

## KNOWLEDGE TRANSFER: FROM THE LABORATORY TO THE PUBLIC



L. Ketchum

### **Agricultural Sciences Communications**

The Office of Agricultural Sciences Communications (OASC) supports media relations, print and electronic communication for College of Agriculture research, extension and teaching activities.

OASC deals in today's reality and tomorrow's technology. The reality is a modern College of Agriculture involved in genetics, biotechnology, and in the issues facing ranchers, farmers, people who live in the city, people who live in small Arizona towns, and families everywhere. The technology is laser printers, electronic news transmission, computer graphics, computerized mailing, interactive video—the technology of communications.

Getting a publication printed—dealing with the news media—shooting a videotape—making a slide presentation—

designing a brochure—putting out a quarterly magazine—the challenges of getting the word out about the College is the business of Agricultural Sciences Communications. Messages from the faculty and staff of the College can be seen, heard and read everywhere in Arizona, across the United States and even overseas.

**Dr. Jim Chamie**  
Agricultural Sciences Communications

### **Arid Lands Information Center**

The Arid Lands Information Center (ALIC) continues to provide a variety of reference and information management services to individuals and institutions locally, nationally and internationally.

Recently ALIC provided one of its

librarians to the United Nations Environment Programme in Nairobi, Kenya. During his three-month stay the consultant helped organize an information center for the Desertification Control Activity Programme. As part of this project, the librarian assisted in the development of a microcomputer-based online catalog using the UNESCO-developed CDS-ISIS bibliographic information management system. This software program has been applied successfully in a number of ALIC international information projects.

In addition, an ALIC consultant spent a month at the Arabian Gulf University in Manama, Bahrain. This project involved performing a five-day training course on accessing international information sources and conducting a review and evaluation of the College of Sciences Library program.

In mid-1988 ALIC will publish a third edition of the Arid Lands Research Institutions Directory. First published in 1967 and again in 1977, this work was originally based on UNESCO's 1953 Directory of Institutions Engaged in Arid Zone Research. Each of the editions contributed to the call of UNESCO's Advisory Committee on Arid Zone Research to promote and stimulate research in the various disciplines bearing upon problems of arid regions.

Since 1953 numerous research and development organizations have formed around the world to address the issues faced by countries in dry regions. Communication between these organizations permits the free exchange of information and assures long-term progress toward mutual goals. During the past twenty years the directory has been a valuable tool for promoting organizational contacts and linkages. The new volume will include nearly twice as many entries as did the previous edition, and coverage has expanded to include virtually twice as many countries.

**Barbara Hutchinson**  
**Dr. Robert G. Varady**  
Arid Lands Studies

# INFORMATION AND CONSUMER RESOURCES

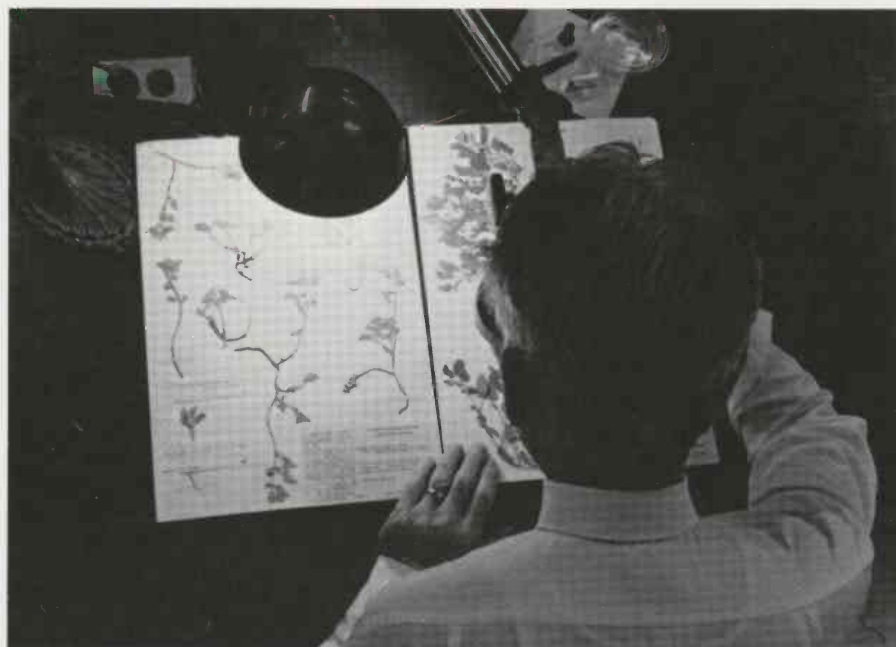
## UA Herbarium: A Plant Library

Researchers from diverse scientific fields in the university community often turn to the UA Herbarium as a source of information. Not only is it a repository for 276,000 identified, preserved, and mounted plant specimens, but it also houses such valuable resource materials as a large library of botanical literature, the comprehensive Gray Herbarium Index of scientific names of all New World plants, the Torrey Botanical Club Index, the Shantz collection of photographic negatives, the Lucretia Hamilton collection of original botanical drawings, worldwide reprints and journals. Daily these different resources and plant specimens are utilized not only by scientists, physicians, agriculture Extension agents, but also by home owners, and the intellectually curious. Individual assistance is always available.

Like all reference libraries, the Herbarium continues to grow. In the past year the holdings were greatly enriched by the valuable gift of the coveted Howard Scott Gentry Herbarium, the incorporation of which makes the UA Herbarium one of the foremost in the world with its extensive *Agave* specimen collection. Dr. Gentry worked for many years throughout Mexico for the New Crops Division of USDA and is recognized as a world authority on *Agave*. His books include *Rio Mayo Flora* and the comprehensive *The Agaves of Continental North America*. During his fifty some years of work in Mexico, Dr. Gentry developed his personal herbarium, the gift of which to the UA consisted of more than 11,000 mounted specimens, 2,206 of which were Agavaceae.

Last year in addition to the Gentry material, 3,987 plant specimens, received by exchange with other herbaria, as gifts, or by deposition as research vouchers, were added to the Herbarium. At the request of worldwide herbaria, 1,820 specimens were loaned for study by their affiliated researchers. True to the character of a research library, more than 1,800 questions concerning plants were answered for the local community and across the country. The director of the Herbarium voluntarily has offered to the Poison Control Center 24-hour identification and pertinent botanical information.

The only comprehensive manual for identification of Arizona plants has been allowed to go out of print; therefore, the Herbarium staff has taken the lead in



L. Ketchum

developing an editorial committee, in preparing guidelines for style and format, and in organizing contributors for the preparation of a new manual, *Vascular Plants of Arizona*. The need for such a book is already felt by researchers and students. During the projected seven-year period of preparation, the resources of the Herbarium will be in constant demand by the botanical specialist contributors.

Frequent requests for data from herbarium labels instigated a computer program to facilitate obtaining this material. To date, 7,000 Arizona specimens are entered into the computerized record, with more being added weekly. The Herbarium welcomes all visitors.

**Dr. Charles T. Mason, Jr.**  
**Rebecca K. Van Devender**  
UA Herbarium

## Arid Soils Management

Since arid and semiarid regions make up one-third of the earth's surface, their soils are an important global resource. The Office of Arid Lands Studies, in cooperation with the USDA Soil Management Support Services, Washington, D.C., and the UAs Departments of Soil and Water Science, and Biomedical Communications, produced an educational program to encourage the

agricultural development of arid and semiarid regions through careful management of their soils.

"Classification, Properties and Management of Aridisols," which consists of 96 color slides, a 10-page program guide and a 31-minute audio cassette narrative, is designed to be used as a teaching aid to disseminate information about the classification, management, and physical and chemical properties of arid soils. Its target audience is made up of students, technicians and professionals involved with agricultural use of arid soils throughout the world.

The educational program is unique with its coverage of the entire range of soils found in arid regions and its integration of information on physical and chemical soil properties, soil classification and related soil management considerations for agricultural development.

The U.S. Agency for International Development and the Soil Management Support Services are sending 250 copies of the program to agricultural research centers, libraries and universities in developing countries throughout the world. These presentations will help train soil scientists, agronomists and land use planners to more efficiently utilize and conserve arid soil resources of the world. Sixty programs have been purchased by the Soil Conservation Service national office in Washington, D.C., and have been sent to

SCS and USDA centers throughout the United States. Additional copies are available to interested organizations and individuals through the Office of Arid Lands Publications Department.

**Chris Mack**  
Arid Lands Studies  
**Dr. Donald F. Post**  
Soil and Water Science

## Water Information Transfer Program

Information transfer has always been a significant component of the activities of the UAs Water Resources Research Center. A decision package approved by the Legislature in 1985 has allowed those activities to be further emphasized and expanded in scope. The primary goals of WRRC's information transfer program are to: 1) facilitate the transfer of relevant information from the State's academic institutions to the larger Arizona water community; 2) bring information on water problems needing research attention to water researchers at the state universities; and 3) increase effective communication among water researchers at Arizona's state universities.

To achieve these goals, WRRC works cooperatively with several units on campus, including the Office of Arid Lands Studies and Cooperative Extension. Close ties are also maintained with a number of state agencies including the Arizona Department of Water Resources, the Arizona Department of Environmental Quality, and the State Land Department.

WRRC is engaged in a variety of ongoing information transfer activities. Two newsletters are produced and disseminated: *Arroyo*, a quarterly publication providing coverage of water issues of state-wide interest and *The Arizona Water Research News*, a monthly publication published during the academic year and distributed to the specialized university water community. WRRC also prepares a series of issue papers, which have two main functions. Some issue papers provide state-of-knowledge assessments on water topics of critical concern. Other issue papers disseminate research findings from ongoing and recently completed research.

WRRC also facilitates information transfer through conferences, and specialized workshops and symposia. An annual fall

research conference emphasized mechanisms to increase the effectiveness of communications between research producers and users. The center also organizes and conducts more focused workshops and symposia on topics of particular concern when appropriate. WRRC also makes several types of water-related data available, primarily as a service to the academic water community. First, computerized bibliographic searches are conducted through the DIALOG system. Second, WRRC maintains a specialized library collection, which is currently being catalogued and automated. Third, WRRC maintains a computerized expertise directory of water researchers at the three state universities. Finally, WRRC offers access to a limited range of numerical water databases, and provides referrals to several other agencies (local, state and federal) who maintain such databases.

**Dr. Marvin Waterstone**  
Water Resources Research Center

## Why People Marry the Partners They Do

Courtship, in this culture at least, is assumed to be a testing ground for marriage. During courtship, partners supposedly spend time getting to know one another and evaluating whether the partner is a good match. Yet each of us knows of couples who decided to wed despite the fact that they had serious doubts about marrying or obvious incompatibilities. Why is it that some partners experience courtship as a time of careful decision-making while other partners do not? Does later marital happiness depend on whether couples test compatibility during courtship or whether they wed for other reasons?

In 1981, a research program began designed to answer these questions. To study why people marry the partners they do, we recruited newlywed couples from marriage license records, and had husbands and wives independently graph changes in the "chance of marriage" from the time they met until they wed. The chance of marriage is a measure of commitment that ranges from 0 percent to 100 percent. Respondents plotted in a stepwise fashion the upturns and downturns in commitment that occurred throughout their courtships. Each time they reported an upturn or downturn in commit-

ment, they also explained why it occurred.

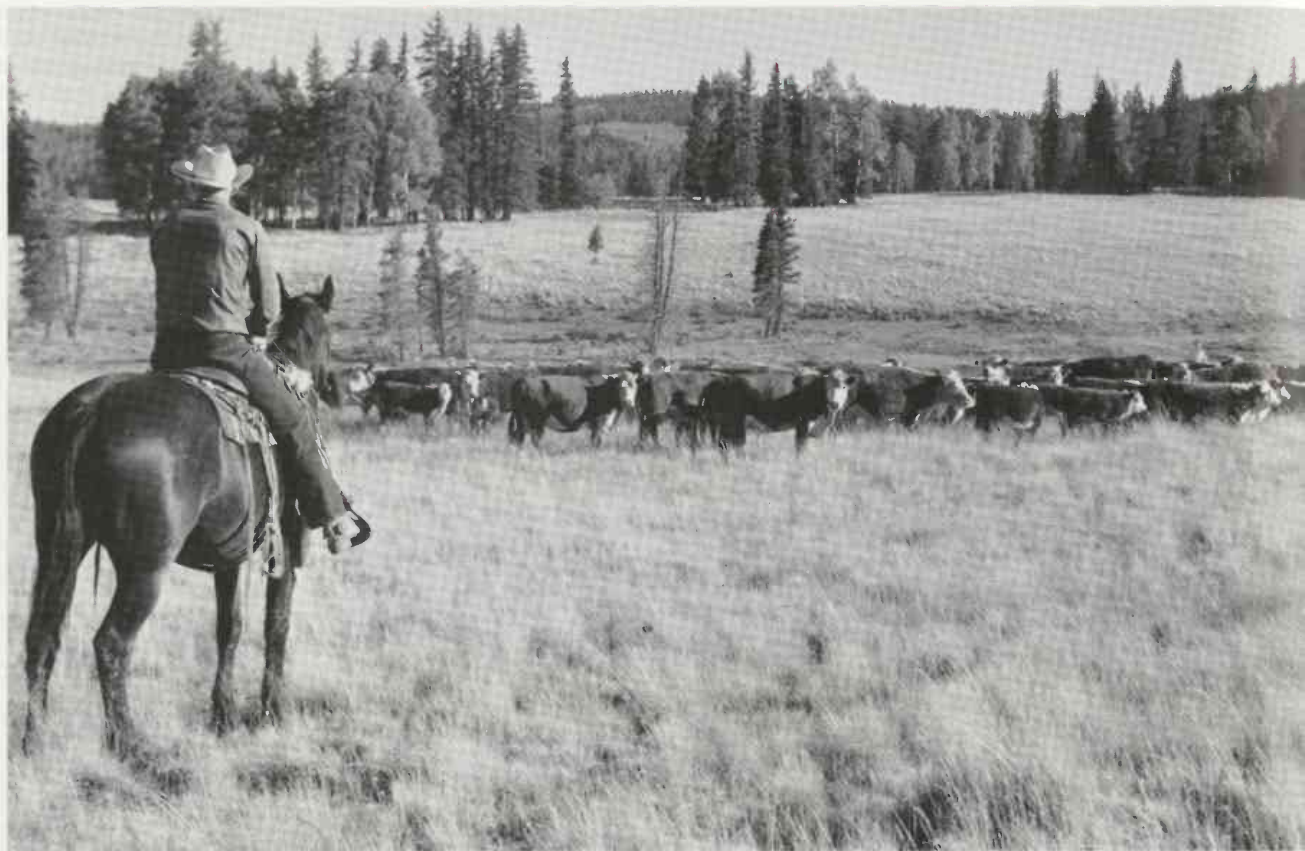
Early studies showed that reasons for commitment are much more varied than originally thought. Partners mentioned spending time together, sharing personal secrets and feelings, and falling in love, as well as job hirings and firings, car accidents, other dating partners, the opinions of parents, the desire to have children and the like. We found that reasons can be broadly classified into four categories: *interpersonal/normative reasons* which concern what is desired or proper in relationships or marriage partners (e.g., "I was 26 . . . It was time to settle down."); *dyadic reasons*, which stem from interaction between partners or beliefs about interaction (e.g., "We talked over what we wanted in a family" or "We were compatible."); *social network reasons*, which concern interactions with and beliefs about family members, friends, other dating partners, clergy and other third parties; and *circumstantial reasons*, which involve institutions or forces external to partners, such as the weather, luck, God, the army or workplace.

Studies also suggest there are two types of commitment processes: event-driven and relationship-driven. Event-driven commitments arise from simplistic decisions based on attention to salient happenings, such as the opinions and actions of third parties or the dating partner doing something that alters the other's impression of him or her. Event-driven commitments involve social network and certain dyadic reasons. These types of reasons are associated with dramatic, sharp changes in commitment; with fast growing, short courtships; and with lower marital happiness after four years of marriage.

Relationship-driven commitments, in contrast, involve such dyadic reasons as disclosing important information, communicating frequently, spending time together, and getting to know each other. These reasons typically are given for moderate changes in commitment that happen over longer periods of time (e.g., many months as opposed to one month or less), and are associated with greater subsequent marital happiness. Little to do with the quality of their match.

Future work will examine further the distinction between relationship and event-driven commitments and their connection to forming healthy relationships.

**Dr. Catherine A. Surra**  
Family and Consumer Resources



S. Moore



L. Ketchum



N. Smith