

# Who Are These Graduate Students, Anyhow?

Dedicated Young People  
Seek to Aid Posterity

By W. F. McCaughey  
and  
B. E. Gunning

*The College of Agriculture should be considered one of the most important functioning university units on behalf of the people of the state.*

In consideration of its contribution, three factors are of utmost importance. First is the dissemination of information to those of you who are developing the land, either as a productive element for society itself, or as a tool of development. Second is the carrying on of the undergraduate teaching program in preparing persons to continue maximum, efficient utilization of the people and the land. Third is the responsibility of encouraging the interested and capable student to seek knowledge beyond the known.

We don't usually think much about the people who deal directly with the myriad of problems involved in making these factors — extension, teaching, and research — bear fruit for the benefit of all the people. Since we frequently don't understand how these problems are resolved, we tend to put them aside as a necessary function, but of little practical importance.

## Analyzing Teacher-Researcher

In order to overcome this concept, one must examine the motivation of the teacher and the researcher as they cope with these problems on an everyday basis. Thus, we have interviewed three graduate students in Agricultural Biochemistry and Nutrition, as a means of broadening the research concept.

## She Studies Quail

Karen Curtis is a native Arizonan. She completed the requirements for the B.A. degree here at the university and is at present working toward an M.S. degree in Agricultural Biochem-

Dr. McCaughey is Professor of Biochemistry and Nutrition, in the Department of Agricultural Biochemistry, while Dr. Gunning is Associate Professor of Nutrition in the School of Home Economics.



THEY CALL THEMSELVES "The Research Team," because they all work together, as a team, in research dedicated to the welfare of mankind. Left to right — Dr. Kemmerer, Ken Samonds, Dr. Reid, Karen Curtis, Dr. McCaughey and Jim Clark.

istry and Nutrition. Her research is supported by a graduate fellowship in the Department of Poultry Science under the direction of Dr. B. L. Reid, department chairman. Karen is involved primarily with the determination of the protein and amino acid requirements of the Japanese quail (*Coturnix coturnix Japonica*).

These birds have been used extensively in recent years in physiological studies relating to the effects of environmental factors on reproductive process. However, there is still little information available regarding their nutritional requirements and usefulness in nutrition studies. It is believed these birds offer a unique opportunity to researchers for investigation and evaluation of the effects of essential nutrients and other factors on various physiological processes.

Perhaps their greatest value lies in their rapid growth rate and small size. They reach maturity in five weeks and 10 of them can be confined in a space equivalent to that required for one chicken. In addition, their low feed consumption makes them relatively inexpensive to maintain. The results of these combined factors may well provide a bird excellent for laboratory use.

Research is now being undertaken to establish rather basic nutritional requirements, in an effort to maintain

these birds optimally under laboratory conditions. They are expected to serve as excellent research tools in the future, not only in the specific area of poultry investigation, but in a wide frame of reference to man and other animals as well.

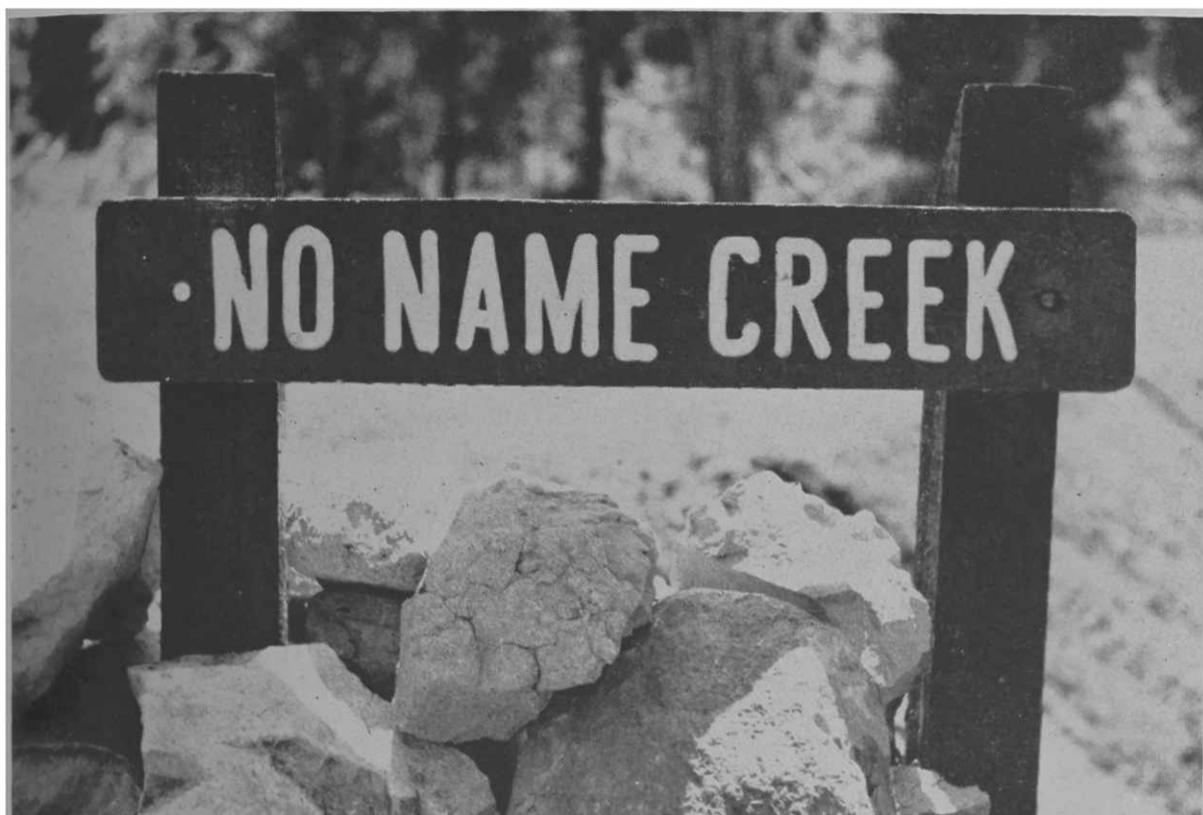
## An Illini No More

Ken Samonds may still refer to the University of Illinois as his alma mater but this will all be changed when his M.S. in Agricultural Biochemistry here at The U. of A. is completed. Ken is pursuing studies associated with "Amino Acid Utilization as Affected by Vitamins" under the direction of Dr. Arthur Kemmerer, chairman of the department of Agricultural Biochemistry and Nutrition. Ken didn't come to the U. of A. to be convinced of the advantages here. His decision was made after talking to Dr. Kemmerer about Arizona while Ken was still in Illinois.

Ken receives support from both the National Institute of Health and one of the co-operative regional projects to contribute information to "Amino Acid Utilization as Affected by Vitamins." His particular portion of the project is the utilization of the sulfur-containing amino acids as affected by Vitamin A. His data indicate Vitamin

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## Well, If You Just Can't Think of a Suitable Name . . .



*Our sequence of interesting Arizona oddities, as a series of unusual pictures, started almost three years ago with a sign reading "Heart Trouble Bridge" over Cibecue Creek, up in the White Mountains.*

*The sign pictured in this present issue is at another creek site — but it is up to you to figure out just where in Arizona this is.*

*Or, if you're eager to do it the easy way, turn to Page 17 for the answer.*

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A causes a better utilization of the amino acids methionine and cysteine, as based on growth and blood studies.

The major effects of his research on the Arizona population concern the poultry industry, in that a more efficient growth of fryers and broilers will lower consumer costs. Possibly his most important contribution is a better understanding of protein metabolism and the function of Vitamin A.

### From Badger to Wildcat

James Reed Clark received his B.S. degree from Wisconsin State University. He is currently working for the M.S. degree under the direction of Dr. W. F. McCaughey, Professor of Biochemistry and Nutrition, with support from a National Institute of Health Nutritional Science Training Grant.

Jim speaks for himself: "Today the number one health problem in the United States is a group of diseases known as the cardiovascular disease.

The majority of deaths due to these diseases are attributed to a single disease known as atherosclerosis. In atherosclerosis you have a degeneration of fatty acid metabolism and an infiltration of lipids beneath the inner layer of blood vessels."

He further emphasizes the role of cholesterol as being a component of the deposited material, as well as the high blood levels associated with coronary disease. Jim believes one of the best ways of controlling the cholesterol level is by controlling the synthesis of the material in the body. He believes this can be done by the use of non-toxic chemicals that might tie up the enzymes operating in the synthesis pathway. To date he has tried several materials none of which give him data he is satisfied with, although plenty of ideas to pursue.

Jim feels any positive results he may obtain in his work will not only contribute to people of Arizona but those of the entire U.S.

This research progress is a part of the College of Agriculture of The University of Arizona.



### Cochise County

KAWT, Douglas — 6:15 a.m.  
Mon. through Fri.

12:20 p.m. Monday through  
Friday

KHIL, Willcox — Mon. thru  
Fri., 6:05 a.m.

### Coconino County

KCLS, Flagstaff — Tues. and  
Thurs., 8:45 a.m.

KCLS, Flagstaff (Home Agent)  
— Wed., 10:15 a.m.

### Gila County

KIKO, Globe-Miami  
Monday, 12:45 p.m.

### Graham County

KATO, Safford—Sat., 9:30 a.m.  
Mon. thru Fri., 12:45 p.m.  
(daily)

### Maricopa County

KTAR, Phoenix—Mon. thru Fri.,  
5:55 a.m.

KOY, Phoenix—Tues. thru Sat.,  
5:40 a.m.

KOY, Phoenix—Sunday Garden  
Club of The Air, 8:35 a.m.

KPHO, Phoenix—Mon., Cotton  
Report, 12:40 p.m.

KPHO, Phoenix—Thurs., Dairy  
and Livestock Report, 12:40  
p.m.

KUPD, Phoenix—Mon. thru Fri.,  
5:30 a.m. and 12:30 p.m.

### Mohave County

KAAA, Kingman — Mon., 9:06  
a.m. (Extension Home Econ-  
omist)

### Navajo County

KDJI, Holbrook — Tues., 1:00  
p.m.-1:15 p.m.

KINO, Winslow — Sat., 12:15-  
12:30 p.m.

### Pinal County

KPIN, Case Grande—Mon. thru  
Sat., 6:55 a.m.; Mon and Fri.,  
9:30 a.m.; Tues., Thurs. 11:30  
a.m. on Monday and Wednes-  
day and Sat., 12:20 p.m.

### Yavapai County

KYCA, Prescott — Mon., Wed.,  
Thurs. and Fri., 3:45 p.m.

KNOT, Prescott — Mon., Wed.  
and Fri., 6:25 a.m.

KVIO, Cottonwood—Mon. and  
Fri., 8:15 a.m.

### Yuma County

KVOY, Yuma — Mon. thru Fri.,  
5:45 a.m.

KYUM, Yuma — Tues., Thurs.  
and Sat., 6:25 a.m.

KYUM, Yuma — Saturday, 4-H  
Program, 10:05 a.m.