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OCTOBER, 1970

ICASALS newsletter

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

ICASALS annual review . . .

The third operational year of the International Center for Arid and Semi-Arid Land Studies was marked by the continuation and expansion of its established programs, the creation of new ones, and the initiation, through ICASALS, Inc., of an important Algerian development project. The continued growth of the International Center also necessitated new administrative appointments.

ADMINISTRATION

The administrative staff was reorganized to include the appointment of a new director and the creation of the positions of deputy director for academic affairs and deputy director for administration. An Advisory Council was instituted, composed of the deans of the colleges, the vice president for research and special projects, the associate vice president, and the chairman of the executive committee of the Faculty Council. A Projects Board, to which fifteen faculty members were appointed, was charged with originating and implementing research and public service programs. An Editorial Research Service was organized to handle all ICASALS publications, and any other University research manuscripts submitted. Three internationally known consultants were also appointed.

SYMPOSIA

In September, 1969, the International Center sponsored its Third International Symposium at the University. The symposium was interdisciplinary and papers were read by faculty representing each of the University's colleges and by six invited speakers. The International Center was co-sponsor with Texas Tech University's Water Resources Center, the West Texas Water Institute, and the Department of Geosciences, of a major symposium on the Ogallala Aquifer in April-May, 1970. Proceedings of both symposia will soon be released.

INFORMATION EXCHANGE

The program of exchanging and disseminating knowledge of arid lands continued through the publication of the ICASALS Newsletter which is circulated to more than 5,000 addresses in almost 90 countries. The Center also accepted 16 Special Reports and 16 publication contributions, bringing the totals to 37 Special Reports and 88 contributions. Several hundred books, monographs, journals, articles, and maps related to arid lands were obtained by the Center and transferred to the Texas Tech University Library, bringing to more than 3,000 the total of items deposited there.

INVOLVEMENT

The International Center continued its interest in and commitment to regional development through its public service programs and pure and applied research programs. In the area of foreign involvement the International Center initiated and advanced projects related to arid lands when its representatives visited Algeria, Australia, Canada, Mexico and Tunisia. Foreign visitors at the Center included representatives from Algeria, Australia, Canada, Denmark, India, Jordan, Mexico, Nigeria, Turkey, and the United Arab Republic.

ALGERIAN PROJECT

An important three-year program of commercialized agricultural research and development was begun in Algeria in conjunction with ICASALS, Inc., a non-profit research and education corporation. The project was arranged through contract with SONATRACH, the Algerian national petroleum organization.

STUDENT-ORIENTED ACTIVITIES

The International Center was co-sponsor, with the University Center, of the annual World Affairs Conference, which in 1970 focused on Australia. The Center also arranged and co-sponsored a series of lectures and discussion seminars conducted by five specialists from the U.S. Department of State, and involving more than 1,000 students. Other sponsors included the University Center's Ideas and Issues Committee, Delta Phi Epsilon and Phi Nu Epsilon, national professional foreign service fraternity and sorority, the International Relations Committee of the Lubbock Chamber of Commerce and the Lubbock League of Women Voters. The center also assisted the Student Association in the planning and implementation of International Week.

MUSEUM

The Museum of Texas Tech University moved to its new multi-million dollar building. The Museum, which will have an ICASALS gallery, is devoted to exhibitions, research and continuing education. Formal opening of the new structure is scheduled for November 1970.

FOCUS ON THE ARTS

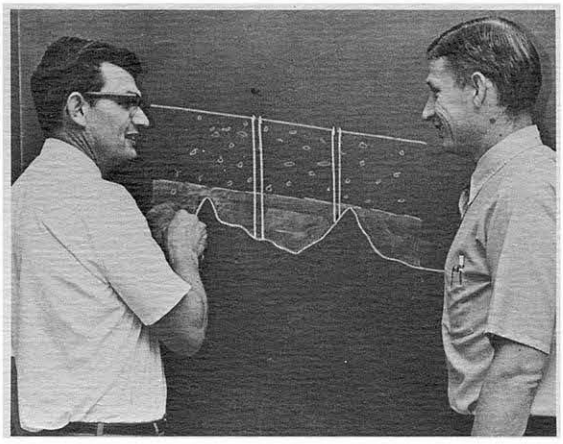
Continued interest in the arts of arid lands was enunciated through several art features and through the sponsorship, with the Department of Music, of the Seventh National Conference of the American Harp Society. Concerts featured the music of arid lands. An arts festival, the second for the International Center, is being planned for 1970-71.

HONOR

In May the activities of the International Center and the total international program of Texas Tech University were recognized as among the three best international programs in the United States by the Institute of International Education and the Reader's Digest Foundation.

PLANNING

Plans developed for the coming year include continuation and expansion of current programs, an interdisciplinary symposium on playa lakes in October, and enlargement of research activities.



UNDERGROUND MAPPING — Peaks and canyons which form the bottom contours of unconfined aquifers vital to human water supplies will be subject to mapping as researchers refine their mathematical model of the Ogallala Formation. Texas Tech University and the High Plains Underground Water District No. 1 are refining their model with support of the Interior Department's Office of Water Resources Research. Dr. B. J. Claborn, left, is sketching a rough view of what the computer is expected to reveal for District Engineer Albert Sechrist.

Technology course is now offered in engineering fields

A new Department of Engineering Technology for Texas Tech University's College of Engineering was approved for the start of the fall semester by the Coordinating Board, Texas College and University System.

Training and education are offered in three areas of technology—civil engineering, electrical electronics, and mechanical engineering. The department will provide graduates with a liberal education and a background in technological training.

Graduates will not work so much in design as in occupational areas such as construction supervision, technical sales, equipment installation and maintenance including computers, and quality control.

Norwood Andrews heads department

Dr. Norwood H. Andrews Jr. assumed new duties at Texas Tech University in August as chairman of the Department of Classical and Romance Languages, succeeding Dr. Harley D. Oberhelman who resigned to devote his time to teaching and research.

Prof. Andrews is a Brazilianist. His special interests are in the literature of Brazil with a "long term" research interest in the theme of drought which, he explained, runs as a thread uniting two kinds of Portuguese literature—the novels of the Cape Verde Islands and those of northeastern Brazil.

Andrews formerly was on the faculty of Vanderbilt University.

Malaka Finco named to language faculty

Malaka S. Finco has been named instructor in Arabic at Texas Tech University. She is an American citizen born in Tantah, Egypt, and previously has lectured on Egyptian history, geography, civilization, culture, traditions, religion, the language and politics.

Her university studies have been done at the University of Cairo and Tufts University in the U.S.

ICASALS headquarters move

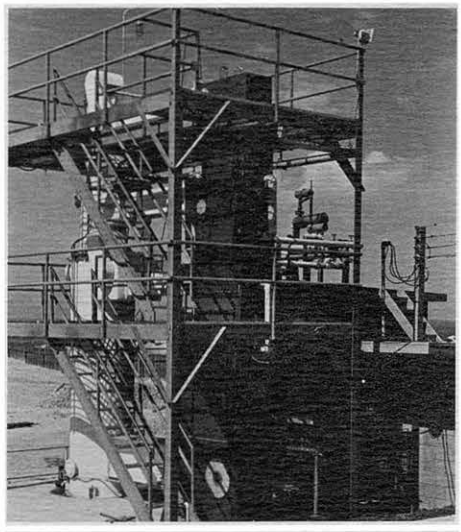
The staff of the International Center has new quarters in a 10-room suite in the old museum building in the heart of the Texas Tech University campus. The facilities now are in the west wing of the first floor of the old museum building.

Controlled environment

Coastal desert area facility toured

Five representatives of the International Center in July visited experimental facilities of the University of Arizona at Tucson and in Mexico—at Puerto Penasco, Sonora.

The facilities are oriented particularly toward the development of systems for production of power, water and food in coastal desert areas and toward the development of a large-scale, controlled environment research facility for agricultural development.



PRODUCTION UNDER PLASTIC — From top to bottom: the exterior of the plastic greenhouses at Puerto Penasco; the sea water distillation plant in Sonora equipped to provide fresh water for agricultural and domestic uses; and experimental plots within a plastic greenhouse.

Dr. Carle O. Hodge of the University of Arizona's Environmental Research Laboratory was host to Director Frank B. Conselman and members of the ICASALS Advisory Council: Harold E. Dregne, chairman of the Department of Agronomy; John C. Gilliam, associate dean of the College of Business Administration; Arnold J. Gully, associate dean of the College of Engineering; and Justin C. Smith, associate dean of the School of Law, all of Texas Tech University.

Work first began at Puerto Penasco in 1963. In addition to that installation and one at Tucson, equipment recently has been diverted to Abu Dhabi in Egypt for planned, large-scale commercial production of both water and vegetables for local consumption.

At the installations, distilled water is used for plant irrigation and feeding with enough surplus for sale of bottled water.

Greenhouses are plastic-roofed hemicylinders, 100 feet long and 23 feet wide, and this plastic construction is said to reduce the water requirements to one-tenth of that needed in an outside, uncontrolled environment.

Vegetables are produced, and experimental variants include not only genetics of the plants but also the nutrients fed them and the atmospheric components within the greenhouse.

The trip also included conferences between the ICASALS representatives and Carlsbad, N.M., city officials and members of that city's Chamber of Commerce.

Harpists plan conference following 1970 success

The eighth annual conference of the American Harp Society will meet June 23-26 at the University of Indiana, Bloomington. The 1970 conference drew as many as 400 participants and guests for one concert, and original compositions as well as innovative lecture-recitals were particularly well received. The International Center was a sponsor.

Kuwait center reports progress

The permanent mission of Kuwait to the United Nations reports that two buildings have been constructed at the Water Resources Center in Kuwait—a $2 million project to provide extensive training programs in the management, operation and maintenance of desalination installations and associated power plants.

Described as a "first of its kind in the world," the project is jointly sponsored by Kuwait ($1,450,000) and the United Nations Development Program ($568,400). Buildings for administration and classrooms and library have been built. A third building under construction near a power station will be used for prototype testing and new process experimentation.

The five-year project to establish the center began in 1969.

Formal opening

Museum to open doors in November

Formal opening of the new Museum of Texas Tech University and dedication of its Moody Planetarium has been scheduled for Nov. 14. Several events, however, were planned to precede this landmark occasion at the site of The Museum.

The Ranch Headquarters Association scheduled its first annual meeting Oct. 3 at the outdoor site for the living, authentic museum of the ranching industry. The Texas State Historical Survey Committee approved a historical marker for the Ranch Headquarters for dedication at the meeting.

Five buildings already are at the site—three of them standing. These include a blacksmith shop from the Renderbrook-Spade Ranch, a box and strip house from the Long S Ranch and the carriage house from the U Lazy S Ranch as well as the dismantled meat and milk house from the JA Ranch and the headquarters of the Capote Ranch. These and other buildings will be restored and situated within authentic ranch settings when the complex is complete.

On Nov. 12 a preview of "This Was the West"—an exhibition of works of art depicting the history of the American West—is planned. On Nov. 13 there will be an address by Frank Taylor, director general of museums of the Smithsonian Institution.

The $2.5 million structure was completed during the summer and represents the first phase of a projected $7 million complex. Within the first phase of The Museum will be an ICASALS gallery to feature exhibits depicting the multiple facets of life and land in arid and semi-arid environments.

Australian physicist named NSF scientist

Dr. Charles N. Watson-Monroe, noted Australian academician in plasma physics, has been named a National Science Foundation senior foreign scientist to teach and conduct research at Texas Tech University during the 1971-72 academic year.

Dr. Watson-Monroe will be working within the Department of Electrical Engineering which, in September, received a $476,000 development and expansion grant from the NSF. The grant will help to develop support facilities and staff and the special areas of physical electronics, controls and instrumentation, systems and circuit theory and engineering electro-magnetics.

ARID LANDS ART — Director Eugene Kingman, left, of The Museum of Texas Tech University holds a Hittite figure produced about 1,200 B.C. With him is F. William Holder, president of the West Texas Museum Association, indicating a 6th Century B.C. Cypriot head. Both figures will be used in future Museum exhibits depicting the art of the world's arid lands. The Hittite figure is one of a gift of three made to The Museum by the Mr. and Mrs. Stanley Marcus Foundation. Other obects are recent acquisitions for the ICASALS gallery and include a smaller Cypriot head and a small Cypriot jug. The tall, terra cotta pottery jar is from pre-dynastic Egypt, 4,500 to 5,000 B.C.

Items chosen for ICASALS gallery

The West Texas Museum Association has announced acquisition of 25 items which eventually will be displayed in the ICASALS gallery of the new museum at Texas Tech University. The collection was chosen as representative of several cultures which flourished in arid or semi-arid lands.

Two of the items—a Gandhara standing figure and an Anatolian terra cotta bull's head—were purchased privately for loan to The Museum.

Purchased by the association were an Egyptian stele, Egyptian painted panel, Cypriot terra cotta head, Corinthian alabastron, Attic amphora, Syrian terra cotta figure, South Italian fish plate, Amlash dagger, Iranian camel vase, Assyrian clay tablet, Egyptian carved wood mummy box, Cypriot limestone head, early Christian terra cotta oil lamp, Syro-Roman glass drinking vessel, Persian glazed pottery oil lamp, Egyptian bronze goddess, "Isis," Egyptian bronze, "Osiris," Egyptian glazed faience ushabti, Cypriot pottery jug, Greek Attick lekythos, Roman terra cotta oil lamp, and an Amlash bronze arrowhead.

Expanded program planned for Tech's International Week

The third International Week at Texas Tech University has been scheduled Oct. 11-16 and will include music, an international dinner and an international symposium on topics of current interest.

Other features which have proved popular in the past also will be repeated—an International Cabaret, a Continental Cafe, and the production of a Spanish drama by **Esta Noche Teatro.**

A new musical feature of the week will include performances by the university's Faculty Brass Ensemble, the Madrigal Singers and members of the Texas Tech Choir.

James Childers, Student Association secretary for International Student Affairs, is director of International Week. Childers also is president of Delta Phi Epsilon, a national professional foreign service fraternity. With a faculty sponsor, Dr. Idris R. Traylor, he attended the national conference of Delta Phi Epsilon, celebrating its 50th anniversary in Washington.

Prof. M. O. Oyawoye is university visitor

Prof. M. O. Oyawoye, head of the Department of Geology at the University of Ibadan, Nigeria, was a Texas Tech University visitor Aug. 17-18, returning the professional visit made in May to his university by President Grover E. Murray of Texas Tech.

At the request of the University of Ibadan, Dr. Murray had lectured at Nigeria's national university and served as a consultant in petroleum geology and allied technological programs.

Toronado research

Studies of May disaster varied

A new group of Texas Tech University activities, several in research—in six departments and the Southwest Collection—relate to the May 11 tornado which struck the city of Lubbock, destroying 10 square miles of the city and costing 26 lives and more than $200 million in damages.

J. E. Minor of the civil engineering faculty is coordinating the university-wide storm related projects to assist in the sharing of pertinent information. Although some of the research is self-sponsored, the National Science Foundation, the American Institute of Steel Construction, the Metal Buildings Manufacturers' Association and the university have granted support.

The devastating storm which cut a swath as wide as 1.5 miles and eight miles long through the heart of the city and its northern perimeter had winds measured at 220 miles per hour and believed by some investigators to have gone much higher. (In one instance, a 500-pound industrial air conditioning unit was hurled 500 or 600 feet and imbedded in the second floor of a motel.)

Wind research, particularly its effect on structures, is of special interest to several researchers. K. C. Mehta and A. J. Sanger, of the civil engineering faculty, are documenting the response of structures to the Lubbock tornado. Sanger also is evaluating effects of the storm on pre-engineered metal buildings. Dr. Mehta also is studying the effects of wind-driven missiles on structures.

In a related study, R. R. Minor is documenting structural damage caused by Hurricane Celia which struck the Corpus Christi area on Texas' Gulf coast in August.

20-STORY OFFICE BUILDING hit by tornadic winds in Lubbock, May 11.

Technical papers are being prepared by these researchers and Dr. J. R. McDonald and J. E. Minor for presentation at the Texas-New Mexico Section, American Society of Civil Engineers, and the American Society of Civil Engineers' national meeting. Dr. McDonald's study relates to the effect of the storm on a 20-story office building.

Within the Department of Economics, Dr. John Wittman Jr. has three projects. He is assembling comprehensive economic data on the tornado's effect on the regional economy. He also worked with the Small Business Administration in establishing local offices after the storm, and he is working with graduate classes involved in assessing and evaluating economic data from the tornado.

In the Department of Sociology and Anthropology, Dr. Myra S. Minnis and Perry McWilliams are measuring the impact of the storm on social conditions in Lubbock's Guadalupe area and the relocation areas used for storm victims. Department Chairman W. J. Cartwright and Dr. D. E. Poplin have undertaken a study of the psychological effect of the tornado on occupants of a 20-story office building.

From the geosciences faculty, Dr. D. R. Haragan is conducting a fall semester Seminar on Severe Storms. Dr. Harry F. Martz of Industrial Engineering is studying the statistical properties of tornadoes. The Southwest Collection is working on an oral history of the storm. In the Department of Electrical Engineering, Drs. Marion O. Hagler and Magne Kristiansen are continuing a study started before the Lubbock tornado—on electromagnetic relationships in the development of tornados.

A research report series with the results of the Texas Tech University studies relating to the Lubbock tornado will be published, with the first report due in October.

Agricultural administrator of India visits Center

Daljit Aurora, district collector for more than 10 counties in India, was an August visitor to the International Center and Texas Tech University.

He is the first agricultural administrator sent to the United States to study agriculture and agricultural communications in a program sponsored cooperatively by the Ford Foundation and the Indian government. His district lies in a semi-arid region where major crops are sorghum ,millet, cotton and rice.

The form, opposite, to be used for a Specialist Register is inserted in this issue of the ICASALS Newsletter for the convenience of readers. Please note that all information contained in returned forms will be kept confidential upon request.

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ASSIGNMENT: _____

FEE REQUIREMENTS? _____

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no

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Research scientists begin investigations in Algerian project

Research scientists from ICASALS, Inc., —the corporate affiliate of the International Center—began Phase I of a three-year development project in Algeria in July. The project is sponsored by SONATRACH, Algeria's national petroleum company.

The three-year program will include hydrological investigations, soils studies, research in the uses of agricultural chemicals, development of agribusiness, environmental studies and a professional training program for Algerians.

The initial work was devoted to a detailed study of Algeria's Four-Year Plan for Development, conversations with Algerian government officials reconnaissance tours of farm operations and research of exisiting data.

On the team which went to Algeria were: Dr. Thomas R. Owens and Dr. Henry J. Hibshman, economists; Amon D. Dacus and Horace C. Dean, soils scientists; Dr. Frank L. Doyle, Arthur L. Jenke, and Robert M. Winn, hydrologists; John Beavers, agronomist, and Dr. Emmanuel T.G.M. Van Nierop.

All of the team members have had extensive experience in the United States and six have served on overseas assignments for private industry or government.

Also going with the first contingent of ICASALS, Inc., representatives were Deputy Directors Idris R. Traylor and Joseph Humphrey. Humphrey's responsibilities are in the area of administration.

Dr. Traylor went on to Tunisia, conferring with officials in Tunis and making an expedition into the Djebel Ousselata to examine extensive remains of the Berber cities of that region.

Of special interest

ARID LANDS IN TRANSITION, to be published Dec. 10, by the American Association for the Advancement of Science (in time for the AAAS meeting Dec. 26-31 in Chicago) is No. 90 in the AAAS series and includes invited papers of the AAAS International Conference on Arid Lands in a Changing World June 3-13, 1969, in Tucson. Chairman Harold E. Dregne of the AAAS Committee on Arid Lands is editor.

INDEX OF GREEK VERBS, by Dr. John Bodoh of the Texas Tech University Department of Classical and Romance Languages, published in August, 1970, by Georg Olms, Hildesheim, Germany, telescoping—by a unique system of indexing—500,000 forms into about 45,000 entries.

SPECIALIST REGISTER

In response to frequent request, The International Center is compiling an up-to-date register of specialists who are interested in possible employment with one of its current or future projects. Interested individuals should complete the following form and return it to The International Center for Arid and Semi-Arid Land Studies, Texas Tech University, Lubbock, Texas 79409.

NAME: _____

ADDRESS: _____

_____

_____

DATE AND PLACE OF BIRTH: _____

CITIZENSHIP: _____

CURRENT POSITION: _____

PERTINENT EXPERIENCE: _____

_____

SPECIALTY: _____

DEGREES AND INSTITUTIONS GRANTING: _____

LANGUAGES (indicate proficiency): _____

PUBLICATIONS (use reverse side if necessary): _____

PHYSICAL CONDITION: _____

MARITAL STATUS: _____

CHILDREN: Name(s) and Age(s) _____

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ARE YOU INTERESTED IN FOREIGN ASSIGNMENT? _____

LENGTH OF TIME AVAILABLE FOR ASSIGNMENT: _____

HAVE YOU MINIMUM SALARY OR FEE REQUIREMENTS? _____

ADDITIONAL INFORMATION: _____

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Note If you wish these details to be confidential, please indicate: yes
no

Your desires will be respected.

Dune stabilization

Gulf island project shows promise

Panicum amarum is a grass finding special favor with a Texas Tech University research team working to stabilize dunes on 113-mile long Padre Island, which borders the Texas Gulf coastline from Corpus Christi to Brownsville.

Four plants appear promising—*Panicum amarum,* sea oats (*Uniola paniculata*), sea shore dropseed (*Sporobolus virginicus*) and saltmeadow cord grass (*Spartina patens*). Of these *Panicum amarum* and sea oats have so far performed best.

Dr. B. E. Dahl of the range and wildlife management faculty is project leader for the team working through the Gulf Universities Research Corp. The work is funded by the U.S. Army Corps of Engineers which also is working on the project using fences to build dunes.

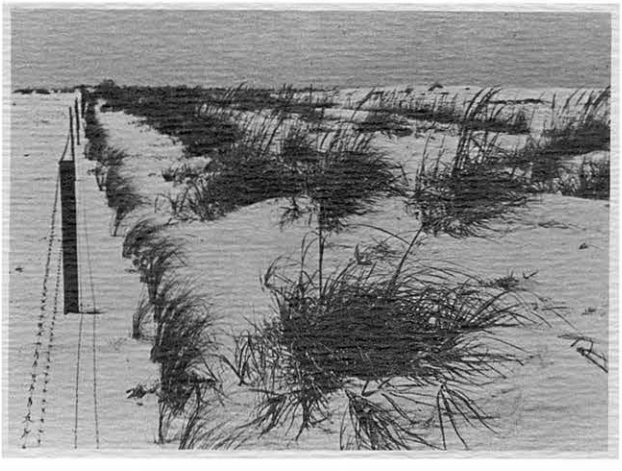
The barrier islands—formed 3,500 to 4,000 years ago—have been denuded by influences of man, overgrazing, storm surges and fire. The goal now is to rebuild the dunes about 15 feet high, well covered with protective vegetation.

The dunes would provide substantial inland protection, Dahl said, from seasonal high tides, storm surges and hurricane generated waves. Storm surges along the Gulf Coast vary from one to two feet above sea level to 15 to 20 feet above sea level during hurricanes.

Sea oats are good, Dahl said, and alone they can hold enough sand to build a dune even if only 8 to 10 per cent of the transplanted crop survives. But researchers are working toward a 75 per cent survival to build dunes faster.

Panicum amarum appears to handle easier than the sea oats, researchers find, with a longer planting season and easier transplanting. It survives well, sending out rhizomes from its base to dig into the sand and hold it. Grass grows up through new sand blown in upon it, and the buried root system forms a network for stabilizing the dune, a feature not possible with fence built dunes.

Research goals include finding the best time of year to plant, the clump size needed at transplant time to insure a reasonable survival rate, the advantage of nursery produced planting stock over wild planting stock for sea oats, and an evaluation of the four grass species which appear most useful for dune construction.



DUNE BUILDERS — A long row of transplated saltmeadow cord grass outlines a dune, two to three feet high, built by plantings of sea oats. The sea oats send out rhizomes and the resulting root network catches and holds the sand on Padre Island where Texas Tech University researchers are working to develop a natural scheme for building 15-foot protective dunes. The sea oats built up this dune in a 15-month period.

Policies for Texas coastal zone aired

Director Frank B. Conselman of the International Center served as chairman of the session on "Natural Resources—Mineral" for the Governor's Conference on Goals for Texas in the Coastal Zone and the Sea in Houston, Sept. 10-11.

Dr. Conselman described the conference as a "first" in offering an opportunity for all of the industries and agencies interested in the development of coastal and offshore Texas to discuss with other interested users the problems affecting their operations.

"The conference brought together the conservationist and the developer, the shrimp fisherman and the oyster dredger, and the offshore oil operator and the agencies providing necessary insurance. Everything was considered," he said, "from weather warning and pollution control to detailed environmental and ecological factors."

The purpose of the conference was to provide policy guidance for the Office of the Governor in recommending suitable legislation.

"A meeting of this kind," Conselman pointed out, "can also achieve the very desirable results of establishing communication among parties hitherto operating independently and without real awareness of the interests of co-users."

Logical arid land urbanization evolvement sought

The Committee on Arid Lands (COAL) of the American Association for the Advancement of Science (AAAS) on Oct. 3 in Washington made final plans for its December Symposium on Urbanization in Arid Lands.

COAL Chairman Harold E. Dregne said a second major item on the COAL agenda was planning for symposia of the future. The urbanization meeting will be held in Chicago during the Dec. 26-31 AAAS meeting. Carle O. Hodge and Carl N. Hodges are symposium coordinators. ICASALS will publish the proceedings.

There will be 16 contributors discussing the natural and cultural constraints on urban settlement in arid lands, reflecting on past failures and successes in inhabiting the deserts and semi-deserts and assessing the means by which urbanization in the arid lands might evolve more logically.

COAL has pointed out that studies show that urbanization, with light industry, utilize the sparse water of the American West, for instance, more profitably than does agriculture. Such fundamental questions, however, as to whether man should adapt his development to the arid environment rather than seek to modify the environment never have been resolved.

These matters, COAL suggests, will become increasingly significant as the burgeoning world population leads to accelerated settlement of the vast land bank that is the dry fifth of the earth.

COAL members are Chairman Harold E. Dregne who is chairman of the Department of Agronomy, Texas Tech University; Dr. R. B. Woodbury, chairman, Department of Anthropology, University of Massachusetts; Prof. Carl N. Hodges, director, Environmental Research Laboratory, University of Arizona; Prof. T. L. Smiley, head, Department of Geochronology, University of Arizona; Ralph W. Richardson, associate director for agricultural sciences, Rockefeller Foundation, and Dean F. Peterson, dean, College of Engineering, Utah State University.

Mazonowicz to speak for archaeology group

Douglas Mazonowicz, research associate-at-large of the Carnegie Museum and noted for his silk-screen prints of prehistoric art, will lecture Nov. 11 at The Museum of Texas Tech University as the guest of the Lubbock Chapter of the Archaeological Society of America.

Traveling exhibitions of his work have been featured in the United States and Europe.

Agricultural sciences to have leadership of Anson Bertrand

Dr. Anson Rabb Bertrand, professor of agronomy and chairman of the Agronomy Division at the University of Georgia, has been named dean of the College of Agricultural Sciences at Texas Tech University.

He succeeds Dr. Gerald W. Thomas who resigned to accept the presidency of New Mexico State University at Las Cruces. Bertrand currently is working on an agricultural project in East Pakistan and will assume his new duties at Texas Tech after Jan. 1.

Dr. Sam E. Curl, formerly assistant dean of agricultural sciences, is serving as interim dean, and he will serve on the ICASALS Advisory Council until Bertrand's arrival. Associate Dean J. Wayland Bennett was named assistant vice president for academic affairs of Texas Tech.

Before joining the University of Georgia faculty in 1967, Bertrand served three years as branch chief of the U.S. Department of Agriculture at Athens, Ga., and as research director for the USDA at Watkinsville, Ga., from 1961 to 1964. Prior to that appointment he was for six years a member of the agronomy faculty at Purdue University. His degrees were earned at Texas A&M University, the University of Illinois and Purdue.

He is the author and co-author of more than 35 articles published in scientific journals, and he has served as associate editor of the Journal of Soil and Water Conservation and of Soil Science Society proceedings.

ICASALS travelers

WASHINGTON and NEW YORK — ICASALS Deputy Director for Academic Affairs Idris R. Traylor visited, in Washington, with representatives of the Department of State, the U.S. Information Service, the International Education Commission of the Department of Health, Education and Welfare, the Smithsonian Institution, the National Science Foundation, the Tunisian Embassy, with Congressman George Mahon, and attended the national meeting of Delta Phi Epsilon, professional foreign service fraternity, of which he is a national vice president. In New York, he visited with officials of the Institute of International Education, the Rockefeller Foundation, the Ford Foundation, several agencies of the United Nations, the New York office of the American University of Cairo and with art and antiquity dealers concerning exhibitions for the ICASALS gallery of The Museum at Texas Tech University.

University welcomes international students with special events

Approximately 200 students from about 50 foreign countries were among the 20,008 enrolled for the fall 1970 semester at Texas Tech University.

Participating in orientation seminars and social events for new international students were representatives of the university's International Club, Student Association, Alpha Phi Omega which is a men's service organization, the Women's International Relations Association, The Museum, the Office of International Student Services, the faculty and the student body, and the Lubbock Community Coordinating Board for International Student Projects. Robert Burnett, director for International Student Services, coordinated the orientation program.

Panel discussions emphasized "Social Perspectives of the American Society" and "The Academic System at Texas Tech."

Prepared to assist prospective students is a new handbook, "Information for Prospective Foreign Students," available upon request from the university's Office of Admissions. It includes descriptions of admission requirements, application procedures, expenses, services and programs, living accommodations, medical services, visas and major subjects offered.

Weaving specialist joins Textile Research Center

Dr. A.P.S. Sawhney has joined the Texas Tech University Textile Research Center as a postdoctoral research fellow, assisting in the weaving aspect of a study of blending extra high and extra low micronaire cottons. The study shows promise of developing markets for these "discount" cottons.

J. Knox Jones named to head Graduate School

Dr. J. Knox Jones Jr., professor of systematics and ecology and associate director of the Museum of Natural History at the University of Kansas, has been appointed dean of the Texas Tech University Graduate School.

His appointment will become effective June 1, 1971. Until that time Dr. Thomas A. Langford, a member of the English faculty and assistant dean of the Graduate School, will serve as interim dean.

Dr. Lawrence L. Graves, a member of the history faculty who had served as interim dean of the Graduate School since 1968, was named dean of the College of Arts and Sciences upon the resignation of Dr. Lorrin G. Kennamer. Kennamer now is dean of the College of Education, University of Texas.

As a result of the changes, Dr. Langford will serve on the Advisory Council of the International Center until Dr. Jones assumes his new duties. Dr. Graves remains a member of the council.. Dr. Kennamer now is consultant to the International Center.

Dr. Jones has been associated with studies of recent mammals for more than 20 years with particular interests in systematics and biogeography (including Pleistocene) of mammalian fauna of North and Middle America and eastern Asia.

He served five years as a director of the American Society of Mammalogists, vice president from 1968-70 and managing editor and chairman of the Editorial Committee since 1967. He was managing editor for the Society for the Study of Evolution, 1965-66, and was named last year to the Council for the Society of Systematic Zoology.

ICASALS contributions numbered 88 to Sept. 1, 1970. This partial list is a continuation of previously published titles and will be continued in succeeding issues to keep the catalog up to date. **Contributions** include:

83. C. D. Cornett, L. B. Sherrod and R. C. Albin	Effect of Methods of Processing upon Digestibility of a New Wheat by Sheep and Cattle
84. A. W. McCloy, L. B. Sherrod, and K. R. Hansen	Nutrient Value of Triticale for Ruminants
85. Robert Albin	Handling and Disposal of Cattle Feedlot Waste
86. L. B. Sherrod	Nutritive Value of *Kochia scoparla I.* Yield and Chemical Composition at Three Stages of Maturity
87. L. B. Sherrod and L. G. Finley	Nutritive Value of *Kochia scoparla II.* Digestibility of Silage Harvested at Different Maturity Stages
88. F. E. Busby Jr. and J. L. Schuster	Saltcedar and Mesquite Occurrence on the Middle Brazos River (Texas) Flood Plain

(Available upon request)

Corona treatment

High voltage effects tested

The effects of a high voltage process called "corona treatment" for cotton, wool and mohair is under study at Texas Tech University's Textile Research Center.

In the project, TRC is working in cooperation with the U.S. Department of Agriculture's Western and Southern Utilization and Research Development divisions. The USDA sponsored research is the largest scale study undertaken to date to carry corona treated fibers all the way through fabric manufacturing and testing.

Joseph A. King, TRC wool technologist, is the principal investigator. Pilot studies, he said, make the process look promising because the tensile strength of cotton yarn was increased 30 per cent and the mohair showed a strength increase of up to 24 per cent.

The treatment uses an electric discharge in the neighborhood of 18,000 volts. It modifies slightly the fiber surface, and increased cohesion allows the spinning of a yarn with less twist than is necessary to spin a stable yarn with smooth surface fibers.

The new research will mark the first time the treatment has been applied to wool for yarn and fabric testing and the first time the three corona treated natural fibers will be blended together in fabrics. The corona treatment also will be applied to alcohol extracted cotton for spinning and fabric testing.

A. Anthony Ball, director of TRC Mechanical Processing, will direct spinning and weaving experiments.

Colorado dig proves promising to students

Texas Tech anthropology students during the summer found Panhandle Plains sites—active about 1100 A.D., + or — 200 years— in northeastern New Mexico and Southeastern Colorado, but the most exciting part of their field trip was the location of undisturbed sites for future digs.

Dr. Richard O. Keslin of the anthropology faculty led the field trip, and he reported that the area is remote and access is difficult. As a consequence, he said, it is undisturbed and offers considerable opportunity for future study.

The region, he said, has sites occupied by prehistoric men of the Paleo-Indian (Llano, Folsom and Plano traditions), Archaic, Late Prehistoric horticultural and historic horse-nomad traditions.

Particularly helpful, he said, was the cooperation of ranchers on whose land the sites are located.

Single cell protein may offer solution to pollution problems

The conversion of mesquite, cotton gin waste, weeds, feedlot waste and agricultural by-products into edible single cell proteins for animal food is the object of an interdisciplinary pilot study sponsored by Brush Control Studies at Texas Tech University.

Chairman S. P. Yang of the Department of Food and Nutrition has been working on research in this area for the past four years.

"I have enough data," Dr. Yang said, "to show that acceptable food can be produced in this way. It would be economical as feed for animals and so could be used to increase food supplies for humans.

"The process not only would prevent environmental pollution and conserve organic matter," Yang said, "but it also shows strong promise for helping to solve the tremendous food shortage problem of the world."

Project participants in the research—"Elimination of Environmental Pollution Through Recycling of Wastes," are: Yang and his graduate students in food and nutrition, Mrs. David F. Summers and Huei-Hsing Yang; Dr. Donald W. Thayer of the biology faculty; and Prof. Joseph L. Schuster, project leader for Brush Control Studies and chairman of the Department of Range and Wildlife Management.

ICASALS, Inc., is a non-profit research and education organization located at the International Center for Arid and Semi-Arid Land Studies. Contributions may be made to ICASALS, Inc., on a tax exempt basis.

Phreatophytes

Brazos River study completed

The first Texas study of the encroachment of phreatophytes and their water consumption rates along a major river has been completed by Texas Tech University researchers who found that the water consuming brush accounts for a loss of almost 100,000 acre feet a year along the upper Brazos.

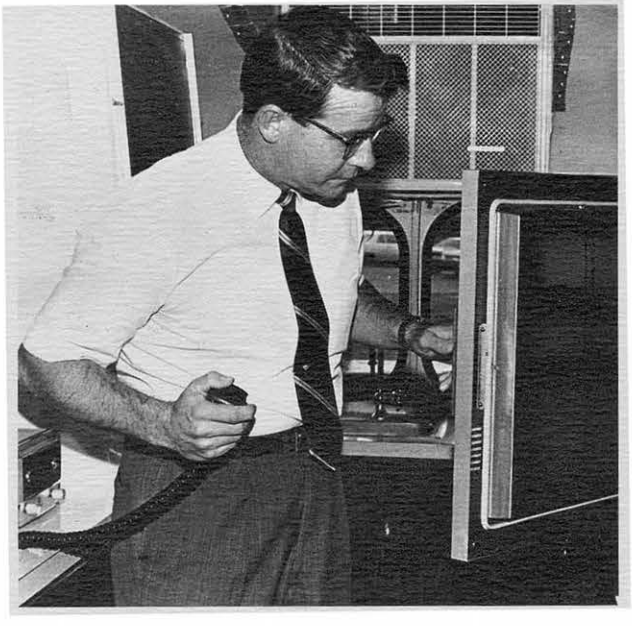
Saltcedar (*Tamarix gallica*) alone accounts for about 72,450 acre feet and mesquite (*Prosopis glandulosa*) for another 17,202 acre feet a year along the Brazos from Possum Kingdom Lake (near Mineral Wells) to its headwaters.

Directing the study was Dr. Joseph L. Schuster, project leader of Brush Control Studies and chairman of the Department of Range and Wildlife Management at Texas Tech. Supporting the study were the Texas Water Development Board, the International Center, and the university's Water Resources Center and Brush Control Studies.

Schuster explained that the brush which covers 82 per cent of Texas rangeland now uses more water annually than all the state's industry and people together.

Saltcedar, he said, was introduced into Texas in the 1870's. While photographs show that mesquite has only held its own along the river since 1940, saltcedar has filled in almost every open area and almost all the grasslands which once bordered the upper Brazos. Cottonwoods are a minor menace, he said.

While some brush is valuable for wildlife and for heat control of the water, he pointed out, management and control obviously are imperative in a state as short of water as Texas—a saving important not only for ranching interests but also for industrial and municipal users.



"GARDYLOO" — A new mobile environmental sampling laboratory, named "Gardyloo," is now fully functional for use as a field station by the various departments at Texas Tech University. Prof. George F. Meenaghan, chairman of the Department of Chemical Engineering, checks out the oven and two-way radio. The bus also has a furnace, refrigerator, sink, laboratory glassware and supplies, water and air pollution testing equipment, and a generator mounted on a trailer to offer 18 hours of uninterrupted operation. Its first operational use will be in water pollution studies.

Playa symposium

Variety of uses receive attention

The diverse uses of playas—from fisheries to space ship landing strips—will be discussed at the first Playa Lake Symposium Oct. 29-30 at Texas Tech University. The symposium has the sponsorship of the International Center and the university's Department of Geosciences.

While the geology of playas and the various purposes to which agriculture puts them will be discussed by several speakers, others will comment on their growing use in fish farming on the Plains of the U.S., the playas as a source of minerals, their value as landing strips for orbital type modules which glide to earth, and possible use of playas for hydra-solar power.

Dr. C. C. Reeves of the geosciences faculty is program chairman and leader for the field trip which will follow the symposium. He said program topics will include:

The Role of Playa Lakes in the Development of the High Plains; Small Playa Lakes of Nebraska—Ecology and Fisheries; Playa Water Quality Changes and Use of Playa for Feedlot Runoff; Concentration of Pollutants in South Plains Playa Lakes; Playas, Southern High Plains of Texas;

Recent Work in Fayum Depression, Egypt; Playas and Related Phenomena in the Saharan Region; Hydrologic and Geologic Processes Influencing Playa Development; Playa Surface Features as Indicators of Environment;

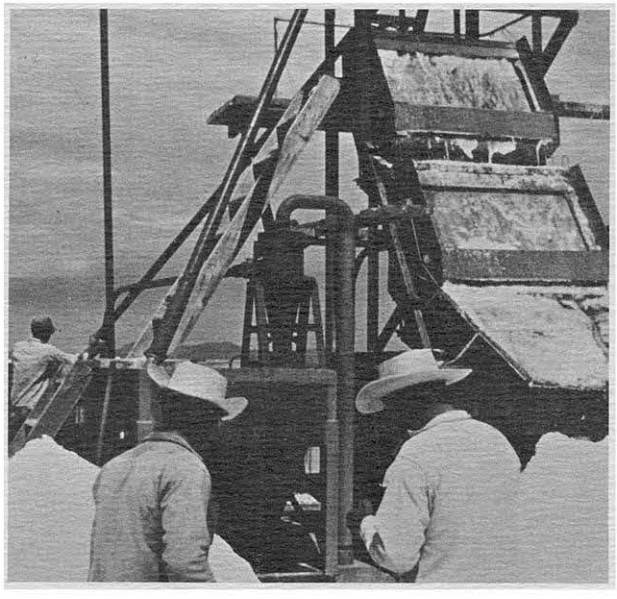
Sedimentologic Studies on the Wilcox Playa Area, Southeast Arizona; Aridity, Iodine and Neotonic Salamanders; Hydra-Solar Power; Subsurface Geology of Some Small Playas; Multipurpose Modification of Playa Lakes;

Mineralogical and Selected Chemical Properties of High Plains Soils and Sediments; Mineralogy of Suspended Playa Lake Sediments of the Southern High Plains; Gravity Anomalies Associated with Playa Lake Basins of the Southern High Plains; Orientation of Playa Lake Basins; Origin of Some of the Salts in Playa Lakes.

ICASALS Special reports

College of Agricultural Sciences No. 36—"Noxious Brush and Weed Control Research"

Department of Agricultural Economics No. 37—"Market Structure of the High Plains" (Texas)



PLAYA MINING — Brackish water from the playa of old Lake Palomas near Salinas in Chihuahua, Mexico, splashes over ammonia coolers to extract supplies of sodium sulphate. Within the Lake Palomas basin is this classic playa, and the recovery of minerals from such areas is a common practice, contributing to economies throughout the world. Mining and the great variety of other uses for playas will be considered at an October symposium at Texas Tech University.

Short course deals with oilfield design

Texas Tech University's Department of Electrical Engineering will offer its first Oilfield Automation Short Course for professional personnel Oct. 19-23.

Dr. Darrell L. Vines is director for the short course which, he said, will emphasize overall system design rather than operational procedures.

Vines said that oilfields throughout the world are moving toward increased automation, and design is critical to performance. On design depend the proper production of the field, quality of the data received by the automation process, labor requirements, and costs both of installation and repair.

The course will include five general areas: end devices, signal conditioning, telemetry, computers and systems engineering concepts. It is limited to 25 participants.

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