

Sheldon Receives Indian Paintings

Eight paintings by contemporary American Indian artists have been presented to the University by Mr. and Mrs. Oscar Thoeny of Phoenix, Arizona.

The paintings will go on display tomorrow at Sheldon Memorial Art Gallery, according to Norman Geske, director of the Gallery.

Mrs. Thoeny, formerly of Alma, is the daughter of Ashton Shallenberger, former governor of Nebraska. She attended the University.

The paintings include: "The Mountain Spirit Dancer" by Frank Vigil, "Antelope Herd" by E. Holgate Jr., "Deer Dancer" by Gilbert Atencio, "Fire Dance" by Beatien Yazz, "Horse Rearing" by Andy Tsinajinie, "Eagle Dancer" by J. Herrera, "Mythical Horse" by Pop Chalee, and "Indian Dancer" by Alfred Hicks.

Campus Calendar

TODAY

GOVERNOR'S commission on human rights 11:30 235 Student Union.

HOME EC CLUB installation of officers 4 p.m.

QUIZ BOWL 7 p. m. Student Union auditorium.

YOUNG REPUBLICANS 7 p.m. 234 Student Union.

SKI TRIP orientation for all who plan to attend ski trip, 7 p.m. Pan American rooms Student Union.

STUDENT TRIBUNAL, 419 Administration Building, 5 p.m.

ALPHA LAMBDA DELTA 4:30 p.m. Pan Am Room Student Union.

TOMORROW

FRIENDS OF SNCC election of officers 4:30 p.m. 126 Andrews.

Nursing Course Will Be Offered

A seven-week collegiate course dealing with daily encounters of the professional nurse will be offered by the University School of Nursing and the College of Business Administration.

"Managing Personnel," second in the special series of courses entitled "Toward Self-Improvement in Administrative Technique," will be conducted at the Nursing School in Omaha, each Saturday from 9 a.m. until 12 noon, beginning Feb. 20 and concluding April 3.

The non-credit course is based on the Business Administration 190 course, with particular emphasis being placed on the supervisory aspects of personnel—motivation, work performance, communication and evaluation.

Course instructor will be Dr. Richard Bourne, professor of business organization at the College of Business Administration.

Fee for the course is \$20 plus an additional charge for required text materials. Registration is being handled by the office of continuing education, College of Medicine. The February 20-April 3 course is designed to accept approximately 80 registrants.

Teachers Will Meet Tomorrow At Center

The first of four annual meetings of the Council on Teacher Education for 1965 will be held at the Nebraska Center tomorrow.

The assembly of 80 educators will include a representative selection of teachers in the grades, high schools and teachers colleges.

The group will meet to discuss teacher certification in Nebraska and the general preparation of teachers in the State's elementary and secondary schools.

Stebbins, Ahrens Named 'Masters'

Two additional University graduates have accepted invitations to participate in this year's Masters Program, according to Bill Coufal, Masters Committee chairman.

The two are Hazel Stebbins of Lincoln, former National vice-president of the Red Cross, and Don Ahrens, vice-president of General Motors and general manager of the Cadillac division of that company.

Coufal also said that the theme for this year's program will be "Masters Today For Tomorrow."

Future Dark For Bugs

The ominous future facing the insect and animal pests of nature was outlined recently by a University professor at the annual meeting of the American Association for the Advancement of Science held in Montreal, Canada.

The report was presented by Professor S. O. Nelson, research leader for the U.S. Department of Agriculture's Agricultural Engineering Research Division. The paper was co-authored by John Seubert of the Fish and Wildlife Service, U.S. Department of the Interior, Laurel, Md.

Nelson described pest control studies involving sound and ultrasonic energy, radiofrequency electric fields, infrared, visible and ultraviolet radiation, and ionizing radiation such as X rays, gamma rays.

Radiation

Radioactive sources of ionizing radiation and electron accelerators, while more expensive than chemical control measures at present, will probably be used some day to control insects in large quantities of grain, he said.

Doses of radiation large enough to sterilize insects do not hurt grain for human use and there is no danger of the grain becoming radioactive when treated with the types of radiation being considered, Nelson said.

Genetic effects would prevent use of such treatment on seed grain, however, he said.

Radiation sterilization techniques have already eliminated the screwworm menace in the southeastern United States through the release of millions of radiation-sterilized male flies, he said.

Ultraviolet Light

The attraction of ultraviolet light to many species of night-flying insects has been used to advantage in tremendously reducing the population of tobacco hornworm moths in a 12-mile-diameter experimental area in North Carolina. Blacklight insect traps have captured encouragingly large numbers of the big moths in experiments conducted by the

U.S. Department of Agriculture, Nelson said.

Radiofrequency energy kills insects in grain without damaging seed quality, he said.

Infrared Radiation

Infrared radiation can also be used to kill stored-grain insects, he added.

And if theories involving infrared electromagnetic communication between insects are found to be valid, there may be other insect-control uses for infrared energy. It is thought that some male moths sense the location of females over great distances from infrared waves emitted by the female moth.

Man-made interference with insect mating activity might be possible if this were true, Nelson said.

Sound Energy

Experimental work on insect control using sound energy shows promise but this field will require much further study, he said. Ideas being investigated include: recording the sounds insects use for sex attraction and recognition and then broadcasting them to attract the insects; studies of man-made sounds to attract or otherwise influence insects; and continuous, low-level sound exposure to reduce or prevent insect infestation in grain and food storage and processing areas.

Studies of the evasive action

which moths take to escape bats show that the moths detect the radar-like ultrasonic sounds used by bats searching for night-flying insects.

High-pitched sounds, inaudible to the human ear, similar to those made by bats are now being studied for possible use in driving cotton bollworm moths away from cotton fields, Nelson said.

Similar principles being studied in Canada for guarding fields of corn against European corn borer moths have resulted in indicators that insect damage has been reduced.

Repelling Pests

Sound stimuli have been used with varying degrees of success to repel birds from agricultural areas and airports, he said. Pyrotechnic devices, rifles and shotguns, sirens, carbide and acetylene exploders, air horns, and broadcast bird alarm and distress calls have been the principal stimuli used.

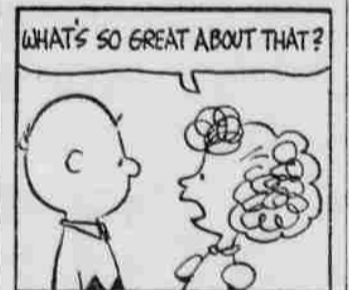
Experiments indicate that the success of stimuli depends upon how intelligently they are used, and on environmental and behavioral factors, Nelson said.

For instance, he said, the effectiveness of broadcast distress calls and shell crackers for repelling herring gulls depends on the strength of the drive to remain in a feeding or loafing area (site tenacity), in relation to the strength of the native reaction to the stimuli.

Since these factors change with time and place, it is unlikely that the success of a given stimulus can be predicted in all situations, he said.

Nelson and Seubert pointed out the need for greatly expanded research on the physiologic, sensory mechanism, and behavior of pest animals

This research, they said, would provide information needed for the development of new control ideas, techniques, and equipment including possible new applications for sonic and electromagnetic energy.



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