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Texas Tech News

UNIVERSITY NEWS AND PUBLICATIONS / P.O. BOX 4650 / TEXAS TECH UNIVERSITY / LUBBOCK, TEXAS 79409 / (806) 742-2136
Residence telephones: Jane Brandenberger, Director, 829-2108 / Bea Zeeck, Associate Director, 296-7125 / Dan Tarpley, Manager, News Bureau, 792-5596

CONTACT: Kandis Gatewood

LUBBOCK--A workshop on camping skills for counselors will be offered on Tuesday and Wednesday (June 12-13) through the Texas Tech University Division of Continuing Education and Department of Health, Physical Education and Recreation.

Sessions will run from 9 a.m.-noon in the Men's Gym. Tuition is \$3.

On Tuesday Dr. Mary S. Owens, physical education professor, will teach games from 9-9:45 a.m. and from 10-10:45 a.m. Dr. Marvin L. Moon, associate professor of art, and his wife, Mrs. Betty Moon, will teach arts and crafts from 9-9:45 a.m. and from 10-10:45 a.m. John L. Smith, recreational sports graduate assistant, will teach archery from 10-10:45 a.m. and James F. McNally, swimming coach, water safety and first aid, 10:45 a.m.-noon.

On Wednesday Smith will teach rope and tool craft from 9-9:45 a.m.; trip canoeing, 10-10:45 a.m.; and canoeing, 10:45-noon. McNally will teach water safety and first aid from 10:45-noon. Capt. John B. Moseley, assistant professor of military science, will teach orienteering from 9-9:45 a.m. and from 10-10:45 a.m.

For further information contact the Division of Continuing Education at 742-3797.

CONTACT: Dan Tarpley

NOTE TO EDITORS: This list may not be complete for your city, since many students, particularly upperclassmen, list Lubbock as their official mailing address. Consequently, we have no way of knowing what their hometown is. This note is designed to help you answer queries from parents who may know their sons or daughters were honored but were not listed.

LUBBOCK--More than 5,300 students at Texas Tech University qualified for dean's honor rolls during the spring 1979 semester by achieving grade point averages of 3.0 or more on a 4.0 scale. Of that number _____ were from _____.

They included:

Texas Tech University, one of the four major Texas universities, has an enrollment of 22,500 students in six colleges and three schools. These include the colleges of Agricultural Sciences, Arts and Sciences, Business Administration, Education, Engineering and Home Economics and the Graduate School, School of Law and School of Medicine.

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CONTACT: Pat Broyles

ATTN: Farm News Directors

LUBBOCK--THE LATEST TRENDS IN THE SWINE INDUSTRY WILL BE DISCUSSED AT TEXAS TECH UNIVERSITY'S ANNUAL SWINE SHORT COURSE JUNE 28TH. SPEAKERS INCLUDE DR. GILBERT HOLLIS, SWINE SPECIALIST IN THE UNIVERSITY OF ILLINOIS DEPARTMENT OF ANIMAL SCIENCE, WHO WILL DISCUSS BROOD SOW MANAGEMENT AND CURRENT TRENDS IN SWINE BUILDING CONSTRUCTION.....DR. (MAHTHAYAW) GENE MATHIA, WITH THE TEXAS TECH DEPARTMENT OF AGRICULTURAL ECONOMICS WHO WILL TALK ABOUT THE OUTLOOK FOR THE SWINE INDUSTRY.....AND KEN HORTON, VICE PRESIDENT OF THE TEXAS PORK PRODUCERS ASSOCIATION, PRESENTING A REPORT ON HIS ORGANIZATION. OVER 100 PERSONS ARE EXPECTED AT THIS YEAR'S SHORT COURSE, WHICH WILL BE HELD AT THE NEW TEXAS TECH LIVESTOCK ARENA, AT INDIANA AVENUE AND BROWNFIELD HIGHWAY. REGISTRATION BEGINS AT 8:30 A.M. THURSDAY, JUNE 28TH, AND COURSES END AT 3 P.M. CO-SPONSORING THE EVENT ARE THE TEXAS PORK PRODUCERS ASSOCIATION, TEXAS PORK PRODUCERS BOARD AND TEXAS TECH ANIMAL SCIENCE DEPARTMENT.

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CONTACT: Dan Tarpley

LUBBOCK--The Texas Tech Research and Training Center in Mental Retardation will co-sponsor a vocational rehabilitation conference at Fountainhead Lodge, Checotah, Okla., Monday through Wednesday (June 11-13).

The conference on "Challenges of Cooperation" is co-sponsored by the Oklahoma Department of Institutions, Social and Rehabilitative Services.

Approximately 30 speakers and presenters will participate in the program. They include Michael Norman, associate director of the National Association of State Directors of Special Education, Washington, D.C.; Michael Stumbaugh, national project director, National Association for Retarded Citizens; Dr. Charles Hopkins, assistant state director for Supportive Services, Oklahoma Department of Vocational and Technical Education; Lowell Green, Division of Rehabilitative and Visual Services, Oklahoma City; and Evelyn Llewellyn, coordinator of Special Education, Oklahoma Department of Special Education.

Two hundred teachers, principals, superintendents and rehabilitation counselors and supervisors from public school systems and rehabilitation agencies in Oklahoma will attend.

Additional information may be obtained from Darrel Rutherford, project training officer, Research and Training Center, Texas Tech, or Beth Edmonson, supervisor, Rehabilitative Services, Oklahoma City.

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CONTACT: Prabhu Ponkshe

LUBBOCK--Dr. Idris R. Traylor Jr., member of the history faculty at Texas Tech University, has been appointed to the board of directors of the Texas Historical Foundation (THF).

The foundation is a private, non-profit group raising funds to support preservation and conservation of Texas' historical heritage.

During the last 25 years THF has, in cooperation with the state-supported Texas Historical Commission, saved or restored nearly 3,000 buildings and other historic structures, established almost 350 local and regional archives, opened 358 history museums and placed more than 6,000 Texas historical markers along state travel routes.

The foundation was organized in 1954 by several prominent Texans including the late Miss Ima Hogg of Houston. Mrs. Charles L. Bybee of Houston is current president of the board of directors. The 34-member board meets four times each year.

THF operates the Texas Heritage Fund, a long-range voluntary financial program for supporting the foundation's activities.

Traylor is deputy director of Texas Tech's International Center for Arid and Semi-Arid Land Studies (ICASALS).

Mrs. Wesley B. Blankenship of Lubbock also is a former director of the foundation and presently member of the Texas Historical Commission.

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CONTACT: Kandis Gatewood

LUBBOCK--Texas Tech University senior Candace Chappell recently completed an internship with the Western Women's Bank of San Francisco, a branch of the Bank of America.

The internship was part of degree requirements for the finance major in the Department of Family Management, Housing and Consumer Science.

According to Dr. Cora F. McKown, associate professor, most finance students intern in the Lubbock area.

"We were pleased one of our students was able to intern in an area such as San Francisco," she said. "We have placed students in the Consumer Affairs Division in Washington, D.C., and the state capital and with a Dallas firm."

Chappell would like to work with consumers in lending at a bank or savings and loan. In preparation for her San Francisco experience, she reviewed the history of banking and did critiques of tapes of the International Monetary Symposium which was held in Europe.

The Department of Family Management, Housing and Consumer Science offers undergraduate options in family finance, housing and interiors, consumer studies and management and residential real estate.

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CONTACT: Dan Tarpley

LUBBOCK--Late enrollment for the first summer term of the summer session at Texas Tech University will conclude Friday (June 8).

Registration conducted Monday (June 4) for this summer's first term totaled 7,485, up from last year's regular first-day registration figure of 7,431.

Official enrollment last year for the first summer term was 7,713 and registration officials expect this year's final total to be about the same.

The first summer term ends July 14 and the second begins July 16. The summer session ends Aug. 25.

7-6-7-79

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CONTACT: B. Zeeck

LUBBOCK--Natural fibers, which played second fiddle to synthetics for a few years, are making a solid come back and wool could have as bright a future as any.

Director James S. Parker of the Texas Tech University Textile Research Center (TRC) attributes the growing popularity in natural fibers not to new but to old characteristics.

"They are comfortable, beautiful and durable," he said, "and blended with synthetics they can even have enhanced quality."

A primary problem with wool in the past is that only a small proportion of the textile systems in the country has been designed to handle the long wool fibers.

Only about 2.7 percent of the textile machinery in the United States is capable of processing wool in the traditional worsted fabrics, while 97 percent of the systems are designed for cotton.

The difference lies in the length of the fibers. Cotton fibers are 1 to 1½ inches long while wool fibers are 3 to 4 inches long.

To adjust, Parker said, several spinning companies use wool at the regular length, process it partially through the worsted system and then reduce it to 1½ inches by breaking or cutting.

There may be a better system, Parker explained, and that is to shear sheep when the wool fiber gets to the length of cotton fibers.

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"This might mean shearing sheep twice a year, but we're working with this short wool now."

In research funded by the Natural Fibers and Food Protein Commission of Texas, the TRC is working with the Texas A&M University Animal Science Research Station at San Angelo. Some sheep are sheared on a schedule to give 1½ inch wool. This is delivered to the Textile Research Center for processing. Martin Wardlaw, Del Rio rancher, also is cooperating in the research project.

"Because of the obvious decline in worsted production," Parker said, "we have decided to evaluate wool on the cotton system as thoroughly as possible. Working with wool shorn at an early stage is just one of the possibilities."

He said that in blending wool with polyester fibers, the TRC has produced fabrics with 80 percent wool and 20 percent polyester and four other percentage combination, 65-35, 50-50, 35-65 and 20-80, with results showing specific physical properties increasing as the percentage of polyester increased.

One problem that has developed is a lack of length uniformity in the wool from early-shorn sheep. The first shipment varied in length from less than a half-inch to longer than 2 inches.

"We would like a fiber with better uniformity, but past experience indicates this material should produce yarn on the cotton system without any great difficulty, with a likelihood of higher than normal amounts of fiber removed during processing. This is a matter, of course, for further investigation."

He pointed out that Texas produces about 20 percent of the nation's wool, and consequently the research has special economic value for the state.

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CONTACT: Jean Terrell

ATTENTION: Agriculture Editors

LUBBOCK--This little piggy went to market. This little piggy stayed home. This little piggy was weaned at three weeks, went into shock and died -- an all too common occurrence now that the trend in pork production is toward younger weaning.

At the Texas Tech University Swine Short Course on June 28, Dr. Bobby Moser of the University of Nebraska-Lincoln animal science faculty will discuss management practices that cut excessively high death loss in newly weaned pigs.

Younger pigs under stress are especially vulnerable to scours, nutritional or infectious, gut edema and "post weaning slump." Conditions contributing to stress include removal from the sow, different physical surroundings, more drafts and lower environmental temperature, commingling with pigs which are not littermates, the need to establish a new "pecking" or social order, diet changed from liquid to dry, change in the drinker, and the shock of being castrated and vaccinated.

One Nebraska study indicates that 70 percent of pigs dying after weaning do so during the first post weaning week.

Pigs must undergo all stress conditions mentioned above at one time or another, according to Moser, but good environmental conditions and a good health and nutrition program will avoid exposure to all of them at weaning and cut losses.

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pig weaning/add one

Moser will discuss procedures shown to reduce post weaning mortality rates, especially creep feeding, iron supplements, starter diets, watering, commingling of litters, and preheating nursery pens.

The registration fee for the short course, which will be held at the new Texas Tech Livestock Arena, Indiana Ave. and Brownfield Highway, is \$10. Registration begins at 8 a.m. and the course concludes at 3 p.m.

8-6-8-79

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CONTACT: Dan Tarpley

LUBBOCK--The parent, relative or friend who attends the beautifully smooth and perfectly orchestrated commencement exercises at Texas Tech University at 7:30 p.m. on Friday will be impressed with the formal simplicity of it.

The casual observer is likely to assume that the long lines of students in their flowing robes and tasseled caps and the faculty filing down the aisles, two abreast in their equally flowing, colorful robes splashed with the royal colors of their alma maters, is just a happening.

But Dr. Floyd E. Eddleman, chairperson of the university's Convocations Committee, will testify that it just isn't so. The logistics have been months in the planning, and already reservations are being made for the 1980 commencement exercises.

It's his committee who work with the administration and vice presidents and who approve the program, with each making recommendations to the other. And it's the committee as a group and as individuals who really have to mold the whole thing into the smooth production that it is.

It's the Convocations Committee that has instructed the several hundred faculty, who choose to don their academic regalia for the processional, to congregate in the southeast area of the concourse in the Municipal Coliseum at 6:45 p.m. The graduates also will congregate at 6:45 p.m. in the southwest portion of the concourse, all in preparation for their grand entrance.

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But days before the event, signs have been prepared to tell students of the colleges where they should gather to move into the procession. A few professors who will participate in the hooding of the doctoral graduates have been told previously to head the line of faculty so they will be available to perform their hooding ceremonies when they get their cue from the platform.

Plans have also been made for a roped-off area for special guests and families of the platform party.

"There are a thousand other details which have been taken care of or must be accomplished before Friday night," Eddleman said. "Some of them are new. For instance, we are announcing that the program will be in the coliseum. For several years we have planned it for Jones Stadium, and then frequently we have had to make a last minute decision to move it indoors because of threatening weather. This time we have planned it indoors and we only hope it will be a cool evening because the Coliseum has no air conditioning."

Another change which the committee believes will be an improvement is the placement of the Texas Tech band at the south end of the arena. Last year it was at the same end with the platform, which, Eddleman said, created a congested area.

But the problems do not end with the Friday night program. The colleges will conduct their individual commencement exercises Saturday. Three will use the Municipal Auditorium Saturday morning, and, because it has been rented by an off-campus organization for Friday night, the College of Engineering must set its stage early Saturday morning for its program at 8 a.m.

Business Administration has it for 9:30 and Education for 11. All three must be right on schedule because the third one must be out in time for another off-campus activity scheduled for the auditorium at 1 p.m.

"That's cutting it closely," Eddleman said.

But come Friday night, most of those who have not read this are likely to think everything just fell into place, almost by itself.

"Don't you ever believe it," Eddleman said.

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CONTACT: Jean Terrell

ATTENTION: Agriculture Editors

LUBBOCK--The Texas Tech University Department of Range and Wildlife Management will hold a cooperative range, brush and weed control field day on June 27.

Area ranchers, soil conservation service technicians, and extension and research personnel are invited to attend to view and discuss recent research developments in herbicidal control, sand shinnery oak, and broom snake weed.

Registration will be from 8-9 a.m. at the Beasley Ranch House, 15 miles north of Plains, Texas, on Highway 214 and 4 miles east on county road.

The morning session will be devoted to demonstrations of sand shinnery oak control and impact on wildlife habitats and the community. After a noon dutch treat lunch at Plains City Park, participants will tour research plots two miles west of Bronco, Texas, on Highway 380. Field day activities conclude at 4 p.m.

The field day is co-sponsored by the Texas Tech University College of Agricultural Sciences, the Texas Section of the Society for Range Management, the Texas Soil Conservation Service, New Mexico State University, and cooperating ranchers.

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CONTACT: Jane Brandenberger

FOR IMMEDIATE RELEASE

LUBBOCK--Robert L. Pfluger, chairman of the Board of Regents of Texas Tech University and the School of Medicine, has announced that the boards will meet in called session on Friday, June 15.

The Regents will meet at 9 a.m. in the boardroom in the Administration Building.

The agenda will include an executive session and consideration of appointment of an interim president and of a search committee for a new president.

Chairman Pfluger said that President Cecil Mackey had informed him of his intention to resign his Texas Tech post in order to accept the presidency of Michigan State University in late summer or early fall.

10-6-8-79

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DATE	Stories and Cutlines	Locals	Reg. I	Reg. W	50 M's	Reg. R	x-lis	Adj.	Hometo	Explanations
1-6-11-79	Pulsed Power Seminar	/	/		/					
2-6-11-79	Tornado Conference	/	/							selected list
3-6-12-79	Swine-Visitors	/								
4-6-12-79	Accountancy	/								
5-6-12-79	Watercolor Exhibit	/								
6-6-12-79	4th of July - Launching Herd	/	/	/						
7-6-12-79	" " " - PSA									local + adjacent county radio
8-6-13-79	Guided Design	/								
9-6-13-79	Education Workshop	/								
10-6-13-79	Leach	/								
11-6-13-79	PSA-Reading + Math Workshop	/								local
8-6-13-79	Outline									
"	"									
12-6-13-79	Used tower	/								
"	"									
13-6-14-79	Saw Management	/	/							Sele. Reg
14-6-15-79	Spalding	/								
15-6-15-79	Elephant Butchering	/	/	/						
16-6-15-79	Arch'dus - (Bear US)	/	/	/						arch. list
17-6-15-79	Outline									
18-6-15-79	Outline Arch'dus - of and 2 arch, Houston, Midland, Ft Worth, API	/	/							

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CONTACT: B. Zeeck

LUBBOCK--Approximately 300 scientists and engineers from 10 countries will attend the second International IEEE Pulsed Power Conference on June 12-14 in Lubbock.

Like the first such international conference, also in Lubbock, the meeting has been arranged by the Department of Electrical Engineering at Texas Tech University, leader in the field of pulsed power technology and engineering, a field increasingly important in energy and defense applications.

The South Plains Section of the Institute of Electrical and Electronics Engineers (IEEE) is a joint sponsor with various offices and laboratories of the U.S. departments of Defense and of Energy.

Experts have preregistered from throughout the United States and from the Soviet Union, Poland, England, Germany, France, Denmark, Belgium, Canada and Japan.

In addition to IEEE, sponsors are the U.S. Air Force Aero Propulsion Laboratory, Air Force Office of Scientific Research, Electronics Technology and Devices Laboratory of the U.S. Army, the U.S. Naval Surface Weapons Center, Office of Naval Research, and the Department of Energy offices of Laser Fusion and Fusion Energy.

A major topic to be considered is the switching of high voltage pulsed power, in the range of kilovolts and kiloamperes which must be switched on and off in the range of nanoseconds -- one billionth of a second. Much of the Texas Tech research has been in the area of switching.

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pulsed power/add one

Dr. Magne Kristiansen, Horn Professor of Electrical Engineering at Texas Tech, is conference chairperson. Heading the Technical Program Committee is Dr. Arthur H. Guenther, Texas Tech adjunct professor and chief scientist of the Air Force Weapons Laboratory, Kirtland Air Force Base, New Mexico.

Registration will start at 8 a.m. and sessions at 9 a.m. at the South Park Inn. The registration fee is \$65.

1-6-11-79

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EDITOR'S NOTE: You are invited to cover this event. However, there will be a news conference at 4:45 p.m., at the end of the conference, summarizing the discussions. This will take place in the Harold Hinn Conference Room.

LUBBOCK--Representatives of more than a dozen agencies with a special interest in the April 10 Wichita Falls tornado will meet for a one-day conference Thursday (June 14).

The group will exchange information and data and plan possible coordination of related research projects and reports.

The conference, under the auspices of the Institute for Disaster Research (IDR) at Texas Tech University, will take place in the Harold Hinn Conference Room on the Lubbock campus.

Attending will be representatives of: the National Weather Service, Silver Springs, Md.; Center for Disease Control, Atlanta; National Severe Storms Laboratory, Norman, Okla.; National Weather Service Regional Office, Fort Worth; City of Lubbock Civil Defense; North Dakota State University Department of Sociology, Fargo; City of Wichita Falls Public Works; Wind Engineering Research Council, Fort Collins, Colo.; National Research Council Committee on Natural Disasters, Pasadena, Calif.; National Science Foundation, Washington, D.C.; National Severe Storms Forecast Center, Kansas City, Mo.; and the National Weather Service, Lubbock.

IDR Director Joseph E. Minor said that informal discussions will predominate at the conference although some time will be devoted to research program development and possible coordination of research work among those represented. There is no registration fee.

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CONTACT: B. Zeeck

ATTENTION: Business Editors

LUBBOCK--The National Association of Accountants (NAA) will award the Robert Beyer Gold Medal to Lane K. Anderson, associate professor of business administration at Texas Tech University, during its annual conference June 24-27 in Boston.

Anderson, among 235 successful candidates completing a five-part examination to earn the Certificate in Management Accounting, achieved the highest score in the competition. The award he will receive is named for a former president of the NAA.

The certification program was established by the national association in 1972 to contribute to the development of management accounting.

"The accountant is no longer simply a recorder of business history," Anderson said, "but now plays a dynamic role in making business decisions in future planning and in almost every aspect of business operations.

"The management accountant has key responsibilities for developing, producing and analyzing information to help management make sound decisions."

Anderson, a certified public accountant, joined the Texas Tech faculty last September after four years as a staff member of the Cost Accounting Standards Board, Washington, D.C. He also has taught accounting at the University of Wisconsin-Madison, Brigham Young University and the University of Maryland. His writings appear in accounting and business systems journals.

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LUBBOCK--Robert E. Wood's "Diana" has won a \$500 first prize for the Green Valley Lake, Calif., watercolorist in the annual Watercolor Exhibition sponsored by the West Texas Watercolor Association and The Museum of Texas Tech University.

The exhibition of 96 works by 59 artists will be on display at The Museum June 17 through July 15. Judge for the 1979 show was Jo Taylor of Pittsburg, Texas, who is a member of the American Watercolor Society.

Second prize of \$300 went to Tom Hill, Tucson, Ariz., for "Flower Lady of Zapopan" and the \$150 third prize to Diane Peters, Corpus Christi, Texas, for "The Pass - I."

Five honorable mentions were awarded to: Barbara George Cain, Fort Worth, "Quartz Crystals I"; Patrick Clark, Hutchinson, Kan., "Seat of Agriculture"; Sandra Humphries, Albuquerque, "Snowbound"; and Maris Durham Shepherd, Albuquerque, "UFO."

Purchase awards of \$150 each went to : Hanna Baugh, McAllen, Texas, for "Quiet Dawn," purchased by the West Texas Museum Association; Tony Couch, Stone Mountain, Ga., "Water," WTMA, and "Helen's Stream," Insurance Associates; Nancy Carr, Levelland, Texas, "John's Tree," Levelland State Bank; Margaret Graham Kranking, Chevy Chase, Md., "Field of Glory," Don Harris Appraisal; Dean Mitchell, Havana, Fla., "Rain Bucket," Dr. Carl Brown; and Leo Smith, Lubbock, Texas, "Rain," Scoggin-Dickey Buick Company.

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watercolors/add one

In addition to the states represented by prizewinners, paintings in the exhibit come from Louisiana, Pennsylvania, Colorado, New Mexico, Wyoming, Oklahoma, Hawaii, Massachusetts, Kentucky and Ohio.

Mickey Stephens of Sudan, Texas, member of the West Texas Watercolor Association, chaired the 1979 exhibit committee. Initial judging is done from color slides submitted by artists. All entries are in transparent watercolors.

5-6-12-79

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CONTACT: B. Zeeck

LUBBOCK--A flag-waving, whizz-bang 1979 Fourth of July, with singing, games and oratory in the best American tradition, will take Ranching Heritage Center visitors back to Independence Day celebrations of yesteryear.

As many as 3,000 are expected to participate this July 4. Before the celebration, which lasts from 5-9 p.m., there will be dedications marking progress in the development of the Ranching Heritage Center of The Museum of Texas Tech University. Dedication ceremonies, for which there is no charge, will last from 4-5 p.m.

The Ranching Heritage Association will dedicate the Jowell House, a mid-nineteenth century limestone ranch house which stood roofless at the center until research could determine the roof contours. Once the design satisfied architectural historians, a stonemason had to complete restoration of the house, its cistern and meat and milk house.

Also scheduled for dedication is the Robert L. Snyder Memorial Drive and Portico honoring a past director of the center and linking a new parking lot with The Museum entrance. Also to be dedicated are a bronze plaque commemorating the Diamond M Foundation's contribution to The Museum operation and a photographic plaque commemorating the association's efforts in making the memorial drive and parking area possible.

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A special time is reserved for nostalgia in the dedication of a live oak tree to the memory of the late Mayor Ray Bass, whose earlier Fourth of July oratories endeared him to Ranching Heritage Center audiences. His law partner for more than 19 years, Kennett Hobbs, will speak at the dedication of the Roy Bass tree. (cq)

Dr. Leslie C. Drew, director of The Museum, said that guests will be invited to join the dedication procession which precedes the festivities. Following the dedications the site will be closed briefly and then reopened for the fun and games.

The celebration is sponsored by the Docent-Volunteer Guild of The Museum. Cost is \$2 per family and first and second place ribbons will be presented for all contests: watermelon-eating, seed-spitting, washer-pitching, horseshoe-pitching, three-legged and sack races. Competition will be divided by ages.

There will be patriotic singing by Dr. Moses Turner, director of the Lubbock Civic Chorale. Eddie Nicholson, the rocking chair philosopher, will perform as will the barbershop quartet, Music West, and the Lubbock Municipal Band.

Lemonade and popcorn, small flags and balloons will be available for purchase on the site, with all proceeds benefitting the Docent-Volunteer Guild and the Ranching Heritage Association. Buildings on the site will be closed with all activities in the open area.

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CONTACT: B. Zeeck or Pat Broyles

ATTN: Public Service Directors (Kill July 4 after 7 p.m.)

30 SECONDS

LUBBOCK--THE PUBLIC IS INVITED TO A FLAG-WAVING, WHIZZ-BANG FOURTH OF JULY FROM 5 TO 9 P.M. AT THE RANCHING HERITAGE CENTER OF THE MUSEUM OF TEXAS TECH UNIVERSITY. FOR TWO DOLLARS PER FAMILY EVERYBODY CAN PARTICIPATE IN WATERMELON-EATING, WASHER-PITCHING, HORSESHOE-PITCHING AND RACING CONTESTS. THERE WILL BE PATRIOTIC SINGING AND BAND MUSIC, ROCKING CHAIR PHILOSOPHY AND BARBERSHOP MUSIC. THE DOCENT-VOLUNTEER GUILD OF THE MUSEUM INVITES EVERYBODY TO COME!

7-6-12-79

-30-

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CONTACT: Jean Terrell

ATTENTION: Agriculture Editors

LUBBOCK--Thirty North Carolina swine producers will arrive in Lubbock Wednesday, June 13, to tour swine facilities at Texas Tech University and in the Greater Lubbock area.

Milton Marrow of Levelland will present a slide show to the group at the dinner that evening and discuss his swine operation.

Thursday the producers will tour the Tech School of Agricultural Sciences swine research and teaching facilities on campus and the Lubbock County Field Laboratory near New Deal, as well as the Herman Lorenz facilities north of Lubbock.

Dr. A. Max Lennon, Tech assistant dean of agricultural sciences, will discuss West Texas agricultural practices with the group, and Dr. Leland F. Tribble, professor of animal science, will serve as host and tour guide.

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CONTACT: Dan Tarpley

LUBBOCK--Thirty-six members of Texas Tech University's teaching faculty participated in a workshop on guided design as a teaching approach conducted by Dr. Kenneth C. Martis of West Virginia University.

The relatively new teaching strategy embraces the concept of small groups of students working together to attack open-ended problems.

The guided design approach is meant for "highly structured problem solving," said Dr. Gary S. Elbow, geography professor who coordinated the workshop. The method calls for the creation of a teaching problem which does not have a set remedy and assigning students to reach a workable solution.

The workshop introduced faculty to the guided design approach with a series of activities including working through a model unit, a 25-minute film showing several classes in operation, and a demonstration of the guided design format applied to a discipline.

The College of Arts and Sciences Committee for Improvement of Teaching sponsored the workshop, according to Elbow.

"Guided design makes it possible for teachers to accomplish simultaneously three goals which have stubbornly resisted integration," Martis said. "Those goals are teaching subject matter, exploring values, and developing decision-making skills required to apply what has been learned to the solution of real world problems."

-more-

guided design/add one

Martis, with a Ph.D degree in geography from the University of Michigan, has been the recipient of a Newberry Library Research Fellowship and a Lilly Endowment Inc. Postdoctoral Fellowship in Learning and Teaching.

8-6-13-79

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cutline-----

TECH PROFESSORS ATTEND CLASS--Thirty-six Texas Tech University faculty took time out this week to attend a workshop on teaching, using guided design. The instructor was Dr. Kenneth C. Martis, right, of the education faculty of West Virginia University. He discussed workshop plans with Dr. Gary S. Elbow, professor of geography at Texas Tech and one of the workshop coordinators, and Dr. Mary S. Owens, associate dean of the College of Arts and Sciences. (TECH PHOTO)

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CONTACT: Nancy Lovell

LUBBOCK--An education workshop designed to improve skills in building a good educational climate in school buildings will be held June 25-29 in the Texas Tech University Center Coronado Room.

"The workshop will stress the significance of school climate in teachers' perceptions of principal effectiveness, teacher job satisfaction, and even pupil achievement," said Dr. Charles A. Reavis, professor of administration and supervision at Texas Tech.

Texas Tech's College of Education and Division of Continuing Education are sponsoring the workshop in cooperation with the Texas Elementary Principals' and Supervisors' Association.

"Those who will especially benefit from the course," Reavis said, "are principals in new situations, including administrators who are recently appointed or transferred to new schools with rapidly changing student populations (including integration) or with a number of new faculty, facilities or programs."

Workshop topics were chosen to help participants improve school climate through leadership, goal-setting and creative problem solving, evaluation, positive mental attitudes and conflict. Each session will be organized on an information-demonstration-participation format.

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Reavis has conducted local, state, and national level workshops on teacher effectiveness and instructional improvement. Other instructors are Dr. Robert H. Anderson, dean of Texas Tech College of Education; Gerald Judd, assistant principal at McWhorter Elementary in Lubbock; Bettye MacPhail, former director of secondary education in the Chesapeake Public Schools of Virginia; and Dr. Karolyn Snyder, vice president of Pedamorphosis, a non-profit organization devoted to the study and improvement of school leadership and organization.

Registration fee for the workshop is \$75. Tuition for optional graduate school credit is an additional \$40. Credit is given for the course titled EDAD 5191, "Advanced Educational Workshops in Teaching and Administration."

There will be nightly entertainment with a western barbecue, social hour, theater and disco dancing. Meals are available at the University Center. Information on camping, hotel and motel facilities, and residence halls will be made available to participants.

There are no prerequisites for the workshop. Persons who wish to enroll for graduate credit must have a Bachelor's degree.

For more information contact Dr. Michael Mezack, director, Continuing Education, 104 Administration Building, Texas Tech University, Lubbock, Texas 79409, or call (806) 742-3797.

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CONTACT: Dan Tarpley

LUBBOCK--Dr. Michael Mezack, director of Continuing Education at Texas Tech University, is a selected representative to a workshop in Atlanta designed to facilitate expansion of adult learning opportunities. Dates for the session are June 18-19.

Purpose of the workshop is to involve the recipients of a proposed diffusion network so that it can be designed for maximum response to users' needs. Mezack said the network would be a medium or media for dissemination of information gained from research and studies to professional educators who need it and can use it.

Mezack and approximately 25 other professional continuing education leaders and administrators have been invited to attend to obtain feedback on results of planning efforts and pilot activities and recommendations made during the first nine months of the project.

The Continuing Education Technical Assistance Center, an agency of the U.S. Office of Education, is engaged in planning efforts to design the nation-wide diffusion network and technical assistance activity.

Georgia State University at Atlanta will serve as host for the workshop.

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CONTACT: Pat Broyles

ATTN: Public Service Directors (Kill July 30)

30 SECONDS

LUBBOCK--IF YOU ARE A HIGH SCHOOL GRADUATE PLANNING TO ATTEND COLLEGE, A SUMMER WORKSHOP IN READING STUDY AND MATH IMPROVEMENT COULD ASSURE YOUR ACADEMIC SUCCESS. STUDENTS WILL RECEIVE INSTRUCTION IN READING COMPREHENSION, SPEED READING, NOTE-TAKING, RESEARCH AND TEST-TAKING SKILLS. BASIC MATH SKILLS, ALGEBRA, AND CALCULATIONS INVOLVING GEOMETRIC FORMS WILL BE REVIEWED. THE WORKSHOP WILL BE OFFERED JULY 30TH THROUGH AUGUST 17TH FROM 9 TO 11:30 A.M. FOR INFORMATION CONTACT THE TEXAS TECH DIVISION OF CONTINUING EDUCATION AT 742-3797.

11-6-13-79

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CUTLINE.....

PULSED POWER CONFEREES--Among the 300 scientists and engineers attending the second International IEEE Pulsed Power Conference June 12-14 in Lubbock are, left to right: T. H. Storr, Atomic Weapons Research Establishment, Aldermaston, England; Dr. Arthur H. Guenther, Texas Tech adjunct professor and chief scientist of the Air Force Weapons Laboratory, Kirtland Air Force Base, New Mexico; Dr. G. A. Mesyats, Soviet Union Academy of Sciences, University of Tomsk, Siberia; Dr. Magne Kristiansen, Horn Professor of Electrical Engineering, Texas Tech University; and Dr. J. C. Jouys, Energy Atomic Commission, Paris, France. Kristiansen is conference chairperson and Guenther heads the Technical Program Committee. The Institute of Electrical and Electronics Engineers is one of several co-sponsors. (TECH PHOTO)

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CONTACT: B. Zeeck

LUBBOCK--Pulsed power, whether the man-on-the-corner knows it or not, is vital to America's defense against nuclear attack.

"The status of the strategic deterrent defense of the United States exists in its present form with its present credibility because of pulsed power testing," according to Peter Haas, until May 18 the deputy director for Science and Technology in the U.S. Defense Nuclear Agency (DNA) and still a consultant to DNA.

Haas was in Lubbock to address the second International Pulsed Power Conference which has drawn approximately 300 scientists and engineers from 10 countries. The Institute of Electrical and Electronics Engineers is the co-sponsor with five Department of Defense and two Department of Energy agencies. Texas Tech University faculty in the Department of Electrical Engineering were the organizers.

Although new applications of pulsed power are developing, particularly in the area of energy from inertial confinement fusion, the technology will probably produce for the departments of Defense and Energy a very fine simulator "long before it can produce ICF for energy purposes," Haas said. This is likely to be so because much more difficult problems need to be overcome for energy purposes, not the least of which will be repetitive operation.

-more-

Pulsed Power/Add One

Pulsed power research deals with power in the range of kilo to megavolts and kilo to megaamperes with pulses in nanoseconds, about one billionth of a second. Its value in defense research is primarily in testing for the simulation of nuclear weapon detonation phenomena.

For a credible defense system, Haas pointed out, the system must be able to survive all the influences of nuclear shock, radiation and other effects. In the laboratory, researchers can produce, in a very small fraction of a millionth of a second, the important components of a detonation. This can be repeated with a frequency that allows researchers to test various features of the process. Laboratory testing of defense missile and communications systems is cheaper, safer and more reliable than full-scale atmospheric nuclear explosions banned by treaty in 1962, according to Haas.

"Pulsed power research is the very essence of the strategic deterrent defense of the United States," he emphasized. "It makes the system credible, assuring any opponent who might start a nuclear war that even after attack the U.S. would have enough power left to wage nuclear war against such an enemy.

"The credibility of the United States system would not exist without pulsed power," he said.

Replacement of the Minuteman defense system by the MX missile system for the united states is defended by Haas on the grounds of survivability.

"To assure peace the MX is essential," he said. "The only reason the country needs an MX system is survivability and the testing of that survivability is dependent upon pulsed power."

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CONTACT: Jean Terrell

ATTENTION: Agriculture Editors

FOR RELEASE PM JUNE 28

LUBBOCK--Swine producers concerned with optimum reproductive performance from their brood sows shouldn't allow the sows to make pigs of themselves, according to Dr. Bobby D. Moser of the University of Nebraska.

A featured speaker at the 27th annual Texas Tech University Swine Short Course, Moser discussed feeding programs for the breeding female.

Dr. Gilbert R. Hollis, extension swine specialist in the University of Illinois Department of Animal Science, described a confinement breeding and gestation system in operation in Illinois. Hollis formerly served as Texas Extension Service swine specialist.

Moser recommended a "limit feeding" program for gilts and sows during prebreeding and gestation, since excessive feeding leads to increased feed cost and interferes with maximum reproductive efficiency.

Overfed sows suffer high embryonic mortality, thus producing smaller litters than do sows fed proper amounts. Sows that are too fat tend to have more conception and farrowing difficulties and to crush more piglets, especially during summer months when they are subject to heat stress.

-more-

However, a "limit feeding" program should govern only the energy intake -- not protein, minerals and vitamins, Moser emphasized. A diet fortified with adequate levels of vitamins A, D, E and K, niacin, pantothenic acid, riboflavin, vitamin B 12 and choline is necessary for optimum reduction. Common feedstuffs fed to sows supply some of these but usually are not adequate to meet needs of the pregnant female. Recent research indicates that addition of choline -- about 70 grams per ton -- is beneficial in increasing the number of pigs born and weaned.

Because energy is needed for milk production, during lactation sows should be fed a high concentrate diet and fed to appetite, said Moser.

Hollis explained the successful confinement breeding and gestation system for swine production in operation at Thrushwood Farms in Fairbury, Ill. The totally confined, environmentally controlled breeding unit eliminates many problems associated with the weather, he said, but certain points should be kept in mind when considering such a unit.

Total confinement dictates hand-mating. Building and labor costs favor a weekly weaning schedule. Physiological needs of the animal must be considered in the building arrangement -- boar exposure, temperature, flooring, and stress reduction. The plan should allow ease of animal movement, efficient use of labor and ample boar pens. A good record-keeping system is essential.

Because of high land values, short labor supply and the constant need for efficiency in handling the breeding herd, Hollis said many producers are becoming more and more interested in the potential of confined sow management systems like the one at Thrushwood Farms.

The Texas Tech Swine Short Course was sponsored by the Texas Pork Producers Association, Texas Pork Producers Board and Texas Tech College of Agricultural Sciences.

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CONTACT: Becky Patterson

LUBBOCK--More than a year ago an art instructor told interior design major Peggy Spalding that no student at Texas Tech University had ever completed a metal chess set by use of the "lost wax" casting method, a tedious and time-consuming process.

Three semesters and several hundred hours later, three days before graduating from Texas Tech, Spalding cast the last bronze figure of a chess set modeled after characters in the movie "Star Wars."

The two- to seven-inch figures pose in combat-ready positions and collectively weigh approximately 20 pounds. Each was carved separately in wax before being cast in molten bronze. Two carry sterling silver swords. All are faithful reproductions of characters from the popular science fiction movie.

Spalding, daughter of Mr. and Mrs. William Aaron Spalding of 607 N. Jefferson St., Waxahachie, said she chose "Star Wars" characters because she loved the movie. "I'm a science fiction fan," she said. "And when I decided I'd like to make a chess set, I chose 'Star Wars' because there were so many characters. I needed a variety of different figures to fill the roles of king, queen, knights, pawns and so on."

Satisfaction and fatigue punctuated her speech and features as she described her project, which had just been completed during a 37-hour stint in the Texas Tech jewelry laboratory. The marathon was broken only by five hours of rest in a sleeping bag on the classroom floor.

-more-

"Spending that long working on a project is not uncommon for art students. Most have to do it at one time or another," she said. "The art building is our second home. But for me, it was the culmination of a very long effort."

The "lost wax" casting technique, often used in jewelry-making, involves many steps. "After the artist chooses the design, he or she shapes special wax into the desired form by using both the fingers and hot metal tools. Because the wax figures will later be encased in plaster for casting, wax sprues are attached to channel molten metal to the figure.

"After the wax figure or jewelry is embedded in plaster, it is heated in a 1300-degree kiln overnight to melt and vaporize the wax. Before removing the plaster from the kiln, the artist melts metal to a glowing orange liquid. The metal is poured through the sprue channel and into the empty mold left when the wax burns away. The figure is cooled and removed from the plaster," she explained.

The lengthy process leaves much room for error. Spalding recast at least 10 of her chess figures because of technical problems. "Several chess pieces were ruined because the plaster did not heat long enough before I poured the metal in. The wax must be perfectly burned out before the piece is poured, or the cast piece may be deformed. Some of my figures emerged without heads or faces."

She had problems of another sort with airline officials. "I flew home once and was going to work on the way. But the airline people at the terminal wouldn't let me take the tools, wax figures or finished metal figures into the plane. They thought the things were dangerous -- as if I looked sinister! Anyway, they let me on the plane after I put everything in my suitcase, which was then safely stowed in the baggage compartment."

However, the metal did pose hazards for her personally. Spalding rubbed her hands raw working with hot, rough bronze. She displayed a burn she received from metal heated by friction from the metal polishing machine.

Florence Lawrence, Lubbock artist, and Wendy Yothers, a graduate enameling student, followed Spalding's efforts closely. Lawrence offered encouragement and helped develop the casting techniques Spalding used. Yothers was primarily an observer.

"You really have to admire Peggy," Yothers said. "She had an idea and stuck to it. That dedication is what art is all about."

Dedication and energy also appear in Spalding's other activities. When not working on interior design class projects and chess pieces, she casts jewelry, reads science fiction novels, takes camping trips and worries about her ailing quarter horse stabled in Waxahachie.

Spalding plans to seek employment with an interior design firm in the Dallas area. Until she finds a job, much of her energy will be applied toward finishing the chess board, which will be formed from squares of black acrylic plastic and polished metal inlaid with enameled spaceships.

What will she do with the finished chess set? "At first I thought I'd take pictures of it and send them to George Lucas, creator of 'Star Wars,' and see if he was interested in marketing it. But now I think I just want to keep and enjoy it, knowing that it is the only one of its kind in the world. And if I keep the chess set just as an art form and don't try to sell it, I won't have to worry about copyrights.

"After I finish the chess board, I'm hoping to do something I've never really spent much time on -- I guess I'll have to learn how to play chess."

cutline-----

FINALLY FINISHED--Peggy Spalding, daughter of Mr. and Mrs. William Aaron Spalding of 607 W. Jefferson St., Waxahachie, examines bronze chess pieces she molded after characters in the movie, "Star Wars." The figures were carved separately from wax and cast, with Spalding using the tedious "lost wax" process. The young artist spent several hundred hours on the project. She was graduated from Texas Tech University in May of this year with a degree in interior design. (TECH PHOTO)

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CONTACT: B. Zeeck

LUBBOCK--It's hard to imagine how early man, say about 12,000 years ago, went about butchering a mammoth, but modern archeologists got a real sense of the problem this week (week of June 10) by butchering an elephant.

The circus-trained Indian elephant died enroute to Denver, was sent to a rendering plant and the carcass recaptured by Colorado State Archeologist Bruce E. Rippeteau. It was Rippeteau who invited archeologists specializing in early American cultures to help butcher the 9,000-pound beast to learn Stone Age techniques.

Among those invited was Dr. Eileen Johnson, director of the Lubbock Lake Site research project which has been unearthing evidence of man's habitation of the area from 12,000 years ago to the near past. The research is done through The Museum of Texas Tech University.

Dr. George Frison, Wyoming state archeologist and a Paleoindian specialist who has experimentally butchered several bison (buffalo), also participated. The Clovis Age tools used were produced by Bruce Bradley, working with Frison this summer at Agate Basin in Wyoming, and Bruce Huckle, archeologist of the Arizona State Museum, Tucson. Both are lithic technologists who replicated tools of the 11,000- to 12,000-year-old culture. They used primitive techniques and patterns taken from artifacts found at the Clovis level in various digs.

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elephant butchering/add one

Johnson found the practice butchering an invaluable learning experience. Rippeteau said the experience was an improvement over the first such activity done at the Smithsonian Institution because the Denver elephant was completely intact and not frozen.

The activity began with Bradley, Huckle, Frison and Rippeteau thrusting Clovis points into the carcass to see how a death blow might have been inflicted on a mammoth. William Butler, federal archeologist of Denver, threw wooden atlatls (an ancient throwing stick) at it to see if the velocity of the wooden tool could compensate for its comparatively light weight. Rippeteau said no atlatl could penetrate the thick hide.

"This exercise could very well revise some of our thinking on how primitive man killed big game," Johnson said, but other butchering activities provided more insight. From the bones the archeologist judged that mammoths must have been about twice as big as the elephant, but the muscle meat was heavy. "It took two of us to carry some of it from the carcass to the meat pile.

"One of the most interesting things I discovered," she said, "is that we automatically, without being directed, formed teams to do the work. And when we were finished, four areas had developed, also without planning."

One was the carcass area, another a bone pile. There was a stack of meat and the fourth area was a tool production site. Tool debris was left at each end of the carcass as workers sharpened the tools they were using.

Johnson said 60 to 70 tools were used. Those butchering resharpened some of their tools during the process but, as they wore out, they were collected for future analysis and study, and new tools were issued.

The tools were of various kinds of cherts and of quartzite. They will be analyzed for wear patterns and to discover why some lasted longer than others. Complete records were kept on each tool used and on each step of the butchering process.

"The micro activity areas fit closely the model found at the Lubbock Lake Site," she said. "Without any overt leadership our teams just fell into a pattern suggestive of primitive butchering."

Another factor discovered by the archeologists was that the elephant meat stayed fresh as long as it did. They could not cut into the carcass until four days after death. While they were braced for working with putrid meat, they found it in good condition and of consumable quality.

"It was a new experience for me and for most of the archeologists," Johnson said. "The idea of practicing with Stone Age tools isn't unique, but it is rarely done and it gives archeologists an opportunity to look at our data in a different light."

She said Dr. Frison gave experienced leadership for the butchering. Dr. Marie Wormington of Denver, another of America's leading authorities on early man in the New World, observed. Dr. Glynn Isaac, University of California-Berkeley, sent him several graduate students who assisted with the work. Isaac is co-director with Richard Leakey of Africa's Lake Turkana archeological project.

Johnson's participation was funded by a grant from the National Science Foundation, which includes studying butchering patterns and microwear analysis of butchering tools found at the Lubbock Lake Site.

ARCTODUS/ADD TWO

Alene Carriere of Woonsocket, R. I., and a junior at Brandeis University, made the find of the tool as well as the cat bone.

The 1979 dig is supported by a grant from the Moody Foundation. Other funding for the Lubbock Lake Site research has come from the National Science Foundation, the National Geographic Society and other agencies with a special interest in past cultures.

cutline-----

BEAR BONES--The 12,000-year-old bear bone tool, left, found at the Lubbock Lake Site archeological dig is compared with the bone of a modern brown bear to show the immensity of the prehistoric animal, Arctodus. The tool, working end down, was fashioned by Clovis man from the proximal end of a radius. The Clovis Age bear was more than twice the size of the modern grizzly. The discovery of Arctodus at the Lubbock Lake Site is the only evidence of that bear found in association with man. (TECH PHOTO)

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CONTACT: B. Zeeck

LUBBOCK--What's the best way to butcher a huge, prehistoric cat? Well, it's just possible that you use a bear bone tool.

Archeologists aren't yet ready to claim that primitive man, living about 12,000 years ago at the Lubbock Lake Site, chose that method, but they have uncovered firm evidence that Clovis man did fashion a powerful tool from the bone of an immense, ancient bear. And that tool was discovered at the same level and location as their recent discovery of a bone belonging to a cat of the same period.

The giant cat could have been a saber-tooth tiger, an American lion or a prehistoric jaguar. They will identify the cat more specifically with comparative studies, but they do know it was about twice the size of the modern mountain lion.

They know for sure that the bear was *Arctodus*, more than twice the size of the modern grizzly. Previously, the Lubbock Lake Site archeologists discovered a tooth and the left forepaw of the bear which lived 12,060 -- plus or minus 100 -- years ago, according to radiocarbon dating.

Both the cat bone and the bear bone tool will be on display for Lubbock Lake Site visitors Saturday. Free public tours are given from 9-11 a.m. Saturdays during the summer. Maps showing how to get to the site are available at The Museum of Texas Tech University, through which research is done. There will be no tour July 7, the Independence Day Weekend.

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The discovery of the remains of Arctodus at the Lubbock Lake Site is the first time that this extinct North American bear has ever been found in association with man.

Dr. Eileen Johnson, director of the research project at the site, said that earlier evidence indicates that Clovis man skinned and butchered the bear.

"The exciting thing about the new discovery," she said, "is that now we know he not only used the skin and ate the meat, but he also used the bone for tools."

The first indication that the bone had been used as a tool appeared in the way it was broken.

"It was a spiral break, which is sure evidence that man broke the foreleg," Johnson said. "Then the wear damage on the end of the bone and the polish at that wear point shows it was used as a tool."

The bone is the proximal end of a radius which, in man, would compare to a forearm bone at the elbow end. Because there is very definite sexual dimorphism in bears, Johnson said that the bone had to have come from an old male. It was found several meters away from the last find related to the bear but just a few centimeters below the cat bone.

Bjorn Kurten of Finland, who is a world authority on ancient bear, and Elaine Anderson of Colorado are publishing a book on the Pleistocene animals of North America. In it they refer to the Lubbock Lake Site bear finds. Again, the major point of interest is the unique finding of Arctodus in association with man.

Alene Carriere of Woonsocket, R.I., and a junior at Brandeis University, made the find of the tool as well as the cat bone.

The 1979 dig is supported by a grant from the Moody Foundation. Other funding for the Lubbock Lake Site research has come from the National Science Foundation, the National Geographic Society and other agencies with a special interest in past cultures.

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CONTACT: Steve Morgan

LUBBOCK--Dr. Larry S. Roberts of the zoology faculty of the University of Massachusetts, Amherst, will become the new chairperson of the Department of Biological Sciences at Texas Tech University this fall.

Roberts will succeed Dr. Raymond C. Jackson, who will remain on the faculty in the department.

Announcement of his appointment was made Friday by Dr. Lawrence L. Graves, dean of the College of Arts and Sciences.

Roberts taught courses in zoology, human physiology, parasitology, and other areas during his 16-year tenure at the University of Massachusetts. He was awarded the Henry Baldwin Ward Medal in 1971 by the American Society of Parasitologists for "meritorious contributions to parasitology."

Roberts received the B.S. degree from Southern Methodist University in 1956. In 1958 he received the M.S. from the University of Illinois, and in 1961 a doctorate in science from The John Hopkins University.

From 1973-74 Roberts was chairperson of the graduate admissions committee in the Department of Zoology at the University of Massachusetts. He was president of the Massachusetts Society of Professors from 1976-78. Roberts has been associate editor of the publication "Transaction of American Microscopical Society" from 1971 until the present.

He now has a research grant to study growth physiology of cestodes. Since 1963 he has participated in the National Institutes of Health Training Grant in Parasitology and he was acting director of the program from 1973-74

roberts appointment/add one

Roberts was born in Texon, Texas. He is married and has four children.

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CONTACT: Nancy Lovell

LUBBOCK--Dr. Kenneth Laine Ketner, professor of philosophy at Texas Tech University since 1971, will assume the chairmanship of the Philosophy Department this fall.

Arts and Sciences Dean Lawrence L. Graves announced Ketner's appointment this week. He succeeds Dr. Ivan L. Little who retired at the end of the spring 1979 semester. Dr. Daniel O. Nathan is serving as interim chairperson during the summer.

Ketner was graduated from Oklahoma State University in 1961 with a B.A. degree in philosophy and later received the M.A. in philosophy there. He then received an M.A. in folklore and mythology from the University of California at Los Angeles while working as a research assistant in folklore. From 1969-70 he was a teaching assistant in philosophy there.

He earned the Ph.D. in philosophy in 1972 from the University of California at Santa Barbara. Subsequently he taught philosophy and folklore at UCLA.

Much of Ketner's academic career has been in pursuit of his interest in the philosophy of Charles A. Peirce. Peirce, the founder of pragmatism, is considered the greatest philosopher America has produced.

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In 1973 Ketner was invited to participate in the Arisbe Conference, a special gathering of Peirce scholars held at Milford, Pa., to plan the use of Peirce's home, which has since become a national memorial. The following year he was a member of the research team studying Peirce's manuscripts at Harvard University. From 1975-79 he was secretary, vice president, then president of the Charles S. Peirce Society, and principal writer for a new constitution of the society on 1979.

His study of folklore has produced such unique papers as "The Use of Madstones in Oklahoma," published in "The Chronicles of Oklahoma," and "Hydrophobia, Superstitious Pigeons, and Conventional Wisdom," published in "American Folklore."

Ketner has been director of the Institute for Studies in Pragmaticism at Texas Tech University since 1975.

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CONTACT: B. Zeeck

EDITORS: Please note dates, Aug. 13-17, for your calendars.

LUBBOCK--The first Feed Manufacturing Short Course to be offered by Texas Tech University, incorporating the use of its unique feed mill operation, will take place Aug. 13-17.

Texas Tech is sponsoring the short course in cooperation with the Texas Grain and Feed, Texas Cattle Feeders and the American Feed Manufacturers associations.

Registration is limited to 50 persons. The cost is \$375, with an Aug. 1 registration deadline. Fees, made out to Texas Tech University, should be sent to the Division of Continuing Education, Texas Tech University, Lubbock, Texas 79409. Dr. C. Reed Richardson is coordinator for the course, and his telephone number is 806: 742-2814.

"There is a dire need for more expertise in feed mill management," Richardson said, "and this short course is designed to supply information and training of specific importance to both commercial producers and feed lot mill personnel.

"Everything connected with livestock is nutrition oriented but, as there are advances in understanding nutrition, feed mill operation advances. The short course will help managers keep up with the most recent developments."

Topics to be covered include management, feed formulation, manufacturing practices, customer relations, personnel management, inventory and cost control, employee safety, equipment selection, electrical systems and maintenance.

On the final day participants may choose areas of special interest, either commercial operation or feed lot feed mill operation. These sessions will deal with problems and methods of producing specific kinds of feeds.

The faculty includes: Richardson and Dr. Robert C. Albin, who heads the Texas Tech Department of Animal Science; Wayne Bellanger, corporate safety director, Conagra; L.S. Hall, manager, Engineering Department, Mill Mutual Fire Prevention Bureau; Jack Hamil, general manager, Hi-Pro Division, Friona Industries Inc.; Vernon Hayes, Hayes & Stolz Manufacturing Co. Inc.; Dr. A. Allen Heidebrecht, chairman, Acco Feeds; Dr. Hollis Klett, consultant, Nutrition Service Associations Inc.; Reed MacBain, sales manager, California Pellet Mill Co.; R.H. Mason, assistant division head, Nutrina Feed Division; Robert McElhiney, Department of Grain Science and Industry, Kansas State University; Robert L. Parker, president, Paris Milling Co.; Curt Wagner, president, Wagner Machine Co.; and Deloyd Walls, direct sales manager, Acco Feeds.

The advisory committee for the short course included representatives from sponsoring associations and industry representatives from Texas, New Mexico and Arizona.

Participants will spend some time at the feed mill at the Texas Tech College of Agricultural Sciences field laboratory. The \$1.5 million mill is the only one of its kind devoted entirely to university research related to livestock feeding.

cutline-----

ACTING PRESIDENT--Newly appointed Interim President Lawrence L. Graves of Texas Tech University is congratulated by several Regents. Pictured above are James L. Snyder, rancher from Baird, Dr. Graves, Robert L. Pfluger, board chairman and rancher from San Angelo, and Clint Formby, radio executive and owner from Hereford. Graves, who has been on the faculty of Texas Tech since 1955, has been dean of the College of Arts and Sciences over the last decade. Regents will meet in Lubbock again on July 6 to approve guidelines for the Tech presidency and to consider appointment of a search committee to find a new president. Dr. Cecil Mackey, current president, has resigned to accept the Michigan State University presidency. He will leave Texas late this summer. (TECH PHOTO)

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CONTACT: B. Zeeck

ATTENTION: Building Editors

LUBBOCK--Architects, engineers or others responsible for designing buildings that can withstand heavy winds, even hurricanes or tornadoes, will meet in two short courses at Texas Tech University during the week of June 25.

The courses are sponsored by the Institute for Disaster Research (IDR) and 20 persons from 11 states, from Connecticut to California, have preregistered.

IDR Director Joseph E. Minor said that there is special interest in standards which will affect future building codes and also in research findings on glass designed for structural use.

Dr. Kishor C. Mehta of the IDR staff and the Texas Tech civil engineering faculty heads an American National Standards Institute committee working on revision of wind load standards in building codes. He will review controversial proposed changes. Mehta is a recognized authority on the development and interpretation of wind load provisions of building codes and standards in this country and other parts of the world.

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Other faculty will include Drs. Minor and James R. McDonald, both members of the Texas Tech civil engineering faculty; Robert F. Abbey, meteorologist with the U.S. Nuclear Regulatory Commission, Office of Nuclear Regulatory Research; and Dr. John D. Holmes and George R. Walker, both of the civil engineering faculty of James Cook University, North Queensland, Australia. Holmes also is director of the Boundary Layer Wind Tunnel Facility at James Cook.

The first short course will begin Monday, June 25, and end at noon Wednesday. It will focus on current standards of practice for wind loading on structures. The second will begin Wednesday and end at noon Friday. It starts with an introduction to the nature of tornadoes and includes the various forces of tornadoes as they affect the design of new buildings and the behavior of existing structures.

Each course costs \$250 or \$400 for both. For additional information contact the Institute for Disaster Research, Texas Tech University, Lubbock, Texas 79409; phone 806: 742-3476.

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CONTACT: Jean Terrell

ATTENTION: Agriculture Editors

FOR RELEASE PM, June 28

LUBBOCK--There is no "best" system for producing hogs, but new trends toward energy conservation, better use of space, and economy include ideas and management practices that can be adapted to many swine operations.

Dr. Gilbert R. Hollis, extension swine specialist at the University of Illinois, made these observations when he reviewed new techniques in swine buildings for participants in the 27th Annual Texas Tech University Swine Short Course on June 28.

Solar heating, double decking baby pigs in nursery facilities, liquid manure handling, and natural ventilation for finishing and gestation buildings are showing good results for some producers, Hollis said.

Several hundred solar heated hog buildings have been built in Illinois since 1964. Up to 50 percent of the yearly fuel bill for heat can be furnished by solar energy using these systems, he explained. The first units used galvanized steel roofing as a bare plate collector. But today Tedlar-coated, clear, greenhouse grade, corrugated fiberglass roofing commonly functions as a covered plate collector, using both a 2-inch space under the roofing and the full attic space to collect heat. Emphasis is on building low cost installations that quickly pay for themselves, rather than trying to use heat storage units.

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Illinois confinement producers have shown considerable interest in the double-deck concept in nursery units. In a double-decked nursery, one flat-deck pen with slotted expanded metal or stainless steel floors is located above another similar pen.

Most producers using the system say that when pigs are weaned into pens on the upper deck, they perform better than when weaned into pens on the floor, Hollis said. The upper decks are warmer and cleaner, and because the pigs are divided into smaller groups, the stress from competition is less.

About 1.75 to 2 square feet of floor space per pig is provided in the upper deck. Pigs are usually weaned into the upper deck pens at three to four weeks. After 10 to 15 days they are moved into the larger floor pens. Hollis said most producers using the system indicate they plan to expand their double-decking facilities.

Hollis cautioned that, because newborn pigs are sensitive to air movements humans can hardly detect, solid partitions should be used on three sides of each pen to prevent drafts.

For liquid manure handling systems he suggested a gravity drain system. Basically a modification of the deep narrow gutter, the advantages are reduced odor and gas concentrations and no need for pit fans or mechanisms to pull air down through slats and create drafts on young pigs. The system lends itself to central manure storage or liquid-solid separation, he said, and it is easier to remodel a building using these trenches than using deep pits.

Near optimum conditions for hog performance for finishing hogs weighing over 75 pounds and for gestating animals can be maintained in well insulated buildings with totally slotted floors using a natural ventilation system.

A ridge outlet should be a part of the ventilating system because there is negative pressure at the ridge regardless of wind direction.

The ridge outlet should be sized for cold weather conditions, with the opening 4.5 to 5 square inches for each finishing hog and 7 square inches for each gestating sow. Sidewall inlets should have about the same area as the ridge outlet and be equally distributed on both sides of the building.

For a wide range of winter conditions the inside temperature will fluctuate between 50 and 70 degrees Fahrenheit, with temporary drops into the 40s during a severe winter storm.

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CONTACT: B. Zeeck

LUBBOCK--Computers, push-button watches and myriad other sophisticated electronic devices provide lighted messages at the tap of a fingertip. To do it they use LEDs, or light emitting diodes.

The light is caused by impurities in semiconductors which, although commonly used, are little understood, even by experts in the area.

Dr. Martin A. Gunderson of the Texas Tech University electrical engineering faculty is using the properties of lasers to study the properties of the semiconductor impurities, to determine which defects perform what roles.

"Semiconductors are the heart of solid state devices," he explained. "We need to know what impurities can and can't do, the physics of their performance. It is hard to improve on a device when you don't even know what the real limits are." Gunderson speaks of "deep traps."

"We know there are deep traps, but we don't know in detail how they work or how to control their effect. The same is true of many other defects."

With understanding of the physics involved, Gunderson said that it will be possible to build devices that are cheaper, more efficient, with slower degradation. In addition, important new devices will be possible, such as fast, high power semiconductor switches.

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In his laboratory research Gunderson and graduate students are working with Texas Instruments, an industry highly dependent upon semiconductors.

Gunderson's previous experiments with infrared lasers have led him to believe that much can be learned about semiconductor impurities by using the laser as a scientific detective.

His special interest is in gallium arsenide phosphide and silicon semiconductors. Studying them, he is seeking the methodology for learning the role of the impurities. To date, beyond initial scientific discoveries, industry has depended excessively on trial and error, he explained.

It is an industry that has moved so rapidly and successfully that the need for greater understanding of the semiconductors has, until now, been put on a back burner, in Gunderson's view.

"What little is known helps us see how much more there is to know," Gunderson said. "We think that by using the infrared laser, we can discover ways to reduce failures, develop reliability and cut costs."

Students working with Gunderson on the project include Paul G. Snyder, son of Mr. and Mrs. Paul Snyder, 1251 Kessler Court, Dallas, and Terry A. Yocom, son of J.C. Yocom, Andrews.

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CONTACT: Nancy Farmer

LUBBOCK--Counselors for the Comprehensive Employment and Training Act (CETA) participated in a management training workshop Tuesday at Texas Tech University.

The workshop was developed by members of the Texas Tech Department of Home Economics Education, under the direction of Drs. Ruth W. Volz and Merrilyn N. Cummings.

The federally instigated CETA program helps unemployed or under-employed workers who meet certain criteria find jobs. CETA counselors initially place the workers and then help them develop skills necessary to later find jobs on their own.

A team from Tech's Home Economics Education Department has been conducting classes for more than 75 CETA clients in Lubbock. This workshop was designed to teach counselors how to conduct client classes themselves in order to phase out the Texas Tech team. Volz and Cummings will continue as consultants for the counselors when they begin teaching the classes.

Workshop instructors included Volz, Cummings and graduate student C. Ann McLennan. Volz has incorporated the use of puppets in the workshop.

"We developed five skits in which we used the puppets," Volz said, "to emphasize certain aspects of the training, particularly human relations on the job in regard to employer-employee relationships, family and co-workers."

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During the morning sessions on personnel management Volz said the puppets made it easier for the participants to identify through non-human characters. "We can zero in on the problems without stepping on anybody's toes," she said.

Afternoon sessions were designed to help counselors develop the necessary teaching skills to lead discussions and ask questions.

"In the afternoon," Volz said, "we developed the importance of sequence -- that is, introducing the topic, establishing a discussion built on questions, and closing or summarizing."

The trained counselors will begin teaching classes to CETA clients Monday (June 25) in Holden Hall on the Texas Tech campus.

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CONTACT: B. Zeeck

LUBBOCK--Fourth of July plans for the Ranching Heritage Center of The Museum of Texas Tech University have been changed. There still will be a public celebration from 5 to 9 p.m. with music, games and contests, but dedications of additions to the center have been postponed.

Dr. Leslie C. Drew, director of The Museum and the center, made the announcement.

Dedications originally planned for the Fourth of July will be held Aug. 4, including those for the Robert L. Snyder Memorial Drive, the Jowell House, a tree commemorating the late Lubbock Mayor Roy Bass, and two plaques. The plaques commemorate contributions from the Diamond M Foundation and the Ranching Heritage Association's efforts in making the memorial drive, a portico and parking lot possible.

"The Independence Day calendar has become so crowded," Drew said, "that we think we can more properly recognize the significant contributions to the Ranching Heritage Center by setting aside a special day for the dedications."

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CONTACT: Jean Terrell

LUBBOCK--Registration for the second term of the summer session at Texas Tech University is scheduled for 12 noon-7 p.m. on Monday (July 16) in the Municipal Coliseum.

Students who are registered for the first summer term and those who were registered for the spring semester may pick up registration materials in the University Center Coronado Room July 2, 3, 5 and 6, from 1-6 p.m., according to David Michael Smith, associate registrar.

Undergraduates who have not been registered for either semester should begin the registration process at the office of Undergraduate Admissions in Doak Hall. Graduate students should go to the office of Graduate Admissions in Holden Hall.

Classes for the second summer term begin Tuesday (July 17), with late registration continuing through Friday (July 20).

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CONTACT: B. Zeeck

LUBBOCK--Two workshops on calligraphy, taught by a nationally known expert, Alice Blue Girand, will be offered at The Museum of Texas Tech University June 25-29.

One workshop will be held in the mornings, 8:30-11:30 a.m. and the other from 12:30-3:30 p.m. each day. Beginning and accomplished calligraphers are eligible. The fee is \$42 and enrollment is limited to 14 for each session.

Girand studied calligraphy at the University of New Mexico. Her instructor was Ralph Douglass, author of a leading textbook in the field, the decorative art of fine penmanship. In 1976 and 1978 Girand was chosen as one of the top American calligraphers to study in London.

She has recently done the calligraphy for a book, "The Prayers I Love," by David A. Redding. Her work has been featured in several other publications, and an article on Girand and her work was featured in a recent issue of "New Mexico" magazine.

For registration information call the office of the West Texas Museum Association, 806: 742-2443.

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CONTACT: Nancy Lovell

LUBBOCK--An ancient gentleman in a flowing robe who thoughtfully strokes his beard and ponders truth is the immediate image of a philosopher to many people. But almost any intelligent person who has faced a doubt or crisis is a philosopher, according to Dr. Kenneth L. Ketner, recently appointed chairperson of the Texas Tech University Philosophy Department.

Philosophy is the study of and attempt to practice the objective method of resolving issues and questions, he said.

Ketner says the stereotype of philosophy majors as long-faced students studying irrelevant questions is ironic since a lot of students are studying philosophy under another name. "The philosophy courses are there, disguised," he said, "sometimes not being taught by the Philosophy Department."

All sciences were originally branches of philosophy, Ketner explained; physics, mathematics and linguistics started this way.

Ketner thinks philosophy's next gift to the sciences may be semiotics. This is the extremely broad scientific research of any kind of communication phenomena. "That covers about everything, when you think about it," Ketner said. Semiotics originated with Charles S. Peirce, an American scientist and philosopher, and Ketner's forte of study.

When Ketner came to Texas Tech in 1979 , he discovered that Dr. Charles S. Hardwick, then chairperson of Philosophy and now vice president for Academic Affairs, shared his interest in Peirce. The Tech Philosophy Department now has the world's most complete publicly accessible collection of Peirce's works and related material at the Institute for studies in Pragmaticism. Hardwick went on to other things, and Ketner became director of the Institute. Ketner will go to Vienna in early July to present a paper on Peirce's important contributions to the logic of scientific terminology.

The new chairperson said he is proud of the department's involvement in Peirce studies but emphasized that Tech's Philosophy Department encompasses much more. It has a program in the theory of value, axiology, which includes the study of beauty in theater, art and music. "A new professor in continental philosophy has been added to the faculty," Ketner said, "and philosophy of science courses will be taught by Prof. Alberto Cortes. We're small, but we're vital.

"The importance of philosophy to undergraduates is not to teach them to think. They are thinkers already if they're in college. A good philosophy course will teach students objective methods of handling doubt and offer them an opportunity to develop themselves in something they're already doing. In a well-taught course students are invited to improve their objective reasoning skills in a natural human way. Philosophy is the discipline that attempts to study and develop objectivity. A study made of leading universities in the United States showed philosophy was a part of every curriculum."

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LUBBOCK--The annual School Business Services Workshop on June 28-29 at Texas Tech University will focus on the impact of new legislation on school finance, implementation of the tax relief amendment, and teacher unionism. Sessions will be in the University Center.

The workshop is open to area school officials with a special interest in any of the topics under discussion. Approximately 200 participants are expected.

It is sponsored by the Texas Association of School Business Officials (TASBO), the West Texas Association of School Business Officials, the Texas Tech University College of Education, the Lubbock Independent School District (LISD), Region XVII Education Service Center, Texas A&M University and the School Equipment Exhibitors.

(cq)

Raymon L. Bynum, associate commissioner for finance, Texas Education Agency (TEA), will discuss the "Impact of New Legislation on School Finance" at the opening session. Ken Graeber, acting executive director of the School Tax Assessment Practices Board, Austin, will talk about tax relief admendment implementation.

Robbie Collins, deputy associate superintendent-management, Dallas ISD, will address the Thursday afternoon session on "A 1979 Look at Teacher Unionism."

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Discussion panels Thursday afternoon will include: "Energy Audit and Conservation," Dr. Woodie Coleman and Travis Brown, Region XVII Education Service Center, Lubbock; "Update on School Transportation," Gabe Gilley, director, School Transportation, TEA, Austin; and "Depository Contracts," W.H. Van Horn Jr., associate commissioner for Business Management and Contract Services, TEA, Austin.

Clyde Bunnell, TASBO president and director of Maintenance and Operation for Fort Worth ISD, will preside at Thursday morning sessions. H.D. (Spec) Pearson, assistant superintendent, Business Affairs, Dallas ISD, will preside Thursday afternoon.

Dr. Clyde E. Kelsey Jr., Texas Tech vice president for Development and University Relations, will welcome participants.

Ronald Gooch, assistant superintendent for business affairs in the Lubbock ISD, will preside over Friday sessions.

Among the Friday speakers will be Linus Wright, superintendent of the Dallas ISD and former official in Lubbock and Houston public school systems.

A clinic and open forum will be chaired by Charles Walker, assistant superintendent for business, Ector County ISD. Forum participants include: Austin Roberts, Region XVII Education Service Center; Travis Nelson, director of finance and accounting, Bryan Public Schools; Ed Schroeder, director, Purchasing and Material Management, Corpus Christi ISD; V.R. (Buddy) Smith, assistant superintendent, Business Services, Denison ISD; Mrs. Raydell Goggans, director of business, Gladewater ISD; and Gerald Brashears, business manager, Abilene ISD.

Dr. Berlie J. Fallon of the Texas Tech College of Education faculty is workshop coordinator. Conference planners also included the TASBO West Texas chapter, Gooch and Rupert Pearce of the Lubbock ISD and Dr. Les Richardson, Texas A&M University.

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CONTACT: Nancy Lovell

LUBBOCK--When Irene Temple began working as a secretary in the Graduate School office she expected to be there "for a couple of years." But two years turned into 26 and now she is retiring as Assistant to the Dean of the Graduate School.

As the only person with continuous employment in the graduate dean's office during that lengthy span of years, Temple has seen many changes in the program. "When I began working for Dean Gates there were 500 graduate students," she said. Five deans later the Texas Tech Graduate School counts approximately 2800 students.

"At one point the Graduate School enrollment doubled in 10 years," Temple commented. "The figures jumped when the Gilmer-Aikin Law was passed." This was the 1949 legislation reorganizing the Texas public school system and elevating educational requirements for teachers. "Many people had taught for years and it was a shock to have to go back to school."

She also mentioned the lessening of requirements for doctoral degrees. "I remember when no one could earn a doctorate without two languages," she said.

"We used to register every graduate student, and registration was a lot more involved. There would be lines all day long, and the process of registering required several days."

Temple and her husband Frank were guests at a reception in their honor last Friday in the University Center Faculty Club.

They left Massachusetts 28 years ago when a friend persuaded him there were better opportunities for history teachers in Texas. "There weren't," Temple said, so he went back to school at North Texas State University. After obtaining an advanced library degree he came to Texas Tech. He is now retiring as Associate Librarian in charge of Technical Processes.

Although she has kept her Boston accent, West Texas is home. "One person said I'm a good facsimile of a Texan," Temple laughed.

INFORMATION FOR HOMETOWN NEWS RELEASES

Name _____

Parents _____

(Mr. and Mrs.) (Mrs.) (Mr.)

Parents' address _____

street and city

Classification _____

Major _____

Play _____

Role _____

Other performances _____

INFORMATION FOR HOMETOWN NEWS RELEASES

Name _____

Parents _____

(Mr. and Mrs.) (Mrs.) (Mr.)

Parents' address _____

street and city

Classification _____

Major _____

Play _____

Role _____

Other performances _____

June 25, 1979

To: Deans, Department Chairpersons and Directors

From: Jane H. Brandenberger, director, University News and
Publications

Subject: University *CALENDAR*

University News and Publications looks forward to resuming publication of a University Calendar next fall. To do this, we request that you and others in your college or department provide us a list of events scheduled for the 1979-80 academic year.

The information we keep on file includes: the dates of the event; title of the event, place; hours; sponsor; person to contact for additional information and that individual's telephone number.

Other helpful information includes whether or not the event is held annually or is a one-time-only event; whether the president of the university is expected to participate; the names of any off-campus distinguished guests expected to attend; and special information which would help us better understand the significance of the event.

We prefer the information in writing in order to minimize errors. If your office publishes a college or departmental calendar, that can be forwarded, BUT we would appreciate the basic information--place, times, sponsor, contact and phone number--added.

~~Please forward to the University News and Publications office.~~

To expedite compiling the calendar, we ask that you forward whatever events already are scheduled as soon as possible. As future events are arranged, we would appreciate your forwarding the proper calendar information to us.

Listings should be sent to Calendar Editor, University News and Publications, Campus.

Thank you for your assistance in this effort.

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CONTACT: Nancy Lovell

LUBBOCK--_____ of _____

_____ was one of 106 law students graduated
from the Texas Tech University School of Law this spring.

_____ received _____

_____.

Texas Tech University is one of the four major state university systems in the state and is made up of six colleges and two schools. They are the colleges of Agricultural Sciences, Arts and Sciences, Business Administration, Education, Engineering and Home Economics, and the Law School and Graduate School.

Longterm enrollment is more than 22,500 students.

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CONTACT: Dan Tarpley

LUBBOCK--Dr. Jerry D. Parham, associate director of the Texas Tech University Research and Training Center in Mental Retardation, is keynoting a week of training for vocational and special education instructors at Alabama (Normal) A&M University this week (June 25-29).

The workshop is sponsored by the A&M Department of Home Economics.

Parham will discuss current ideologies and trends in serving handicapped students, personalizing educational programs, developing more effective teaching techniques, and facilitating change in educational systems. The program includes a mixture of lecture, discussion and small group sessions.

Approximately 50 instructors in the fields of vocational and special education are attending sessions which are open to interested persons.

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LUBBOCK--Humor, pathos, satire and music and dancing distinguish the cycle of four plays to be offered by the Texas Tech University Theater and Music Theater's productions of Summer Repertory.

"Vanities" is the story of three Texas girls whose paths diverge as they grow up. "You're a Good Man, Charlie Brown" features its own canine version of Walter Mitty. "The Shadow Box" studies, with sympathy and humor, three terminally ill patients. "Company" is about a 38-year-old bachelor who finally decides to tie the knot.

Curtain time is 8:15 p.m. for each performance. For reservations call the Box Office weekdays at 742-3601 between 9 a.m. and 5 p.m. Ticket prices are \$3.50 and \$4.50 for non-students and \$2 for Tech students with valid identification. Season tickets are also available.

"Vanities" follows the fortunes of three girl friends over a 10-year span. The first act is in high school where similarity is security. In the second act they are seniors in college and the three sorority sisters have become separate personalities. Joanne, who seeks security of home and marriage, is played by Jane Ann Cummings of Lubbock. Suzanne Barnard of Lubbock plays Mary, the sophisticate who wants freedom from family to go to Europe. The role of Kathy, the group "mother," who cannot fathom life without the other two, is portrayed by Susan Fortenberry, a graduate student from Lubbock.

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"You're a Good Man, Charlie Brown" is the beloved comic strip brought to life as a series of vignettes interspersed with dance and songs. The Charles Schulz personalities are full of the characteristics for which they are famous: Wishy-washy Charlie Brown, the frustrated coach of his little league team, is played by Thomas E. Francis of Lubbock; Bruce Ford of Levelland is Snoopy, Charlie Brown's dog forever in pursuit of Red Baron, the WW II fighter pilot; the Beethoven afficianado, Schroeder, is played by T.H. Maynor, sophomore from Omaha, Neb.; Linus, the blanket-toting philosopher, is portrayed by John Hardwick a sophomore from Richardson; Sarah Watkins, senior from Tahlequah, Okla. is Lucy, the eternal crab who goes so far as to take a "crabbiness poll;" Peppermint Patty, Charlie Brown's tomboy friend, is portrayed by Terri Eoff, freshman from Lubbock.

Author Michael Cristofer has written a play about three terminally ill patients in a hospital somewhere on the West Coast. "The Shadow Box" is thought-provoking and hilarious as the patients and their families come to terms with the inevitable. Vanessa Hill, a sophomore from Lubbock, is the interviewer who questions the patients to tabulate data on dying people. Joe, the blue collar worker, is portrayed by Sam Thompson, junior from Lubbock. A graduate student from Tulsa, Regan Kimmell, plays the intellectual whose former wife comes to visit. The promiscuous wife, Beverly, is played by Jane Burgess of Amarillo. Felicity, a feisty old woman who refuses to give up hope, is played by Ramona Peebles, speech and drama teacher in San Antonio. Other characters are portrayed by Deborah Bigness of Lubbock, David Graham of Sweetwater, and Paul Prece, graduate student from Arlington.

The musical "Company" is a collage of experiences of an attractive, lonely, 38-year-old bachelor named Robert, who spends a lot of his time listening to problems and brightening the lives of five married couples in their late 30s and 40s. In spite of what he has heard from his friends, the "swinging couples," Robert decides to enter wedlock. Kent Kirkpatrick, architectural major from Post, plays the lucky single and lonely bachelor. Other cast members are David Morrow of Post as Larry; Katherine Massello of Laredo as Sarah; Mary Margaret Pyeatt of Amarillo as April; Kim Murchison of Lubbock as Marta; Heather Hollingsworth of Lubbock as Amy; Nancy Holt of Amarillo plays Kathy; Kathy Watson of Houston, plays Susan; Julie McQuain of Lubbock plays Joanne. Playing the role of Harry is Patrick Remmert of Tulsa, Okla.; from Irving, Mark Walters portrays David; and Tony Mitchell of Lubbock in the role of Peter.

The four plays are performed in rotation, with each show being presented on a different night.

"Vanies" will be performed on June 28, July 2, 6, and 10;
"You're a Good Man, Charlie Brown" on June 29, July 3, 7, and 11;
"The Shadow Box" on June 30, July 4, 8 and 12; and "Company" July 1, 5, 9, and 13.

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LUBBOCK-- Rosemary M. Thompson, outdoor recreation planner with the national Heritage Conservation and Recreation Service, paid a visit to the Lubbock Lake Site Wednesday (June 27).

While her visit was a routine check on the condition of the site, designated a national Historic Landmark, it served to further plans for a celebration of the 40th anniversary of the dig, tentatively set for early August.

The dig at the Lubbock Lake Site is supported this year by the Moody Foundation through the Lubbock Lake Site Development Corp. It is conducted through The Museum of Texas Tech University. The Heritage Conservation and Recreation Service visits its designated landmarks at least every two years to guarantee that they are protected.

Meeting with Thompson were Lubbock County Commissioner Alton Brazell, Lubbock City Director of Parks and Recreation John Alford and Dr. Eileen Johnson, director of the Lubbock Lake Site research project.

Alford said that the city has a bronze plaque which designates the site as an historic landmark. This will be placed, he said, during formal ceremonies, probably those in celebration of the 1939 dig which followed discovery of prehistoric artifacts there. The discovery was made when the city was dredging the site to build a reservoir.

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Both the city and county of Lubbock have supported the archeological project.

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Increasing better business management in public schools will be the focus of this year's School Business Services Workshop, June 28-29, in the University Center Ballroom at Texas Tech University.

"The Impact of New Legislation on School Finance" will be presented Thursday morning by Raymon L. Bynum, associate commissioner for finance at the Texas Education Agency (TEA) in Austin.

Thursday afternoon Robbie Collins will speak on "A 1979 Look at Teacher Unionism." He is deputy associate superintendent for management of the Dallas Independent School District.

Rotating panel discussions beginning at 2:45 p.m. Thursday concern: "Energy Audit and Conservation," led by Dr. Woodie Coleman and Travis Brown, Education Service Center, Region XVII; "Update on School Transportation," Gabe Billey, director of School Transportation, TEA; and "Depository Contracts," W.H. Van Horn Jr., associate commissioner for business management and contract services, TEA.

Friday morning Dallas ISD Superintendent Linus Wright will address workshop participants.

Participants will also take part in a clinic and open forum.

Dr. Berlie J. Fallon of the Texas Tech College of Education is coordinator of the 1979 workshop.

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LUBBOCK--Students interested in entering Texas Tech University in the fall as freshmen are urged to attend registration-orientation conferences for a successful beginning to a higher education career. The six two-day conferences begin July 30-31 and continue at the rate of two per week for three weeks.

A student must have already been accepted for admission and assigned a conference time before he can attend one of the conferences, according to Don Wickard, registrar. "There's plenty of time left," Wickard said, "for students to be admitted and to sign up for one of the orientation conferences."

Students attending the sessions should bring confirmation cards indicating the conference assignment, campus map and schedule of events, Texas Tech catalog, clothing appropriate to pose for a yearbook picture and automobile vehicle identification number and license tag number.

While at the conference students and parents will be able to attend housing and cost seminars. The housing seminar will involve a multimedia presentation to explain programs and facilities of all residence halls. The second seminar will acquaint students and parents with the fixed and incidental costs of university life.

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Before registration students will meet with college faculty concerning programs and requirements and with an academic advisor to plan a schedule for fall classes.

During the afternoon bus tours of campus and The Museum will be conducted every half-hour. Parents are invited to a come-and-go tea in the University Center (UC) to meet student leaders and faculty and discuss campus life and life styles at Texas Tech.

In the UC Courtyard, booths will be set up by various campus organizations and resources departments to show students aspects of campus involvement.

In the evening of the first day freshmen will gather with upper classmen on the front lawn of the Wall-Gates residential complex to discuss college life as a Tech student.

Registration and advisement will continue on the second day. In the UC Ballroom students can purchase parking permits, coupon books for football and basketball games, the yearbook and freshman directory. Tuition and fees will be billed after the conference. Arrangements for room and board payments can be made during the sessions.

Persons interested in admission to Texas Tech or wanting to know more about the orientation conferences should contact the Office of Admissions, Texas Tech University, Lubbock, Texas 79409, (806) 742-3661.

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CONTACT: Prabhu Ponkshe

ATTN: Energy Editors

LUBBOCK--Texas Tech University has entered the field of geothermal energy research with a \$314,000 grant from the federal government, Vice President for Research Dr. J. Knox Jones Jr. announced.

SANDIA Laboratories at Albuquerque, N.M., a federally supported research organization, awarded the grant to Texas Tech's Department of Geosciences.

"The grant has special significance because the coastal areas of Texas and Louisiana have large geothermal reservoirs that could provide 40,000 megawatts of electrical power for an almost infinite period of time," Jones added.

The funds will be used for investigating special properties of drilling fluids that can withstand high temperature and pressure, said Dr. Necip Guven, principal investigator for the project and professor of geosciences.

Geothermal energy is stored in the earth's crust in the form of hot water and super heated steam. The steam emerges at high pressures and is used to operate a conventional turbine for producing electrical power.

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"But because of the high temperatures and pressures involved, there is need to develop a drilling fluid (mud) that can act as a coolant for the drilling bit and also function, among other things, as an extraction medium for bringing the core cuttings to the surface," Guven explained.

The Texas Tech geologist is proposing a drilling fluid which would have a combination of water, a new clay, and certain chemicals.

"Drilling technology for geothermal energy is fairly well advanced, but the problem of drilling fluids that can survive the harsh conditions more than 20,000 feet below the surface is still not resolved," Guven explained.

A major portion of the SANDIA grant will be used for the purchase of sophisticated equipment, including a powerful electron microscope that can analyze atomic structure, chemistry and morphology of clay particles as small as 200 Anstroms. An Anstrom is one hundred millionth of a centimeter.

Guven also received an additional \$15,000 from Texas Tech. The university's Center for Energy Research provided him \$10,000 as seed money, while the Office of Research Services provided \$5,000 for remodeling existing laboratory facilities to accomodate the new equipment.

"The existing X-Ray diffraction facilities, which are the best in the state of Texas, and the additional electron microscope from SANDIA funds, will enable us to establish one of the most modern laboratories for clays and drilling fluids," Guven said.

Working with Guven on the SANDIA project will be Leroy L. Carney, a research associate in geosciences, who is also the manager of Fluid Services and Development, IMCO Services, a division of Halliburton Company. Carney is among the world's leading authorities on drilling fluids.

Guven has published more than 40 scientific papers and has also written a book on bentonites, a special group of clay minerals. Carney has also published a dozen papers and has 10 patents in drilling technology. Both have served on several national and international committees on clay minerals, drilling fluids, and other related areas of geosciences.

Guven is an associate editor of Clay and Clay Minerals, a journal of the Clay Minerals Society which is published in English, German, French and Russian.

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LUBBOCK--The Texas Education Agency finance commissioner emphasized the need for astute management at all levels in the state's public schools as a result of recent legislation passed by the Legislature.

Commissioner Raymon L. Bynum of Austin, speaking at the annual School Business Services Workshop Thursday at Texas Tech University, quoted Lt. Gov. Bill Hobby as saying that any new money for public schools would have to come from better management.

"This is leading back to the basic functions of the public schools," he said, "such as minimum pupils, good teachers, and adequate supplies. Until now we've had drug abuse, parenting and other peripheral classes," he said.

Bynum observed that the difference in money spent per child in the Texas public schools "doesn't cause one bit of difference in achievement." He also said that materials and supplies are the most underfunded area of education.

Citing the baby boom of the 1950s Bynum warned the educators that enrollment was at its peak. "We're adding a lot, but soon we'll have a constant enrollment. What are you going to do budget management wise?" he asked.

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Bynum said one area of criticism is additions to school sports staffs.

Among changes in the last 25 years, Bynum said, the teacher-pupil ratio has greatly improved. "The average classroom size in Texas schools is one of the smallest in the nation," he said.

The annual School Business Services workshop is sponsored by the Texas Association of School Business Officials; West Texas Association of School Business Officials; College of Education, Texas Tech University; Lubbock Independent School District; Education Service Center, Region XVII; Texas A&M University; and school equipment exhibitors.

The workshop continues through Friday and will provide information concerning implementation of tax relief legislation, teacher unionism, energy audit and conservation, and school transportation.

Thursday morning activities began with a welcome by Dr. Clyde E. Kelsey, vice president for Development and University Relations.

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LUBBOCK--The first solid evidence that a shadowy, little understood culture, known only as Archaic, once inhabited the Lubbock Lake Site has been uncovered. The evidence is a 5,000-year-old stone tool.

Dr. Eileen Johnson, director of the Lubbock Lake Site research project, said that it could be a Paleoindian point picked up by the Archaic people, reworked and used by them. The age is determined, she said, by radioactive carbon dating.

"This tool gives us indisputable proof of Archaic occupation at the Lubbock Lake Site," she said, although this previously had been questioned by archeologists.

The second significant facet of this particular discovery, Johnson said, is that the reworked biface makes it appear that Archaic man may have picked up a tool from an earlier culture and shaped it for his own use.

"This backs up our contention that tool conservation was practiced on the plains because of the scarcity of stone material," she explained. "This idea could account also for the great number of bone tools we have found at the Lubbock Lake Site. There were abundant bone resources from the numbers of available animals, but very little stone."

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Archaic man lived on the plains long before the American Indian developed the tribes discovered when the Europeans arrived. He was later than Plainview man, who inhabited the region about 10,000 years ago. Although the culture is recognized as a separate group of inhabitants, little is known of the lifestyle.

The tool was discovered by Jean Heinzman, Area 6 crew chief for the project. She is the daughter of Mr. and Mrs. George R. Heinzman, 16260 Locherbie, Birmingham, Mich. She earned her bachelor's degree at Central Michigan University, Mount Pleasant. She is working toward the master's degree in museum science at Texas Tech University.

The Lubbock Lake Site research is conducted through The Museum of Texas Tech University. The 1979 dig is supported by the Moody Foundation through the Lubbock Lake Site Development Corp. The National Science Foundation supports other aspects of the project.

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5,000-YEAR-OLD TOOL--Jean Heinzman, a crew chief at the Lubbock Lake Site 1979 archeological dig, holds a 5,000-year-old stone tool, the first evidence found that the area was inhabited at one time by Archaic man. Heinzman is a museum science student at Texas Tech University. She is the daughter of Mr. and Mrs. George R. Heinzman, Birmingham, Mich. (TECH PHOTO)

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LUBBOCK--Why does anyone give up a law practice after 16 years and start teaching?

"It's more fun," according to John F. Sutton, visiting professor in the Texas Tech University School of Law. "I like working with concepts. You get to dig deeper. I enjoy it more."

Sutton holds an endowed professorship at The University of Texas School of Law. However, during the first summer session he is teaching an ethics course at Texas Tech's School of Law.

"Tech's is a fast-moving, beginning law school. It is moving faster than most in this region," Sutton said.

Two qualities are necessary to establish a reputation for a law school, quality faculty and quality students. He said a law school also needs a well-equipped library and a place for students and faculty to work.

"I think it's important to be graduated from a school with a good reputation, particularly five or 10 years after graduation," Sutton said. A lawyer's alma mater is most important when he is in a position to establish himself. "That's why alumni help maintain a school's reputation."

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Law schools have always graduated more lawyers than there are immediate jobs for them. However, Sutton said legal needs of citizens with lower and moderate income levels are not being met. Cost factors restrict access to legal counsel for these income groups.

More than a high score on the Law School Admission Test or a high grade point average is necessary in order to be a successful law student, Sutton emphasized. The ideal student will tend to be analytical. Sutton said mathematicians frequently make good law students. Another qualification is a thorough knowledge of English.

One of the best moves for a young lawyer is association with a competent and ethical attorney or law firm.

"A student gets out of law school and he's not really trained to practice law. He has a law background, but he's really not ready," Sutton said.

Through association with an established attorney, a young lawyer learns the formalities of the profession.

Sutton spent four years with the Federal Bureau of Investigation after he was graduated from the UT School of Law. Later he established himself in San Angelo and San Antonio, where he specialized in petroleum cases and civil practice.

In 1957 Sutton gave up his law practice to begin teaching. He teaches what interests him: torts (personal injury cases), evidence and ethics.

He does not regret his decision. "Every student, in a way, represents a kind of challenge," he said. Sutton is able to explore legal concepts and analyze interpretations of the laws. However, that usually follows digging out from under a stack of previously ungraded papers.