

Dr. Richard Andree—

A Man with Many Missions

By PAULA EVANS BAKER



A non-math project of Dr. Andree's department is to supply books to libraries in small high schools and mission schools. To date the mathematicians have sent out more than 20,000 books.

THE University of Oklahoma department of mathematics and astronomy has a touch of "Madison Avenue" these days, supplied by a go-getting department chairman, Dr. Richard V. Andree, who seems to have discovered the secret of perpetual motion.

Dr. Andree is an idea man whose soft, slow speech belies the fact that he is a human dynamo, full of projects, to 1.) interest more persons in mathematics, 2.) improve the O.U. curriculum, 3.) get more foundation grants and 4.) continue his own writing and research.

The 43-year-old professor has founded the "O.U. Mathematics Letter," first publication of its type in the county; started the National High School and Junior College Math Club, which now has international headquarters at O.U.; organized "help" sessions for students with mathematical difficulties; set up committees to study O.U.'s graduate and undergraduate programs and was instrumental in establishing O.U.'s computer program. On the extracurricular side he is responsible for O.U. faculty's contribution of more than 20,000 textbooks to small Oklahoma high school and the nation's mission schools.

Dr. Andree joined the University faculty in 1949 as an assistant professor of mathematics, following completion of his Ph.D. at the University of Wisconsin. It did not take him long to find the suggestion box.

In 1951, he answered the University call for ideas by suggesting a computer program. When the program was inaugurated

there is just no way to discourage this persistent professor who can't understand the meaning of "no"

several years later, Dr. Andree, who was the only one on the faculty with computer experience, trained the computer staff, served on the planning committee and helped design facilities for the IBM 650 computer which was installed in 1957. He has been in charge of the laboratories and lectures for the University's Saturday morning computer course for high school students since they were started in 1958. He has since turned his course notes into a widely-used text on computer programming. Dr. Andree's computer know-how received national recognition in 1958 when he was one of ten university mathematicians from all over the country chosen by the National Bureau of Standards to study the latest trends in numerical analysis in Washington, D.C.

Also in 1951 he founded and became editor of the "O.U. Mathematics Letter."

"As far as I know," Dr. Andree says, "this was the first mathematics letter to be published by a university for high school teachers, although there are several published now. The letter contains articles about mathematics and mathematical problems and is sent all over the world. It is now edited by Dr. Arthur Bernhart of our staff."

Six years after he founded the "OU Mathematics Letter" Dr. Andree decided that bright high school math students need more recognition and encouragement. Accordingly, he organized the National High School and Junior College Math Club, also called Mu Alpha Theta (M A Th). Although high grades are required

for admission, the club was not planned to be strictly an honor society. Meetings are required at least once a month and members take part in activities on local, regional and national level. One national activity which has been welcomed by PT-A's and school librarians is the publication of a list of mathematics books recommended for school libraries—a list compiled by mathematicians around the country. Club activities are written up in the "Mathematical Log" which appears three times a year and also contains articles similar to those in the Mathematics Letter. Dr. Andree still edits the "Mathematical Log" but otherwise feels the organization has grown enough to do without his services. Since Mu Alpha Theta's founding, 771 chapters have been organized in all 50 states, Canada, Switzerland, Japan, Puerto Rico, England, the Canal Zone, Mexico and Guantanamo Bay, Cuba.

Mrs. Andree, who received her B.S. in mathematics and M.A. in meteorology at the University of Chicago where Dr. Andree did his undergraduate work, was the first national secretary-treasurer of Mu Alpha Theta. She resigned from that post a year and a half ago with the arrival of the fourth Andree child but remains on the board of directors.

When Dr. Andree became head of the O.U. department of mathematics and astronomy in the fall of 1961, he set to work immediately to help students with mathematical difficulties and to revamp the mathematics curriculum.

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Dr. Andree, with Mrs. Joyce Washburn and Dr. Harold Huneke, now has ample math club help.



With all his side projects, the welfare of the students are still Dr. Andree's main concern.



Dr. Andree's ideas have influenced the rapid development of a University computer program.

Dr. Richard Andree is a master of the art of making people want to work

"We have set up 'help' sessions every afternoon from 3 to 4:30 p.m.," Dr. Andree explains, "for every freshman and sophomore course. Related courses are grouped in the same rooms, and there is at least one instructor, often more, in every room to answer questions. There are five or six sessions every afternoon with attendance ranging from 6 or 8 to 40 or 50. The students are doing noticeably better, and the instructors like the sessions because they eliminate some of their home calls and let them know when work has not been presented clearly."

Along the same line, Andree inaugurated letters to students who receive unsatisfactory grades at mid-term. The form letters list standard difficulties faced by students and suggest that they try to analyze their problems and if they need more help, contact their instructors or write the mathematics department.

"All those who write the department get personal letters and sometimes we are really swamped," Dr. Andree said. "It's worth it however."

"The main reason we are making progress is that everyone on the staff helps in whatever ways he can best serve," Dr. Andree explains."

As department chairman, Dr. Andree has set up committees to study both the graduate and undergraduate mathematics programs.

"Dr. George Ewing is chairman of the graduate committee," Dr. Andree says, "which is revamping the program for master's and doctor's degrees. The department offers degrees of Master of Arts, Master of Science, Master of Natural Science (Math Option), Doctor of Philosophy in Mathematics, Doctor of Philosophy in Education and Doctor of Education (Math Option)."

"The undergraduate committee, headed by Dr. Gene Levy, has revised requirements, added courses to keep up with new trends in mathematics and worked out ways for freshmen to receive advance college credit for high school courses."

Dr. Levy is also in charge of the mail-order counseling service the department offers high school students. Students may list the mathematics they have had and their future plans and receive advice on the courses they should take and whether

they should try to enter college with advanced standing. It is hoped that some of those who receive counsel will want to come to O.U. but no restrictions are placed on the service.

Although teaching, rather than research, is generally considered to be the department's long suit. Dr. Andree has had a part in bringing some of the mathematics faculty's research and writing to attention. His request to the Alumni Development Fund for display cases was answered with a handsome case on the stair wall leading to department headquarters in Buchanan Hall which is filled with a score of faculty books displayed in rotation.

Dr. Andree is no shrinking violet when it comes to requesting help for his department and his persistence with National Science Foundation has paid off in a host of grants for special projects, Saturday institutes and summer programs. Eight NSF programs are scheduled this spring and 11 this summer, including the nation's only postdoctoral research participation award program in mathematics.

With all this going on, he still finds time

for his own research and publication work and duties as national secretary-treasurer of Pi Mu Epsilon, national collegiate honor society, and secretary-treasurer of the Oklahoma section of the Mathematical Association of America. He has written eight texts, two with O.U.'s Dr. John Brixey and "the rest with Mrs. Andree, although she doesn't get proper credit." He had two books published this fall, one presenting calculus theory to non-science students and the other a new set of advanced mathematical tables computed by the O.U. Mathematical Tables Project which he directed. At present he is writing three books, dealing with computer programming, advanced numerical analysis and abstract algebra.

"The mathematics department has another special project which has nothing in particular to do with math," Dr. Andree says. "This is our project to supply books to libraries in small high schools and mission schools. It started two years ago when I cleared out my bookshelves and found I couldn't bear to throw books away. On an impulse, I sent them to an Indian mission. The response was so gratifying that we began collecting books from other professors and publishing firms and have sent out more than 20,000 books to date. Expenses are paid by private donations and the Office of University Relations and faculty members do the packing work."

Naturally, a man with as many ideas and

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To counterbalance many indoor activities, Dr. Andree turns to the outdoors in his spare time. Gem collecting and polishing are a natural outgrowth of the Andree family camping trips.

Bob Kerr's "Land, Wood & Water"

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firm in the damp soil. This was a time for celebration. We slapped each other on the back and shook hands.

Paul said, "A man sure learns a lot."

Today, those river bottomlands are green with rich pastures. Hundreds of fine cattle graze and grow fat where before were old briar patches and sloughs. The bulls and steers produced in southeast Oklahoma are winning prizes in livestock shows all over

the Southwest and bringing top prices.

Most important, this progress is encouraging a contagious new spirit of pride and confidence; and I am working with my neighbors to improve and develop the entire area. Sharing this enthusiasm, my family often gathers here. This community has become our general headquarters. On a beautiful cliff overlooking the valley, we have built our permanent home, large enough for the entire clan, including (currently) 10 grandchildren. Standing there on the front deck, with its inspiring vista, we can peer into the distant haze of mountain peaks.

Last spring, a party of tourists came to the Valley, drawn from far away by the word-of-mouth stories of this little known wonderland. They marveled at the splendor of dogwood, redbud, wild azaleas, and roses strewn across the slopes. They drove slowly up the grandeur of the Winding Stair Mountains and beyond to a windy lookout on Mount Kiamichi. The crests of the mountains were like giant waves on a sunlit sea. Here and there, the sun gleamed on mountain waterfalls, and down below in green valleys, streams wandered lazily. The distant mountains were gradually lost in a haze. The wind was fresh and full of the wonderful scents of spring.

They noticed an unusual and striking monument. Native stones were the base, and from them three weathered timbers reached up to the heavens like men at

prayer. A metal plate riveted on the stones attracted the tourists, and they gathered 'round to read:

"In Appreciation of the Leadership in the Rapid Development of Our State

Roads

Water

Recreation

Forests

"LAND - WOOD - WATER"

We, the Grateful Citizens of
McCurtain and LeFlore Counties
Contribute and Dedicate This
Monument to the Following:
SENATOR ROBERT S. KERR
SENATOR MIKE MONRONEY
CONGRESSMAN CARL ALBERT
GOVERNOR RAYMOND GARY
R. C. MILLER"

What more could a man ask from life?

Only that the lessons learned in this patch of Oklahoma mountains be transmitted to the nation. Here is what can be done. On a small scale here is an example of "Land, Wood, and Water" for the United States, for a continent.

It takes money, but not spendthrifts. Conservation pays for itself many times over.

It takes cooperation, but not a fourth level of government. A unified approach is all that is required.

It takes faith, but not blind faith. The future is plain for all to see,—at Poteau, at Sandstone Creek, at Lake Texoma!

A Nation preserved as God gave it to us, what more indeed can a man ask from life?

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activities as Dr. Andree has antagonized some of his less aggressive colleagues.

"He bugs people," is the way one faculty member puts it. "However, he is usually reasonable in his demands and while he is fairly convinced that he is right, he is not dogmatic. Actually he has a great deal of humility."

Dr. William E. Livezey, dean of the College of Arts and Sciences, characterizes Dr. Andree as a "type who is found too seldom on our campus."

"Dick is a man of many ideas and tremendous energy who is interested in mathematics at all levels—high school, college and graduate—and is dedicated to his field and to the University," Dean Livezey says. "He has a concept of public relations unusual among University faculty members."

Because most of his time is taken up by indoor, academic matters, Dr. Andree's hobbies have an outdoor, athletic cast. Last

winter he and Mrs. Andree got their exercise by taking SCUBA diving lessons in the O.U. Men's Pool. Another mutual interest, gem collecting and polishing, just naturally goes along with the camping trips shared with the Andree children, David, 12, Peter, 9; Suzanne, 5, and Jeanne, 1½.

This year Dr. Andree's activities are supposedly curtailed by an attack of hepatitis which has put him on a half-time basis officially. He insists he is resting and that his colleagues have relieved him of a great deal of his work. However, Mrs. Andree recently clocked him with an office work week of 67 hours, so his interpretation of "resting" is open to debate.

Questioned about his health, Andree admits:

"Well, I'm up and down. When I'm up, I try to do too much. But how can a person help working when there is so much to be done?"