni Club met at the Quality Courts in Mobile, Alabama on July 27, 1972 to enjoy cocktails, buffet dinner, and club meeting. Mr. Norman Walton, President, presided. Approximately 150 people were present at the event to hear speeches by Bill Fulcher, head football coach at Georgia Tech; Steve Sloan, head offensive coach; and Maxie Baughn, head defensive coach. Also present was Dennis Smitherman, editor of the Sports Section of *The Mobile Press*. New officers installed were President, Emil T. Graf, III; Vice-President, Gordon Moulton; Secretary, J. Don Foster; and Treasurer, Rudy Boutwell.

WESTERN CAROLINAS

The Western Carolinas Chapter of the Georgia Tech Alumni Association held its

annual fall dinner meeting on October 11 at the Holiday Inn in Spartanburg, S.C. The meeting was attended by Mr. Bob Rice from the National Georgia Tech Alumni headquarters and Mr. Frank Roper, the registrar at Georgia Tech, who was the guest speaker. Reports were received from Mr. Gordon Dasher, Treasurer of the club; Mr. Charles Sanders, member of Scholarship Committee; and Mr. Max Cochran, Chairman of the Roll-Call Committee. The Western Carolinas Club placed fifth among clubs of its size in response to 1972 Roll Call. The following men were elected officers for 1973: Terrell Sovey, Spartanburg, President; Towers Rice, Greenville, Vice-President; Gordon Dasher, Spartanburg, Treasurer; and Max Cochran, Greenville, Secretary. The outgoing president was Bud Weir from Greenville.

Employment Opportunities

We are an established recruiting and consulting firm managed by a TECH engineer. Our client companies have exceptional line management and engineering staff positions for professionals with ChE, ME, EE, CE, IE, and Computer Science backgrounds. Most positions are for new or expanding divisions, plants, engineering/consulting offices, edp systems depts, etc., with companies having impressive growth and profitability records within the refining, chemical, fiber, computer, electronics, equipment manufacturing, etc. industries. Each contact is made selectively (you are in control) and held in strict confidence. Our client companies assume all placement fees and relocation expenses for both domestic and international locations. Send resume or handwritten experience outline in confidence and our Houston director, J. L. Gresham, BChE, MBA—will contact you at home to discuss your interests. Member AIChE.

SYSTEMATION CONSULTANTS, INC.

1410 Post Oak Tower

Houston, Texas 77027

(713) 622-1370

Letters

It was a very sad ending Saturday afternoon but one we were not able to do anything about. In looking up my old records of yesteryear I found that 70 years ago I was playing center on the "rambling wreck". We played Tennessee and the score was 34 to 3 (There is some question in my mind about this score since the pamphlet recently gotten out gives this score as 10 to 6 Tenn.). What I do remember most was that a train wreck occurred before we reached our destination, we were up all night kidding one another, and were not in a good humor or condition for that game. Football needs discipline at all times and we were lacking in that.

Now Ben I am going to say something about that game yesterday. We had nothing new except when we scored the touchdown which was classified "illegal" and I won't blame our boys for that. They will wake up I am sure. Tennessee is the team of the hour and could have scored more had the first team remained. They will be hard to beat.

Their half-time show is the best I have seen anywhere, and shows they were ready for everything and we were not. Their receivers were always in the clear and made good.

B. F. Markert, Sr., M.E. '03
Atlanta

On October 11, 1972, Mr. Markert was honored by the Georgia Tech Athletic Hall of Fame as Tech's oldest living football player—ed.

The enclosed bit of nonsense may be of use. Best personal regards.

Many years ago in England, the Earle of Sax, George Smithe, had been involved in a long, bitter feud with the Duke of Scotland. During their previous encounter the Duke had humiliated him so severely that George of Sax decided he would prepare a tremendous offensive to capture the Duke and torture him in some hideous, inhumane way. With this in mind he hired the best engineer in England, Harold, to design and construct the most ingenious and cruel rack possible. Harold the Engineer worked diligently for months and finally constructed a monstrous machine so complicated that only he could operate it. With an army composed of hundreds of men this machine was moved, with great effort, to the hills in Northern England where it was situated on one of the steep slopes and held in place by blocks placed in front of its huge wheels. They patiently awaited the morning sunrise because the

Duke was camped below and they would then mount their attack to capture him and proceed with the planned torture. However, as the sun rose and it was possible to see through the morning haze, a sudden thing happened. For some unknown reason the blocks became disengaged and the huge rack with Harold sitting in the operator's seat came rushing down the hillside.

The lookout for the Duke's army was heard to exclaim, "Here Comes The Rambling Rack from George of Sax and Harold the Engineer".

Melville M. Zemek, E.E. '40
Dallas, Texas

Thanks, Mel—seems someone from Memphis sent in a wild one a few years back about a "Ramblin' Rack for George's tax and an elephant engineer."—ed.

Congratulations on the last issue of The Georgia Tech Alumnus. I have enjoyed the new image and identity which you have established and congratulate you on a job well and quickly done.

As an active alumnus, I would like to point out an important omission in the "Georgia Tech Team."

Joe Guthridge, who ties all the strings together albeit not in the academic area, is as important as each Dean of each school. Joe really makes the wheels turn and more than that he keeps them in mesh. He is a speech maker, a pacifier, a coordinator, a good listener and over many years has subordinated his own situation to that of the institution.

Joe Guthridge should be given rightful recognition and I think that your magazine is the place to do it.

I. L. Kunian, T.E. '34
Atlanta

I feel more or less like an Ass and a Boor trying to change the course of history as well as patting myself on the back, but knowing how you want to keep any history about Tech in line I thought I would mention something about the history of the Alumni Association that will straighten things out a little.

It is necessary to announce that "Old Man" Griffin was Secretary and Editor of the Alumnus during part of 1922 and 1923. When Al Staton graduated and left for South America as a Missionary in the summer of 1922, there was no one else around to take over the job, and since I was Track Coach at the time and had many

mornings free, I was saddled with the job. Right now I am looking at a photostat of the Alumnus of Oct. 1923. The front page was taken up by an editorial by the Editor, subject, "By Way of Explanation", going on to say that the Alumni Association has other duties on hand besides running down football tickets and "closing with the line"; the Association is more than glad to do so but the work is bigger than that.

The Officers of the Association at the time were as follows: G. M. Stout, President; J. A. Mansfield, First Vice Pres.; S. Snider, Second Vice. Pres.; H. Holleman, Secretary and Treasurer.

Subscription to the Alumnus was \$2.00 per year, twenty cents per copy.

Two or three funny things happened. First, when Al Staton told Mr. George Adair that he was going to South America as a missionary, Mr. Adair, for whom Al had been working during the summer, said "Boy, you are out of your mind. Stay here and I will pay you enough salary you can send three missionaries in your place." I believe that Mr. George offered him \$6,000.00 a year, a tremendous salary to stay and work for him.

The second was when Jack Thiesen came out to take over as permanent secretary, I had a little office under the stage at the Georgia Tech YMCA, just about large enough for a desk and a typewriter. Jack looked around and almost fainted. He said many times later that all he found was stacks and stacks of papers, the cuts all over the floor and general confusion rampant.

Hoping that all of this might be of interest, I am

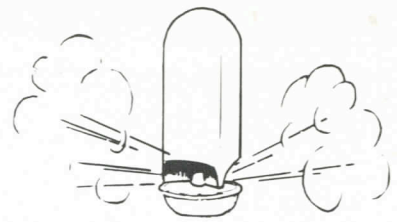
George Griffin, C.E. '22
Atlanta

P.S.—I hope you will get one of the young ladies in your office to correct the English and the Spelling so everyone will think that old Griffin learned something about the language from Dr. Perry.

Dean Griffin, I considered it a personal privilege.—ed.

This fall, for the first time ever, the alumni relationships of our freshman class were analyzed revealing several interesting statistics.

First, a surprisingly high 31.7% of our freshmen do have an alumni tie to Georgia Tech: that is, either the student's father, brother, cousin, grandfather, etc., previously attended Tech.



Of this percentage, 12.6% indicated that their father had attended Tech; 6.0% had brothers who have matriculated; and 13.1% fell into the "Other" category (e.g., cousin, nephew, grandfather, etc.).

Although there are no comparative figures available for other colleges, it is considered that the fact that almost one-third of our freshmen do have a relative who attended Tech at some time is still another indication that our alumni must think well of the academic background received here is they are consciously or sub-consciously recommending Tech to their own relatives in the percentages Tech is enrolling.

Jerry L. Hitt, Director
Georgia Tech Admissions

Enjoyed recent Alumni Magazine. If possible I would like a brief review of the History of the Ramblin Wreck. I framed the front page and would like some stories to go with it.

David L. Auld, ME '70
Groves, Texas

Good suggestion—will work it in if possible. We had a lot of requests for prints of that photo—ed.

In your enclosed literature, you mention several outstanding professors that have recently been brought to Tech. As a recent graduate I am curious as to whether undergraduates ever see these fine professors or do they get stuck with some graduate student?

Lt. John J. Mills, IE '71
U.S. Army, APO New York

(An alumnus wrote to ask if undergraduates ever see Tech's top professors.)

You asked a very good question and one that plagues us here from time to time.

I talked with Dr. Neff, Director of the Mathematics Department, who gave me some very interesting insights. He stated that, for instance, in Math 107, the first quarter, over 50% of the 1350 to 1500 freshmen are taught by full-time senior members of the faculty. This includes Regents' Professors, Professors, Associate Professors, etc. I am sure you realize that with the teaching load of approximately 1400, it would be difficult to have enough senior staff to teach everyone.

I talked with Dr. Spicer in the Chemistry Department, and he stated that all of the freshmen in chemistry were taught by full-time members of the faculty.

The Hewlett-Packard HP-35

The HP-35 is a 35-key, pocket-sized scientific and engineering calculator. It performs logarithmic, trigonometric, and mathematical functions with a single keystroke and eliminates the need to refer to log or trig tables. It displays up to 10 significant decimal digits and automatically positions the decimal point throughout its 200-decade calculating range (10^{-99} to 10^{99}). It combines the portability and convenience of the slide rule with the problem-solving power of a desk-top scientific calculator. However, it provides answers in a fraction of the time required for slide rule calculation—with unprecedented 10-decimal place accuracy.

Arithmetic: Add, subtract, multiply, divide and square root.

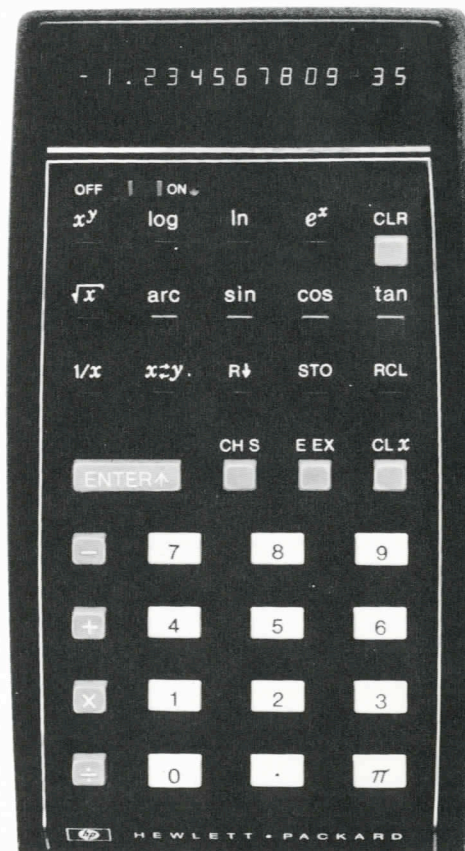
Trigonometric: Sin x, Cos x, Tan x, Arc Sin x, Arc Cos x, Arc Tan x.

Logarithmic: $\log_{10} x$, $\log_e x$, and e^x .

Other functions: x^y , $1/x$, π and data storage and positioning keys.

Engineer's BOOK STORE

252 NORTH AVENUE, N. W.
ATLANTA, GEORGIA 30313



The new
super thin line
precision pencil
with exclusive
"floating lead
protector"!

The
reason
you don't
see our
lead is
the
reason
our lead
won't
break.



New from Sheaffer . . . pencils that use leads of just .3mm or .5mm for ultra precise writing and drawing without lead repointing. Yet these super thin leads don't break, even under heavy writing pressure. Our exclusive Floating Lead Protector absorbs all side-to-side pressure . . . assures a constant writing point. Convenient lead supply indicator signals *before* you run out of lead. Metal or plastic models. Just \$2.98 to \$5.98.

SHEAFFER®
Ultra-FINELINE®
.3mm Pencil

SHEAFFER, WORLD-WIDE, A **textron** COMPANY

Letters Continued

He stated that he teaches one course, Dean Eberhardt teaches one course, etc. There are about 1500 students taking freshman chemistry. Dr. Spicer further stated that senior members of the staff teach sophomore, junior, and senior courses in addition to having graduate students. Dr. Spicer did state that graduate students run the laboratories, but that the classroom sessions are handled by full-time faculty.

I know that this does not reflect all teaching on the campus, but two of our big departments are reported.

I do appreciate your continued interest in Georgia Tech, and, if at any time you have any questions, please let me know.

Joe W. Guthridge
Vice President

The Georgia Tech Alumnus is published by the Georgia Tech National Alumni Association, 225 North Avenue, N.W., Atlanta, Fulton County, Georgia. The location of the general business offices of the publishers is in the Carnegie Building, Georgia Tech, Atlanta, Georgia 30332.

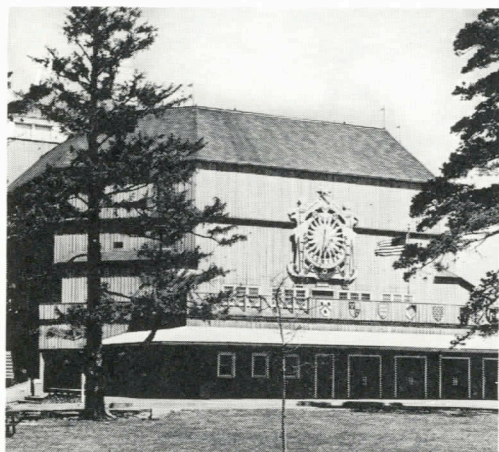
The editor is Ben L. Moon, director of publications of the Georgia Institute of Technology, and the advertising manager is Susie Wallgren, administrative assistant in the office of the Georgia Tech National Alumni Association.

The average number of copies printed of each issue during the preceding 12 months is 20,000 while the single issue printing nearest the filing date of September 29, 1970 was 20,600.

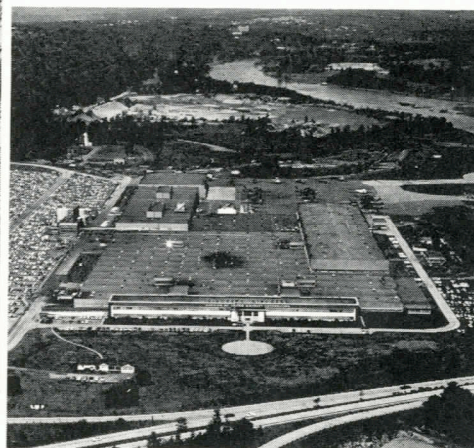
The paid circulation by mail subscription averaged 18,000 during the preceding 12 months and the issue nearest filing date totaled 19,328 paid. Free distribution on the average was 1,000 for the 12 months and was 1,000 for the September issue. This made the total average distribution 19,000 for the preceding 12 months and 20,328 for the August issue.

1973 ENGINEERING GRADUATES (AE, ME, EE)

Sikorsky and Connecticut ...a superb setting for getting your career off the ground faster.



The famous American Shakespearean Festival Theatre in Stratford, Conn.



Start the life you'll want to live for a long time—and the career that makes it possible—with Sikorsky. In the picturesque Southern Connecticut countryside off Long Island Sound, where living still means breathing deeply and being able to stretch out to satisfactions that are meaningful. With forests, streams and rolling countryside as near to your door as the famed Shakespeare Theatre at Stratford . . . and New York City's attractions within easy reach.

You will find equal stimulation and opportunity in your work—using your creative engineering abilities to help take VTOL aircraft into their dynamic future. The truly unique capabilities of these craft are being increasingly recognized daily. To bring access where none existed. To help build bridges, dams, oil rigs, transmission towers, plants and a host of other structures, by hauling and setting major components in place. For exploration, firefighting, lifesaving and a whole new range of commercial as well as military applications. And you can

look ahead with confidence to continuing growth with Sikorsky—for no other company is so strongly committed and so deeply involved in the effort to develop advanced VTOL technology.

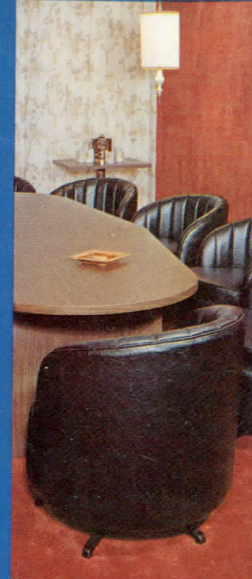
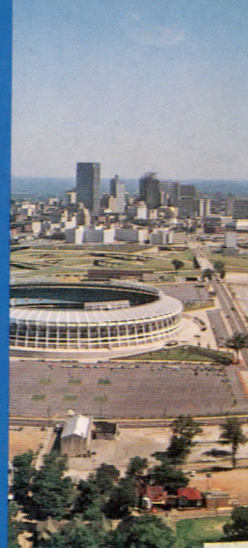
Our ongoing long-term programs offer a wide range of positions for Aeronautical, Mechanical and Electrical Engineers. Areas include **DESIGN** (aircraft structures; propulsion systems; transmissions; rotor, hydraulic & flight control systems; electrical/electronic systems); **TEST and ANALYSIS** (structural, loads, dynamic, stress, mass properties, reliability/maintainability; electrical/electronic systems; technical computing) as well as **MANUFACTURING ENGINEERING** (planning, methods, processes). Salaries are highly competitive, fringe benefits extremely fine.

For further information, see your Placement Director for a copy of our brochure and for the date of our scheduled campus interviews. Or write directly to Mr. Leo J. Shalvoy, Professional Placement.

Sikorsky Aircraft

STRATFORD, CONNECTICUT 06602 An Equal Opportunity Employer M & F

**U
A**
DIVISION OF UNITED AIRCRAFT CORP.



Next time... Mark Inn Atlanta!

You'll spend less and get more as a guest at any of the nine, all-around-town Mark Inn Atlanta motels! Compare. Each is on an interstate highway—just the right distance from downtown congestion! The service is faster, more personal. Each has complete sales meeting and banquet facilities. The food and drink are great. And, the guest rooms... wow! They're easily America's most luxurious. Hush-plush carpeted walls and color TV! So, next time... Mark Inn Atlanta. Our Guest Relations Director would welcome your collect call now at 404/696-3030.



ATLANTA/CHATTANOOGA
ORLANDO/McDONOUGH, GA.
GENERAL OFFICES: 4745 Bakers Ferry Road, S.W.
Atlanta, Georgia 30336

FLYING? Park your car for LESS at AIRPORT MARK INN • Interstate 85 South at Sylvan Road Exit • Free shuttle bus