

Rep. Presnal addresses engineering conference

The state-wide service mandate of Texas Engineering Extension Service programs were emphasized Monday by Rep. Bill Presnal and Texas A&M officials.

"The land grant status of Texas A&M has been largely ignored by the public, and Legislature," Presnal said at the annual EES staff conference.

It has led to duplication of programs at increased taxpayer expense, he said. EES has a long history of training, and the flexibility to conduct short-term programs that do not require prolonged existence.

At other institutions or agencies, the House Appropriations Committee chairman noted, such programs live past their usefulness.

Also addressing EES staff at the day-long Labor Day conference were Engineering Dean Fred J. Benson, EES Director James R. Bradley and Dr. Bill Grusy of the Texas Education Agency, partner in some EES programs.

Benson charged that Engineering Extension Service staff be extra perceptive to "assess public needs in your travels about the state."

To provide it, he continued, "may require taking risks. But if we are not making a mistake or two, we're probably not doing much."

Dean Benson complimented the EES staff on the past year, calling it successful from the size of programs, new training and inauguration of the West Texas Regional Training Center at Floydada.

Presnal stressed that EES instructors can enhance extension programs by reminding the public of A&M's land grant status, "through which the Legislature will get the message."

Bradley called for increased productivity, the only route of continued EES growth in the face of budgetary limitations.

Researchers analyze findings

Archeologists study cave

From this humid campus on the Gulf Plains, Texas A&M University researchers are reaching across a gap of 300 miles and 8,000 years to explore the way early man lived among the rugged canyons of dry West Texas.

Texas A&M's first archeological field school is over, but some of the 19 students who enrolled for it this summer are finding their work has just begun as they start analysis of information and materials from a site near Del Rio.

Described as one of the best instructed field schools, the program offered student supervision by three A&M faculty members (including school director Dr. Bruce Dickson), four graduate student assistants and a professional archeologist from A&M.

The school was held in conjunction with a six-week excavation of a cave by other A&M researchers working under a \$54,900 National Science Foundation grant.

The NSF aid is the largest single grant ever awarded A&M anthropologists. The studies have been financed in past years by the

Winship Foundation of Corpus Christi, National Geographic Society and Texas A&M Research Foundation.

Evidence suggests scores of native Americans inhabited the cave, some as long ago as 6,000 B.C.

During excavation, the team reached bedrock in the cave, which at the deepest point was 10 feet below ground level. In some instances, cultural material was recovered in levels all the way down to bedrock, said Dr. Harry Shafer, archeological team leader.

During the digging, there were some unexpected finds, Shafer admitted. One of the most spectacular was discovery of a widespread layer of cactus pads near the bottom of the other deposits.

"We really have no explanation for it at this time," said Shafer. "Was it a work area, flooring, bedding, or was it simply a device to keep the dust down? We don't know right now."

"The field school proved a definite educational benefit," said Dr. Vaughn Bryant Jr., who directed botanical research and assisted in the archeological effort.

"Five years after establishment of our program, we were pleased to be able to offer a field school. It was great to see all those students able

to transfer classroom theory to practice. That opportunity should put them miles ahead," he said.

"We anticipate future field schools the same general region," said he.

Actual excavation was only part of this year's expanded study, however.

While some sweated in the dusty cave, other scampers up and down sheer canyon walls researching the flora and fauna exploited for food and tools by ancient inhabitants.

A widened search for other archeological sites resulted in location of additional places of ancient habitation in the general area, even though it is unknown whether the same band or others were responsible for the material left behind.

In trying to reconstruct what life was like in West Texas 8,000 years ago, researchers and field school students conducted food gathering expeditions and food preparation experiments to see what the nomads may have preferred.

Although barren by many standards, the West Texas canyon country would have been a veritable garden for what most of the first Americans ate.

Sotol, hackberry, cactus tunas (fruits) and pads, agave, persimmon, walnuts and some flowers are

in abundance and can be easily gathered. But food preparation differed with each plant and Agave learned that fact the hard way, as the people they study learned it 80 centuries before.

One of the major accomplishments from the field school was summer exploration of the site and recovery of more than 1,000 cactus lites, fossilized human excrement which can be analyzed to determine what the cave-dwellers ate, if they prepared it and if they had testinal infestations. Preliminary tests have shown no infestation thus far.

Texas A&M has been acclaimed the world's leading institution in this field of research and the content recovery of so many cactus resulted in the best sampling of North American archeological sites say the scientists.

Artifacts, refuse and coprolites can show how the cave was used, how long it was occupied at any time.

This summer's study of the cave and adjacent region has been the most extensive since exploration began there three summers ago.

"When finished, this project will be the most intensive documentation of any archeological site ever explored in North America," Shafer and Bryant.

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Shale oil may top roads

Texas A&M University engineers are doing their homework on the sources of and materials for tomorrow's road surfaces.

Almost daily, U.S. petroleum engineers are reaching further and further into each barrel of crude oil to produce everything from clothes to food.

Asphalt, the once cheap road building material from the bottom of the petroleum barrel may soon cease to exist, either inexpensively or plentifully. A new source, from the one to three trillion barrels of oil trapped in western shale layers, is under investigation. Samples are being tested by Professors Bob M. Galloway and Jon A. Epps of A&M's Texas Transportation Institute in a project sponsored by the U.S. Energy Research and Development Administration (ERDA).

The duo head a team that is punching, dunking, freezing, and roasting samples of three grades of shale oil supplied by the ERDA research center in Laramie, Wyoming.

"We're doing the preparatory work now," said Galloway. "All indications are that asphalt from petroleum will be diminished soon and a similar material from shale oil will appear. We are doing the testing now that will allow us to put it into rapid use; it's just a question of time."

Four grades of shale oil asphalt, with different viscosity (thickness) ratings, combined with two types of aggregates (limestone and river gravel) will be used in the series of tests.

These eight sample types will be characterized by standard specification tests together with special quality and durability tests to evaluate their physical properties.

Dr. J. Claine Petersen, of the Laramie Center, said that if we really went to work today there could

be petroleum production from shale oil in as little as five years, but now it's "more a matter of public policy and economics than one of technology."

He said that a technically sound process is presently in operation and has been for years, in Brazil, Russia and France.

As to the quality of asphalt from shale oil?

"That's what the tests at A&M are to find out," Petersen said. "However, the Federal Government has been working with shale oil for thirty years, and about twenty-five years ago they made some roads in Colorado with shale oil materials. They are still in appearance today."

Standard design tests will be performed on these asphalt-aggregate mixtures together with special tests to determine stiffness, strength, durability and water acceptability.

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McDONALD'S INTRAMURAL HIGHLIGHTS



Skill Levels, Checkout

IM Changes Trying for Increased Participation

The Intramural program has gone through a lot of changes over the summer. One of the major changes is in the IM Office itself. In addition to a remodeling job, the equipment check-out procedure and location has been changed. It is now located at the northeast door of DeWare Fieldhouse. This office is not only for equipment check-

out, but also for handball/racketball court reservations. They may be reserved by any student, faculty, or staff member for one hour up to 24 hours in advance. ID cards are required to use any IM facility and reservations may be made by calling 845-2624, Monday thru Friday, 8-5.

Another change in the format of

IM activities is the creation of skill level classifications. Each division, except the Fish, will be subdivided into three classes. Class A will require a high skill level with highly competitive teams and individuals. Class B will include teams and individuals of moderate skill level, while class C will not emphasize competition and will be mainly composed of teams and individuals who are playing for the fun of playing.

As each team or individual enters an event or sport, they will declare which class they wish to participate in. Only the class A teams and individuals will compete for All-University Championships and T-shirt awards. Class B and C members will compete for Class Championships and certificate awards. The divisions of IM competition will remain the same as in previous years, including the Corps, Fish, Men's Dorm, Women's Dorm, Men's Independent, Women's Independent, and Co-Rec divisions.

The idea of the class system is not to eliminate competition, but to offer enough different levels of competition that anyone can participate and be competing against individuals or teams of equal skills. The awards system and points system have also been redesigned to keep teams from "sandbagging".

With these new class systems and an improved check-out and reservation system, the IM Office expects Intramurals to have its best year yet. This can only happen if you, the students, staff, and faculty of A&M participate. So, come on out and join the action and the fun!



Robert Reeves, a senior in I-1, urges one of his freshmen on during the tug-of-war competition on "Fish Day".

September Entry Deadlines Near

Flag Football

The 1976 IM Flag Football season will officially kick-off on Monday, September 20, at 5:00 p.m. Play will continue in a Round Robin Tournament with single elimination playoffs. All games will be played between 5:00 and 7:00 p.m. on weekdays and between 2:00 and 7:00 p.m. on Sundays.

The games will be played under official NCAA rules with special TAMU IM adaptations, and all game equipment will be furnished. A copy of the rules may be picked up at the IM Office in DeWare

Fieldhouse. The new system of skill levels will be in effect, so you can choose how competitive you want to be. You have to hurry, though, because the entries will close at 5:00 p.m. on Tuesday, September 14, in the IM Office.

Team managers can pick up their schedules at a mandatory meeting, Thursday, September 16, at 5:00 p.m. in room 267 of G. Rollie White. Any team not having a representative at this meeting will be dropped from the roster.

Tennis Singles

Entries for Tennis singles competition will close on Tuesday, September 14 and play will begin on Monday, September 20. Players can enter at the IM Office and can pick up their schedules on Thursday, September 16, also at the IM Office. Tennis courts may be reserved for practice by calling the IM reservation office at 845-2624.

All entrants must supply their own rackets and balls and any player injured during competition must forfeit if he or she cannot con-

tinue play. Serves will be decided by the toss of a coin or a racket spin and play will be conducted under USTA rules.

The competition will be single elimination with matches consisting of the best two out of three sets. Games within sets will be four point games with no deuce; the first player to four (or forty) will win.

As with all other IM sports, the competitors will be divided into skill class levels. So come on out and show your stuff!

Official Jobs Now Available in IMs

Male and female IM players are urged to help the IM Office by officiating. The IM Office has several openings for officials in football, volleyball, basketball, and softball. Starting pay is \$2.26 per hour with experienced officials earning \$2.50 or \$2.75 per hour.

There will be a meeting for all

those interested in football officiating on Wednesday, September 8 or Thursday, September 9, (attend one) at 7:30 p.m. in room 267 of G. Rollie White. The first Volleyball meeting will be held on Tuesday, October 5, at 7:00 or 8:00 p.m., also in room 267.

This is an excellent opportunity to earn a little extra money (about 8-10 hours per week), as well as learn more about sports and sportsmanship. No officiating experience is necessary as the IM Office will train you for the job. If you have any question regarding officiating, see John Meyer in the IM Office, DeWare Fieldhouse, or call him at 845-7826.

This ad is sponsored by McDonald's on University drive and is prepared by the IM Office, DeWare Fieldhouse. Stories and Photos by Paul "Poogie" Nettell.

September Calendar

Sport	Entry Deadline
Football	September 14
Tennis Singles	September 14
Bowling	September 21
Golf Singles	September 21
Handball Singles	September 28
Badminton	September 28

Fast-paced volleyball action was undertaken by the Corps Freshmen last Saturday in the annual "Fish Day" activities.