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ICASALS newsletter

International Center for Arid and Semi-Arid Land Studies/Texas Technological College/Lubbock, Texas, U.S.A. 79409

ICASALS Annual Review . . .

The first full year of the International Center for Arid and Semi-Arid Land Studies has been devoted to defining its purposes and implementing its goals. An analysis of the intensive self study showed ICASALS could best serve the university as a coordinating agency for all the university's efforts in the problems of water-short environments. Its specific activities in teaching, research, funding, and public service have been covered in the newsletter, which now reaches more than 4,000 individuals, agencies, and institutions in 81 countries.

In general, there has been an increasing awareness by individual faculty members and departments of their responsibilities in international affairs. In the academic area, old courses have been revised, new courses have been added, course projects assigned, inter-disciplinary studies devised, and inter-departmental degrees have been discussed. Several ICASALS scholarships have been established and awarded. Teaching and research assistantships have been earmarked for international students. Cooperative affiliations have been initiated with several Latin American universities and one in Turkey.

Research efforts have been strengthened through seed money grants, contracts and grants from other agencies, and the addition of collaborators to the faculty. Faculty with special competence in arid lands have been added. Faculty projects have been initiated in Central and South America and in Australia. A major amount of state funds have been designated for research on the problems of the dry West Texas area.

In the public service area, ICASALS has concentrated on the dissemination and exchange of knowledge. The Center has accepted two publications, 11 special reports, and 52 contributions (journal reprint series) in the past year. Publication exchange programs have been established with other arid land institutions; over 2,000 pieces of literature have been received and deposited in the Texas Tech Library. In keeping with our policy of cooperative work with foreign institutions, a major symposium was held in Monterrey, Mexico, under the joint sponsorship of ICASALS, three Mexican institutions and the U.S. Agency for International Development.

Plans developed during the first year call for increased international involvement, strengthened research programs, and for next year a special Focus on the Arts, co-sponsorship of a conference on Latin American affairs and a symposium. Inquiries on specific projects metioned in the annual review or in the newsletter are welcome.

ICASALS Director to Spend Year of Study in Australia

Dr. Thadis W. Box, who has served as the first director of Texas Tech's International Center for Arid and Semi-Arid Land Studies, will study the ecology of the arid zones of Australia during a leave of absence in 1968-69.

In 1967, Dr. Box received the E. Harris Harbison Award for Distinguished Teaching, awarded by the Danforth Foundation, providing funds for his release from university responsibilities in order to pursue creative work in his profession.

He will work with the Arid Lands Program of the Commonwealth Scientific and Research Organization in Canberra and will visit Australian universities and examine the Australian approach to research and teaching in the field of natural resources.

The award honors outstanding teachers who excel in scholarship, classroom teaching and in concern for students as individuals. Dr. Box is a professor of range management.

He served in 1966 as a member of a five-man team selected by the United Nations Food and Agriculture Organization to conduct a survey of range resources in Somalia.

HOUSING IN LIMA is the subject of a report prepared for publication in Spanish and English by Robert D. Troy of Texas Tech's Department of Architecture. His study of housing in an arid coastal region was sponsored by the American Institute of Architects (Langley Scholarship) and the Texas Architectural Foundation (M. D. Anderson Fund). His wife, Nora, the daughter of Mr. and Mrs. H. A. Speer of near Lima, prepared the Spanish text. Troy's book has 54 photographs which illustrate problems of and solutions to housing in the Peruvian capital.

Tech President Named To NSF Board of Directors

President Johnson appointed Texas Tech President Grover E. Murray in May to the board of directors of the National Science Foundation, established by Congress to control multi-million dollar research and education grants.

Among NSF responsibilities are provisions for graduate and post-doctoral study and research opportunities made possible through fellowships and traineeships, Congress appropriated $414,978,-938 for its support in fiscal 1967.

Ranch Headquarters Reconstruction Wins Ranchers' Approval

The establishment of an authentic ranch headquarters on a 76-acre plot allocated to the International Center for Arid and Semi-Arid Land Studies and Museum on the Texas Tech campus received hearty endorsement at a June 22 meeting in Lubbock.

More than 30 widely known ranchers, historians and Texas Tech officials gave the endorsement after hearing a committee report which calls for moving to the proposed site and restoring and furnishing buildings dating back to 1878. President T. L. Roach Jr. and Secretary Don C. King of the Texas and Southwestern Cattle Raisers Association offered full cooperation of their organization. The planned complex is to include representative structures used by ranchers whose influence was a dominant factor in the development of the Southwest. Much of the paraphernalia to complete the complex reflects the influence of the earliest Spanish and Mexican ranchmen.

The concept was presented by the Ranch Headquarters Planning Committee: Dr. and Mrs. W. C. Holden, co-chairmen, Lubbock; Frank Chappell Jr., Renderbrook-Spade Ranch; John F. Lott, Slaughter U Lazy S Ranch; D. Burns, Pitchfork Ranch; David Kritser, Kritser Flying Diamond Ranch; Watt Matthews, Lambshead Ranch; Charles Schreiner III, YO Ranch; Miss Christine DeVitt, Mallet Ranch, and W. G. McMillan Jr., Lubbock. Texas Tech President Grover E. Murray presided over the luncheon meeting.

The ranch headquarters buildings tentatively considered for the complex all were constructed before 1905. The earliest is a dugout built on the Matador Ranch by pioneers who helped settle the Texas Plains after the last major battle with the Comanche Indians in 1874.

Engineering Dean Named To UNESCO Commission

Dean John R. Bradford of Texas Tech's School of Engineering was notified in June of his appointment to the U. S. National Commission for the United Nations Educational, Scientific and Cultural Organization. His was one of 13 appointments made by Secretary of State Dean Rusk.

The 100-member commission advises the government on UNESCO matters. It serves as a link between UNESCO and organizations, institutions and individuals in the United States.

Represented on the commission are 60 national organizations interested in scientific and cultural matters. Twenty-five members are connected with federal, state or local government, and there are 15 members at large.

'Retirement' for History Profess(Means Continuing Interest in Te(

PROFESSOR EMERITUS — Dr. W. Curry Holden was named professor emeritus of history in May after close to 40 years of teaching and service to Texas Tech. He is shown with his wife, Frances, in their adobe house, one of three which Dr. Holden has built in Lubbock. The home is warmly decorated with paintings by outstanding Southwest artists, ancient Indian artifacts and Latin American handicrafts and art objects dating from the 16th century—all reflections of Dr. Holden's lifetime historical interests. Dr. Holden's interest in dryland problems was evidenced before 1930 through his published works on northwest Texas archaeological finds, West Texas droughts, the plains buffalo, frontier defense, journalism and immigration and settlement.

William Curry Holden, newly named professor emeritus of history at Texas Tech, retired from the classroom in May after having served the university administration, the people of West Texas and, with the greatest devotion, the students of Texas Tech for almost 40 years.

He is not, however, "through with the university." With his wife, Frances, he is co-chairman of the Ranch Headquarters Planning Committee which seeks to restore on university property a visual history of early ranch life on the plains. Mrs. Holden, who is a member of the Texas Fine Arts Commission, also is serving as a consultant to the ICASALS Focus on the Arts.

One of the first at Texas Tech to begin serious work in arid and semi-arid land studies, Dr. Holden is noted for his understanding of the environmental influences in the Southwest, particularly for his history of the Spur Ranch and of the Yaqui Indians of Sonora, Mex., about whom he wrote his widely acclaimed novel, **The Hill of the Rooster.** In all, Dr. Holden has published five books and 30 articles.

Among Dr. Holden's many achievements at Texas Tech were the establishment of the Southwest Collection and the West Texas Museum Association.

He was a charter organizer of the West Texas Historical Association in 1924, of the Texas Archaeological and Paleontological Society in 1928, and the West Texas Museum Association in 1929. He established the study of anthropology at Texas Tech in 1929.

Dr. Holden also directed Texas Tech's early archaeological expeditions. From 1928 to 1956, he led students into We Texas, New Mexico, Arizona and Mex to explore promising sites. He took dents on the first field school to Me City in 1934. His ethnological expedit took him to the Rio Yaqui, Sonor Mexico, at various times between and 1955.

Through Dr. Holden's perseverance government grant was secured for ex tion of the Lubbock Lake Site, and he supervisor of this archaeologically re ing excavation in 1937 and 1938.

He was dean of the Division of Gra Studies at Texas Tech from 1945 to and had great responsibility in the i tion of the doctoral degree program was curator and director of the West Museum from 1929 until his retireme from that post in 1965, and he edite **The Museum Journal** from its foundi in 1957 until 1965. He also was editor **The Texas Archaeological Bulletin** 1948-53.

The Texas Historical Association no publishing his book, **The Espeula Lan Cattle Company.** He has three other scripts completed. One is **The Saint Cabora** and another, **Water and Man** With his daughter, Dr. Jane Holde Kelley, anthropologist at the Univers Nebraska, he has written a biograp of a Yaqui Indian which is as yet untitled.

Of the cattlemen Dr. Holden has kn so long and so well, he has said: "Th ranch business breeds the kind of m who leaves his boot mark on histor

The business of education also can such men. Dr. Holden is one of them.

Animal Scientists Seek Economic Benefits In Synchronization of Estrus in Ewes, Cows

Major economic benefits in both management and marketing for cattle and sheep ranchers are the hope of Texas Tech experimental programs which successfully synchronize estrus in cows and ewes.

The synchronization causes most females in the breeding herd or flock to exhibit heat within a period of three days following the end of treatment, permitting the majority of animals to be inseminated artificially within a concentrated period.

This eliminates the need to follow the animals on the range, finding only a few in heat each day. The number of bulls and rams needed is reduced and better males can be afforded.

"Clean-up" bulls and rams still are necessary since all females do not conceive at first service, according to the research teams headed by Animal Husbandry Prof. Sam E. Curl.

Calving and lambing are confined to a more limited period so that, with increased attention, survival rate in newborn animals is increased. During the growth and fattening periods, the necessity for age group separation is reduced, and most of the total crop can be marketed at the same time.

The animal scientists found that with ewes, intravaginal treatment with fluorogestone acetate, a synthetic progestin, will synchronize estrus and ovulation successfully. Commercial application of this method already has been undertaken. It is reasoned that the intravaginally-administered pessary may provide for more uniform levels of progestin dosage than when progestins are mixed with feed and administered on a group basis. The method requires that animals be penned for 14-18 days or gathered twice, once for insertion and once for removal of pessaries.

In the treatment of cattle, plastic capsules containing norethandrolone were implanted under the skin on the cow's back to synchronize estrus and ovulation effectively. The drug is a synthetic steroid with androgenic and progestational activities. After 16 days the capsule was removed by pulling a nylon cord attached to it.

Dr. Curl's studies also relate to hormone-induced superovulation in ewes, which results in an increased incidence of twinning. Hormone induced multiple births eventually may become commercially applicable for ewes and certain types of cows under relatively intensive management, he reported. Dr. Curl has studied lambing and calving rates and related economic factors affected by the use of pregnant mare serum (PMS) and follicle-stimulating hormone (FSH)—luteinizing hormone (LH) treatments.

ch Has Visitor from Chad

W. Walker, United States deputy chief mission in the Republic of Chad, ted July 9 with Texas Tech President ver E. Murray and ICASALS officials cerning their mutual interests in blems of arid and semi-arid lands.

ior Honor Student Takes ensive Hebrew Training

ert Whitehill, senior honor student in ory at Texas Tech, is participating in ogram of intensive Hebrew training July 3 to Aug. 20 at Ulpan Agibah, nya, Israel.

Paulina Jacobo Wins Award For Madrid University Work

Texas Tech senior Paulina Jacobo will go to Spain early in September to begin a year's study of Spanish literature at the University of Madrid. She has been awarded a Fulbright Scholarship as a "full study grant."

Miss Jacobo, who has command of four languages, recently served as interpreter at the Monterrey Symposium on Increasing Food Production in Arid Lands. She has worked as a member of the ICASALS office staff and is completing her four-year course in three years. She is a candidate for graduation in August.

Cattle Feedlot Wastes Effect on Pollution Studied by Researchers

Water pollution from cattle feedlot wastes runoff is the concern of three research projects at Texas Tech, and additional studies of this problem are being proposed.

The university's Water Resources Center and the School of Agriculture departments of agricultural engineering, animal husbandry and agricultural economics are working cooperatively on the problems.

A final report is being prepared on an economic and engineering feasibility analysis of feedlot wastes disposal. The two-year research developed design criteria for storage and pumping facilities for handling liquid runoff and made preliminary evaluations of the relationships between types of rations fed and the resulting solid wastes quantity and characteristics. The project was supported by the Texas Cattle Raisers Association and the Coordinating Board, Texas College and University System.

Under current study are the treatment and stabilization of solid wastes by composting, supported by the U.S. Department of Agriculture, and ICASALS-sponsored construction of controlled environment chambers for cattle.

ARID LAND REFERENCE — More than 2,000 items of arid and semi-arid land reference material, received by ICASALS in an exchange program established with institutions in 19 countries, have been turned over to the Texas Tech library of close to a million volumes. Gerald H. Sandy, center, a bibliographer for the library, examines the material which includes newsletters, research reports, article reprints, journals, magazines, statistical data and maps. Shown with him are Director Box and Deputy Director Traylor. Countries represented by the collection are Argentina, Australia, Canada, Colombia, France, India, Iran, Israel, Kuwait, Mexico, The Netherlands, Pakistan, the Republic of South Africa, Senegal, Sudan, the United Arab Republic, the Soviet Union, Venezuela and the United States.

Human Performance Is Research Subject For 28-Member Team

A 28-member Texas Tech research team this fall will begin a three-year study of human performance under conditions of physical and psychological stress.

The research is a part of the Department of Defense THEMIS project. It will focus on individual performance under such conditions of discomfort as excessive heat, cold, high and low humidity, high volume noise and vibration. Investigators also will study the relation of diet and ionized atmospheres to performance as well as the effectiveness of different group sizes in work performance.

In addition to military uses, broad application of findings should benefit industry, government and other large organizational groups.

Industrial Engineering Chairman Richard A. Dudek is the principal researcher. Other faculty involved represent the departments of psychology, business management, chemistry, physical education and recreation for men, food and nutrition and home and family life. Consultants will represent special fields including those related to medicine, biochemistry, physiology and engineering.

Students in Advertising Use ICASALS Problems In Campaign Proposals

A course in advertising campaigns for Texas Tech students of business administration gave ICASALS last semester seven in-depth proposals for advertising and promotion.

Prof. Billy I. Ross presented half the students in the class with the fictitious problem: $100,000 has been donated to a service organization for advertising and promotion; describe how this money should be used to the organization's best advantage; use the International Center for Arid and Semi-Arid Land Studies as the problem organization.

Other students in the class were given a similar problem, but their task was to market internationally a product manfactured in Lubbock.

The students were divided into seven teams, each having about five members. Presentations were made formally in May.

Director Thadis W. Box of ICASALS and Deputy Director Idris R. Traylor praised the presentations. Dr. Box said he found many ideas "worthy of careful consideration" by the International Center.

The specialized, skill-development course provides a systematic approach to the actual creation and administration of advertising campaigns for a variety of products or services.

Monty Davenport Named To Office of Research

Dr. Monty E. Davenport has been named associate vice president for research and special programs at Texas Tech. Dr. Davenport has just completed a year as an American Council on Education administrative intern at the University of Illinois.

His own research has been in the area of thermodynamics and high temperature gas flows. Dr. Davenport was on the Texas Tech faculty from 1956 to 1957 and from 1961 to 1967.

Staab, Hancock Awarded ICASALS Service Scholars

ICASALS International Service Scholarships were awarded this year to two students, Robert L. Staab of San Gabriel, Calif., and Don K. Hancock of Houston.

Staab, who served as a Peace Corps volunteer in Turkey, is a sophomore history major with a specal emphasis on the Middle East. Hancock, a senior agricultural economics major, is applying for Peace Corps service.

International Studen List as Homelands 28 Dryland Countri

Eighty-four of the students at Texas T during the 1967-68 academic year list 28 homelands located in arid land regi of the world.

The major interests of these students within six of the university's eight sch and include agriculture, arts and scien business administration, engineering, h economics and the Graduate School.

Although the School of Education was cited, a large proportion of the inter national students say they expect to te several on the junior college level an some in universities.

Forty students listed major interests one of the eight engineering departme Fifteen are enrolled with business admi tration majors. Major fields of interest the School of Arts and Sciences were varied, and the geosciences, physics a chemistry were the most popular.

With the growing number of internati students, the university is instituting f new courses in English as a second la guage for the fall semester.

ICASALS **Contributions** numbered 52 to July 1, 1968. A partial listing is include in this issue of the **Newsletter**. This listing is a continuation of previously publishe titles and will be continued in succeeding issues to keep the catalog up to date Contributions include:

19.	2/67	G. W. Berry (with Jerry C. Green, William T. Holloman, Robert J. Wade Jr.)	**Our Experiences with a Departmental Self-Stud (on arid land responsibilities)**
20.	2/67	Herbert W. Grubb	**International Center for Arid and Semi-Arid La Studies at Texas Technological College**
21.	3/67	James W. Kitchen	**Proceedings of the 1967 Southwest Park and Recreation Training Institute (Feb. 5-6, 1967)**
22.	3/67	Coleman A. O'Brien	**Suppression of Estrus in Fattening Heifers wi Melengestrol Acetate (MGA)**
23.	3/67	Jules A. Renard	**Study Ternary Systems Equilibria: Water, Salt Water-soluble Solvents for Purpose of Desalination of Sea and Pond Water**
24.	3/67	Gerald W. Thomas and Herbert W. Grubb	**The Multiplier Factor: An Opportunity for Econo Development**
25.	3/67	Douglas F. Owen and R. D. Furr	**The Effect of Sulfur and Trace Minerals on Fora Sorghum Yield and Mineral Composition**
26.	3/67	Thadis W. Box	**Trends in Undergraduate Education in Range M agement**
27.	3/67	Thadis W. Box	**Influence of Drought and Grazing on Mortality Five West Texas Grasses**
28.	3/67	Coleman A. O'Brien	**Effects of Melengestrol Acetate (MGA) on th Growth and Reproductive Physiology of Fattenin Heifers**
29.	3/67	Coleman A. O'Brien	**Conception Rates and Growth Response in Hei Following Variable-term Treatment with Mele strol Acetate (MGA)**
30.	4/67	Eric G. Bolen	**Nesting Boxes for Black-bellied Tree Ducks**
31.	4/10	Coleman A. O'Brien	**Use of Plastic Funnels in Sire Fertility Tests an Clinical Animal Breeding**
32.	5/67	Coleman A. O'Brien	**Response of Ewe Lambs to Melengestrol Acetat (MGA) Following Induced Puberty**

'AO Expert Forecasts Major Storage 'acilities for Saudi Arabian Grain

orecast for major grain storage and lling facilities in the Saudi Arabian es of Dammam and Jeddah, which ld be completed by 1970-71, was made s spring by Prof. Ira Williams of Texas h's Department of Agricultural Engi- ring.

f. Williams served during 1967 as ted Nations Food and Agriculture anization expert in Saudi Arabia, lysing plans and recommendations for country's proposed milling industry.

his FAO study, he reported that the registered small mills in the country work the 40,000 to 60,000 tons of wheat wn annually in Saudi Arabia as well the 70,000 tons imported each year.

suggested that most of these mills be abandoned in the future because of efficiency and health benefits which ld be offered by the larger operations posed. Labor from the small mills could absorbed into the operation and ices of the new industry, Williams

He predicted that by 1970-71, 100,000 metric tons of wheat flour could be milled and 23,000 tons of wheat feeds. Within five years of completion, the major mills could process 90 to 95 per cent of the Saudi Arabian market—280,000 tons of flour and 66,240 tons of wheat feeds.

Arid Land Geographer To Join Tech Faculty

Otis Templer Jr. will join the Texas Tech faculty in September as assistant professor of geography with a special interest in the geography of arid lands.

Templer now is completing his dissertation for the doctoral degree at the University of California at Los Angeles. His work pertains to aspects of water management in Texas' Nueces River Basin.

The new faculty member is an attorney who practiced law in Lampasas, Tex. before completing work for his master's degree in geography at Southern Methodist University.

5/67	Coleman A. O'Brien and Charles F. Miller	**Effect of Melengestrol Acetate (MGA) on the Reproductive Physiology and Feedlot Performance of Ewe Lambs. 1 & II**
6/67	D. Lynn Drawe and Thadis W. Box	**Forage Ratings for Deer and Cattle on the Welder Wildlife Refuge in South Texas**
7/67	Richard E. Wilde	**The Infrared Spectrum of CH_3SiHD_2**
7/67	D. Lynn Drawe	**Midsummer Food Habits of White-tailed Deer on the Welder Wildlife Refuge**
8/67	Thadis W. Box	**Introduced Animals and Their Implications in Range Vegetation Management**
	Gerald W. Thomas	**Progress and Change in American Agriculture**
0, 41.	Dale W. Zinn	**Quantitative and Qualitative Beef Carcass Characteristics as Influenced by Time on Feed**
	Thadis W. Box	**Range Resources in Somalia**
	Thadis W. Box and D. Lynn Drawe	**Influence of High Rates of Nitrogen Fertilization on Coastal Prairie Range**
2/68	Gerald W. Thomas	**Toward Improvement of Water Use of Arid and Semi-arid Rangeland**
2/68	James W. Kitchen	**Proceedings of the 13th Annual Southwest Park and Recreation Training Institute**
	Sam E. Curl	**Synchronization of Estrus in Ewes Through the Intravaginal Administration of Flurogestone Acetate**
2/68	Sam E. Curl	**Effects of Intravaginal Flurogestone Acetate and PMS Administration on the Reproductive Performance of Ewes**
2/68	Alonzo D. Jacka	**Permian Deep-Sea Fans of the Delaware Mountain Group (Guadalupian) Delaware Basin**
3/68	Robert L. Packard	**Comments on Some Mammals from West Texas**
3/68	Alonzo D. Jacka, Carroll M. Thomas, Ray H. Beck, Karl W. Williams, and Stanley C. Harrison	**Guadalupian Depositional Cycles of the Delaware Basin and Northwest Shelf**
3/68	Rolland Z. Wheaton and Marvin J. Dvoracek	**Ground Water Recharge and Its Potential**
3/68	Dalton Ellis and Joseph L. Schuster	**Juniper Age and Distribution on an Isolated Butte in Garza County**

(Contributions are available upon request)

Spring '69 Set For Arts Focus

An expanded program for the originally planned ICASALS International Festival of the Arts has caused the program to be changed to an ICASALS Focus on the Arts. Instead of a two-week program, the Focus will run five months, from January through May, 1969.

The Focus will shift each month to emphasize various areas of the world's arid and semi-arid lands. Included will be the Iberian Peninsula, Africa, the Middle East, India and Pakistan, Australia, Latin America, the American Southwest and contemporary art and music from the arid and semi-arid lands of the world. Exhibits already pledged for the Focus will come from the Smithsonian Institution, the American Federation of Arts in New York, the Amon Carter Museum of Fort Worth and, through embassies in Washington, from several countries.

Coinciding with these presentations will be the Texas Tech Artist Series featuring: the Broadway hit musical based on the life of Don Quixote, "Man of La Mancha;" an exhibition on "The Art of the City" which is an assemblage from sources in Canada, France, Great Britain and the United States; the Indian sitarist Ravi Shankar; and pianist Van Cliburn.

Focus highlight will be an original musical dramatization by John Vance Gilbert of New York. The background will be the arid and semi-arid regions of the world. This work is sponsored in part by the Texas Fine Arts Commission through the National Endowment for the Arts.

Architect Undertakes Study Of Dual Cities on Border

Texas Tech Associate Prof. of Architecture Dudley Thompson will begin work this summer on an 18-month study of cities along the United States-Mexico border. The study will develop an in-depth report on the dual formation of cities from San Diego-Tijuana to Brownsville-Matamoros.

Thompson, whose specialization is urban planning, was awarded a Perkins Boring Fellowship from Columbia University for the research and report.

Proceedings Due in Fall

Proceedings of the International Symposium on Increasing Food Production in Arid Lands held April 22-25 at the Instituto Tecnologico y de Estudios Superiores de Monterrey in Mexico will be available in early fall. Included are 28 scientific and cultural reports related to the problem. ICASALS was one of five co-sponsors for the symposium.

6 Monterrey Delegates Extend Visit to Tech

Special guests of Texas Tech this spring were six delegates to the Monterrey Symposium on Increasing Food Production in Arid Lands.

Invited by President Grover E. Murray to observe ICASALS activities and research programs at the university were: Albert Ortiz Chaux, of the Colombian Institute of Agrarian Reform, Bogota; Frederico Saucedo Carillo, specialist in educational problems of Mexico's arid zones, Mexico City; Director Gonzalo Raga and Augusto Gallardo of the Arid Zones Experimental Station, Barquisimeto, Venezuela; Julio Ipucha Aguerre of the Institute of Soils and Agricultural Technology, Buenos Aires; and Jose Antonio Sarasola, the Agricultural Experiment Station, National Institute of Agricultural Technology, Anguil, la Pampa, Argentina.

ICASALS SPECIAL REPORTS

(Available upon request)

School of Agriculture No. 4. — "A Summary of Agricultural Research at Texas Tech," 1967

Department of Agricultural Economics No. 5 — "Benefits and Costs of Modifying Playa Lakes To Reduce Encephalitis in the Texas High Plains," H. W. Grubb, D. L. Parks, G. W. Sciple

Department of Agricultural Economics No. 6 — "Multipurpose Benefits and Costs of Modifying Playa Lakes of the Texas High Plains," H. W. Grubb and D. L. Parks

School of Agriculture No. 7 — "Proceedings of the Beef Cattle Conference," April 23, 1968, Department of Animal Husbandry

Comparative Literature No. 8 — Proceedings of the April 22-24 (1968) Comparative Literature Symposium sponsored by the departments of English, Classical and Romance Languages, and Germanic and Slavonic Languages, Wolodymyr T. Zyla, editor, three papers; "An Episode from Don Quixote," T. Earle Hamilton; **"The Brothers Karamazov** in English," Floyd E. Eddleman and "The French Discovery of German Literature," Carl Hammer Jr.

Department of Agricultural Economics No. 9 — "Economics of Water Pollution Control for Cattle Feed Lot Operations," Wade Griffin and T. R. Owens

Department of Agricultural Economics No. 10 — "An Economic-Engineering Analysis of Alternative Systems of Packaging Cotton Lint," Richard Chitwood and T. R. Owens

Department of Agricultural Economics No. 11 — "An Economic-Engineering Analysis of Cotton Milling Facilities for the Texas High Plains," James Cato and T. R. Owens

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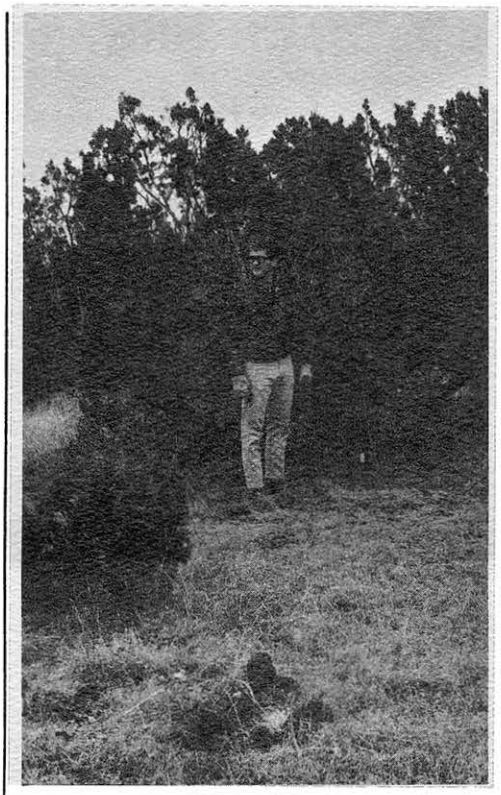
Also Available Upon Request — Edward Teller At Texas Tech, February, 1968, reprinting two lectures: "Application of Nuclear Energy to Water Resources Problems" and "The Impact of Science on Society."



BIOLOGICAL CONTROL of mesquite involves considerable interest in this insect, *Oncideres rhodosticta* Bates, from Argentina. Texas Tech entomology Profs. Ellis W. Huddleston and Charles R. Ward, who traveled to Argentina last year, are making a special study of the insects which attack mesquite. (Photo by Dwight Bennett)

4 Grazing Crops Studied In Cattle Feed Research

Four types of grazing forage crops, under two levels of fertilization and two stages of maturity, will be used in a cattle utilization study conducted by Animal Husbandry Prof. Robert C. Albin of Texas Tech.

Pioneer Sorghum Company of Plainview, Tex., is the cooperating agency.

Dr. Albin is applying three experimental studies to 96 steers for 60 day periods. The experiments will test growth for each forage type. They also will test digestion and the disappearance of dry matter over 12, 24 and 36 hour periods. Two of the steers will be fistulated to observe digestive progress. Cattle are being selected now for the experiments which will start in September at Texas Tech's farms in Lubbock.

ART COMPETITION ANNOUNCED

The first ICASALS juried competition of sculpture, pottery, jewelry and blown glass, open to U.S. artists west of the Mississippi River, will take place May 4-25, 1969, during the International Center's Focus on the Arts. For entry forms, available after Oct. 1, or more information write: Juried Competition, Department of Art, Texas Tech, Lubbock, Tex., 79409. Slides of work are due Feb. 1.

Tech Building Progr Nears $30 Million M

A building program of close to $30 m is in the planning or construction st at Texas Tech.

Scheduled for completion this fall new 12-story, $4,565,000 building to ho the School of Business Administrati which has the largest daytime unde graduate enrollment in the United S A new central heating and cooling pl also is to be completed this fall at a of $4.8 million.

Construction of a new Biology Buil costing $5,136,931, is underway as w as a $1.375 million expansion of Tex Research Center facilities. Construct will start this year on a $3,099,98 School building.

Approved is an Art and Architectur building to cost $4,584,653, an additi to the Chemistry Building costing $ 078 and the initial $2 million constru of the proposed $6 million museum.

Among other structures either in t building or planning stages include $80,000 rehabilitation center, a $776,9 fluid dynamics laboratory and a $55 goat and sheep facility.

Seeger, Dreikurs Named Tech Visiting Professors

Visiting professors on the Texas Tec faculty for the fall 1968 semester will clude Dr. Karl-Heinz Seeger, directo the Boltzmann Institute in Vienna, Dr. Rudolf Dreikurs, Chicago Medic School professor of psychology an director of Chicago's Alfred Adle Institute.

Dr. Seeger, a National Science Found senior foreign scientist fellow, will tea consult and assist with research in th Department of Electrical Engineerin current research involves microwa semiconductors and hot electron eff in bulk semiconductors.

Dr. Dreikurs, who has developed Adl movements in Jamaica, Denmark, Gr and Israel, will teach, lecture and se as consultant in the Department Psychology.

Arid Lands Committee Of AAAS Meets at Tech

The Arid Lands Committee of th American Association for the Advan ment of Science met at Texas Tec June 3 and 4, combining committee b ness with conferences with represen tives of ICASALS. At the meeting w Dr. Ralph Richardson, Rockefeller Fo tion, N.Y.; Dr. Terah Smiley, Ge chronology Laboratory, University Arizona, Tucson; Dr. Joel Fletch Utah State University, Logan; Dr. I Mann, University of California, San Barbara; and Dr. Joseph Schufle, Mexico Highlands University, Las V

ICASALS Travelers

FRANCE — Texas Tech Mathematics Prof. Wayne T. Ford conferred in May with representatives of Fran Laboratories, Inc., in Paris as research advisor in applied mathematics for a special study dealing with fluid flow problems in the Saharan oil fields. Dr. Ford is in Dallas this summer conducting further research relating to the Algerian project.

MEXICO — Dr. Judson Maynard of Texas Tech's Department of Music was presented in a recital May 18 in the Holy Church Cathedral of Morelia, Michoacan. This was the closing recital in a three-day International Organ Festival sponsored by Mexico's Union Nacional de Organistas.

WASHINGTON — Law Prof. Maurice B. Hirk of Texas Tech participated May 23-24 in the deliberative activities of the American Law Institute, the principal scholarly organization within the legal profession of the United States. At this session, the Institute began consideration of a model land development code.

ARGENTINA — Dr. A. W. Young, chairman of Texas Tech's Department of Agronomy and Range Management, is in La Pelada in Santa Fe Province, working with Juan Cristian Born and Asher Bunge Corp. agriculturalists in an effort to improve sorghum production techniques. Dr. Young will return to the university in September.

WASHINGTON — Director Dan M. Wells of Texas Tech's Water Resources Center attended the 55th annual National Convention of the National Rivers and Harbors Congress in Washington, June 3-5. Dr. Wells was named a Texas delegate by Gov. John Connally.

FRANCE — Chemistry Prof. Henry J. Shine was chairman for a plenary session and delivered a paper at the third International Symposium on Organo Sulfur Chemistry meeting in May at the University of Caen in France.

Dr. Shine traveled from May 6 to May 17 giving lectures at the University of Delaware, the Sun Oil Company and the Bell Telephone Research Laboratory on the East Coast, at McGill University in Canada and in England at the University of London, and the Imperial Chemical Industries Research Laboratory at Runcorn. He also visited Imperial's pharmaceutical division in Jarrow near Manchester and the University of Manchester. His lectures dealt primarily with aromatic rearrangements, reaction mechanisms in organic chemistry. His Caen paper dealt with "The Electron Oxidations of Organo Sulfur Compounds."

SAN ANTONIO — ICASALS Deputy Director Idris R. Traylor Jr. conferred in May with Carlos Freymann, director of exhibits and international relations for HemisFair '68 and with the commissioners of the Portuguese, Spanish, Mexican, Bolivian, Venezuelan and Organization of American States pavilions. Discussions related to entries for the ICASALS Focus on the Arts in 1969.

OWRR Approves Search For Mathematical Model For Water Resources Use

The Office of Water Resources Research has approved an Interior Department project to develop a mathematical model for use in water resources management on the West Texas High Plains.

The $98,000, two-year study will be conducted by Texas Tech and the Lubbock High Plains Water District. Data developed through the years will be computerized in order to develop and test the model. Working on the project will be the director of the university's Water Resources Center, Dr. Dan M. Wells, and co-director of the Computer Center, Dr. George S. Innis.

U.S.A. Reports . . .

THE COMMITTEE ON ARID LANDS of the American Association for the Advancement of Science has issued a general invitation to An International Conference on Arid Lands in a Changing World to be held June 3-13, 1969, at the University of Arizona, Tucson. The AAAS conference is supported by the United Nations Educational, Scientific and Cultural Organization. Field excursions and related technical conferences will extend from May 22 to June 2 and June 14-25. Emphasis will be on methodologies and practical approaches to the use of arid lands.

Top Anthropologists Named To University Consulting Faculty

Three of the nation's leading anthropologists and museum administrators have been named consulting professors at Texas Tech.

They are Dr. Stephan F. de Borhegyi, director of the Milwaukee Public Museum, Dr. Fred Wendorf of the Department of Sociology and Anthropology at Southern Methodist University and Dr. Charles C. Di Peso Jr., director of the Amerind Foundation, Inc., Dragoon, Ariz.

Dr. de Borhegyi, a native of Hungary, is author of more than 200 scholarly works and is U.S. delegate to the International Committee on Ethnographical Museums of the International Council of Museums.

Dr. Wendorf, a former member of the Texas Tech faculty, is noted for his studies of the American Southwest. For the past few years his work has included archaeological salvage along the Nile River and in the Sudan. Dr. Wendorf's expedition found remains dated 12,500 B.C.; 78 skeltons of people who lived thousands of years before Christ; and the earliest signs of agriculture yet discovered.

Dr. Di Peso has been the principal investigator in a Casas Grandes expedition sponsored jointly by the United States and Mexico. This three-year expedition resulted in the most extensive (in area) archaeological excavations yet done in the Western Hemisphere. More than 10,000 artifacts from an almost unknown prehistoric culture were recovered.

SUMMER DIG — Archaeology students of Texas Tech Prof. Kenneth Honea started a summer course excavating eight feet below a West Texas pond surface for stone tools dating back 5,000 to 6,000 years, but 15 feet down they made a more valuable discovery. They now are excavating the bones of a large bison which was nearly twice the size of the recent bison found at the first level of excavation. Digging will continue at this lowest bone bed until mid-August. Dr. Honea said the new discovery will tie in with two other well known Late Pleistocene sites of the *Llano Estácado,* the Lubbock Lake Site and the Blackwater Draw Site near Portales, N.M. In the picture are, left, Andrea Honea and Mrs. Judy Trotter.

Latin American Accent Set for '69 Conference

Texas Tech's World Affairs Conference, 1969, will offer students of this and other invited universities new insights into Latin American politics, international relations, economics, education, sociology, anthropology, geography, agriculture, religion and art.

The conference, March 6-8, will be cosponsored by the Tech Union and by ICASALS. An eight student steering committee will plan the program with Union Program Director Dorothy Pijan and two faculty advisors, Dr. Harley Oberhelman, chairman of the Department of Classical and Romance Languages, and Dr. Idris Rhea Traylor Jr., deputy director of ICASALS and professor of Russian and East European history.

Cathy Obriotti of San Antonio, Tex., is director of the conference, and Tom Melton of Fort Worth is assistant director. Other students on the steering committee include: Mary Lynn Anderson, Lubbock; Gary Ashcraft, Sherman; Cathy Cotner, Austin; Carol Clover, Lubbock; Claire Gillespie, Temple, and Everett Urech, Bellaire, all in Texas.

The conference will coincide with the March theme of ICASALS' Focus on the Arts, which is Latin America. The March Focus will feature exhibits and performances from countries to the south.

Arrangements are being made for speakers for the 1969 conference, and they will be counterparts of the visiting lecturers who spoke at the 1968 conference when the theme was "The Soviet Block: Evolution in World Affairs." Speakers included: Ambassador George V. Allen, director of the Foreign Service Institute, United States Department of State; Romanian Ambassador to the U.S. Corneliu Bogdan; Polish Ambassador to the U.S. Jerzey Michalowski; Dr. Ferenc Nagy, former prime minister of Hungary, and **Newsweek** magazine editor Leon Volkov.

Museum Complex Includes Gift of New Planetarium

A $250,000 planetarium, the gift of the Moody Foundation of Galveston, will be among the first units of the International Center for Arid and Semi-Arid Land Studies and Museum on which construction will start this year.

A $2 million, two-story portion of the $6 million complex is expected to be ready for occupancy in 1970. In addition to the Moody Planetarium, it will house a portion of the Industrial Gallery, Pioneer Hall and part of the main exhibits gallery. Bids are to be let later this summer.

Teaching Assistants Join University from Abroad

A teaching assistant from Mexico and another from Argentina will join Texas Tech's Department of Classical and Romance Languages in September. Maria Enriquez of San Luis Potosi, Mex., has a bachelor's degree from Texas A&I University and will be working toward her master's degree in Spanish. From Tucuman, Argentina, will be Beatriz Sanz who has been a technical librarian in Buenos Aires. Her degree is in education and her graduate work will be in languages and linguistics.

Sema Gunisik, who has been an instructor in English at the University of Ankara and its affiliate, the University of Hacettepe, Turkey, will be a teaching assistant in English at Texas Tech starting with the fall semester, 1968. She will be working toward the doctoral degree in English.

Argentine Rancher Visits

Argentine rancher Juan Cardenau visited with ICASALS officials and the faculty of the departments of animal husbandry and range management at Texas Tech July 11. He spent the following day at the Texas Tech Research Farm near Amarillo.

Evaporite Institute To Develop Model Of Delaware Basin

A research program initiated in Ju by ICASALS Institute for Evaporite S could lead to major cost reductions i exploration for underground resource including oil and water.

The study, supported by the Humble Company, developed after Institute rector Alonzo D. Jacka noted a di difference in sandstone formed abo waterlines and sandstone cemented fresh or salt water. From the resea Dr. Jacka expects to develop a mod the Delaware Basin and its surro shelf areas northeast of El Paso.

Principles formulated from the st Dr. Jacka said, should be applicab the prediction of sources for hydroca and water, the cost of developing th resources and the quality to be expe from reservoirs and aquifers.

Details of preliminary research a available through ICASALS contribu series.

Schools Work To Build Inter-University Plan

A newly appointed Texas Tech comm has reported work in progress with Mexican institutions of higher educat with which Texas Tech will attemp develop a working relationship.

Three of the institutions already h responded favorably to the idea, a ing to the committee chairman, D Harley D. Oberhelman, who also is c man of the Department of Classical Romance Languages. These are the U versidad de San Luis Potosi, the Inst Tecnologico y de Estudios Superior Monterrey and the Universidad de N Leon.

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