

WSU News Service

WASHINGTON STATE UNIVERSITY, Aug. 31--Mental illness, alcoholism, homicide and economic failure are closely related to suicide, a Washington State University sociologist asserted today at the 62nd annual meeting of the American Sociological Association.

Professor William A. Rushing, speaking on "Deviance, Interpersonal Relations and Suicide," reports that one of the most striking findings of research on suicide victims is that suicide tends to be preceded by deviant behavior.

He contends the evidence suggests suicide frequently follows deviance because of the interpersonal disruptions created in the life of the deviant. Deviants are likely to be rejected by others, he said, and the resulting social isolation may precipitate suicide.

Persons who have been defined and treated as mental patients and alcoholics tend to commit suicide in disproportionate numbers, as do murderers and murder suspects, Professor Rushing said. He also said the suicide rate for persons who were downwardly mobile, unemployed, or in financial difficulty was unusually high.

"The relationship of suicide to mental illness, alcoholism, homicide and economic failure can hardly be questioned," Professor Rushing says. "To be sure, many suicide victims were neither mentally ill, excessive drinkers, homicides, nor economic failures.

"Nonetheless, an assessment of the evidence leads to one incapable conclusion: Many and perhaps most acts of suicide were preceded by deviance or by a social process in which the victim was defined as a deviant."

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"Furthermore, an unknown number of victims were undoubtedly drug addicts, homosexuals and criminals of various types. The conclusion, therefore, that suicide is frequently preceded by deviance is beyond dispute," Professor Rushing said.

The results have been interpreted three ways: (1) both deviance and suicide are the results of the same social force, such as urbanization; (2) both are manifestations of personality characteristics of the individual; and (3) suicide is the result of an interpersonally disruptive situation generated by deviant behavior. Most behavioral scientists have adopted the first two interpretations, but Rushing contends there is more evidence for the third interpretation than the other two.

Washington State University
News Service

PULLMAN, Wash., Dec. 12--The Marmes archaeological site in southeastern Washington will be featured on an hour-long national television program in late March entitled "The First American."

A six-man crew from New York City has been at the site the past few days filming segments which will be used in the NBC-TV documentary show.

Hugh Downs, host of the "Today" show, will narrate the program which will have an expected viewing audience of 30 million during prime evening time.

The oldest known human remains ever recovered in the Western Hemisphere --11,000 to 13,000 years old--were found at the site last spring by Washington State University scientists. Numerous other archaeological treasures have since been found, including tools, implements and other ancient skeletal remains.

The First American program will study the first men who migrated to this continent out of Asia across the Bering land bridge into Alaska and Canada, the United States and southward to the tip of South America.

"Their story will be told with artifacts found by present day archaeologists and through the direct descendants of those early peoples, some of whom still use similar tools and live very much like their ancestors did thousands of years ago," according to producer Craig Fisher of New York.

The NBC crew will film scenes in Siberian Russia--the general area from which the earliest men came--Onion Portage on the Kobuk River in Alaska, and Nikolski on Umnak Island in the Aleutian Islands, one of the first locations inhabited by the first Americans.

In addition to the Marmes site, the program will include the Murray Springs site in Arizona and the Fells Cave site in Tierra del Fuego, Chile, in the southern most part of the continent, showing the full range of early man's travels.

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"The program will attempt to define and answer such challenging questions as when these people first came to the continent, where and how they moved in their travels and how long it took them to populate our continent," Fisher said.

The program is part of a new, continuing NBC News series of one-hour special programs examining subjects in various scientific areas, produced in cooperation with the National Academy of Sciences.

Fisher, who will write, direct and produce the program, was in Pullman to confer with Roald Fryxell and Dr. Richard D. Daugherty, co-directors of the Marmes project, and other members of the archaeological crew who will be seen in the colorcast.

WASHINGTON STATE UNIVERSITY, Jan. 6--A new technique to preserve priceless printed records from the ravages of time has been developed at Washington State University and is to be used in treating valued documents relating to the history of the 74-year-old institution.

Dr. Mark Adams, head of the chemical research section of the WSU College of Engineering Research Division, said Thursday an 18-month study partially supported by Holland Library has developed a method to extend the durability of valued papers up to 100 years.

As some documents age, they become brittle and discolored. This is caused primarily by acids present in the paper or formed in the paper during storage, Dr. Adams said.

Unfavorable environmental conditions such as humidity, light and increased temperature help promote the deterioration.

"Consequently," he said, "any method designed to preserve documents has to begin with a neutralization treatment that does not make the paper strongly alkaline at any time."

A research team of Dr. R.A.V. Raff, Ivan Herrick and Dr. Adams based its study on the concept that the incorporation of polymeric buffering agents (such as alkali salts of organic polyacids) will neutralize acids, prevent deterioration, and simultaneously reinforce the paper structure.

They chose CMC (the sodium salt of carboxymethylcellulose) and after use it was estimated that the treated paper became 69 percent stronger.

"We investigated two processes--impregnation and lamination," said Dr. Raff, principal investigator. "In the impregnation process a CMC solution was applied to the paper. In the lamination process, pre-formed films of CMC were applied to both sides of the paper sheet. Paper stabilized either way may undergo further protection in the encapsulation process by laminating between sheets of polyethylene-coated mylar."

Preserving documents add 1-1-1

Dr. Adams said the improvements were shown to apply to four types of paper tested in the program--newsprint, letterhead bond, onionskin copy paper, and old 1916 legal bond paper. No serious alteration of the appearance of the treated sheets was noticed.

Dr. Adams said the newly developed restoration know-how will be put into effect as soon as prototype equipment can be developed.

Dr. G. Donald Smith, director of libraries at WSU, said that more than a million priceless documents housed there could be subjected to the preserving treatment when it is refined enough to use.

Included in the collection of papers that need to be given added "life" are the numerous letters and papers authored by the late Dr. E. O. Holland, president of WSU from 1916 to 1944.

WASHINGTON STATE UNIVERSITY, April 10--The National Park Service has granted \$20,000 to Washington State University for archeological salvage excavations in the Little Goose and Lower Granite dam reservoirs on the Snake River.

Roderick Sprague, WSU staff archeologist, will direct the project which will include scientific excavation of several ancient Indian sites along the Snake River plus the operation of an archeological field school for some 20 students.

WSU crews have conducted archeological excavations at many locations along the Snake, Columbia and other rivers for the past 20 years. Gradually they have been working their way up river on the Snake--trying to keep ahead of rising waters brought by the construction of new dams on the river.

Their objective has been, and the objective of Sprague's project this summer will be to discover and preserve knowledge of ancient peoples in this area and their culture for the public. Several sites have been selected in the area for this year from Lewiston to Penawawa on the Snake. In most cases the sites are on property now controlled by the U.S. Government and Federal law provides for the scientific search for prehistoric material. It also prohibits the digging for artifacts on the land by amateurs, and Sprague said well-meaning amateurs have caused serious problems to WSU archeological field teams in the past.

"The sites we are planning to excavate this summer and next have been known to archeologists at WSU for many years," he said. "We have conducted our excavations--as a matter of necessity--farther down the rivers before the rising water from the newly constructed dams covered the sites. We have left these farther upstream for future years. Many sites in the area in which we are now working have been ruined by amateur diggers who probably meant no harm, but who have disturbed the materials left by ancient man in this area.

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"The artifacts of prehistoric man are meaningful really only if we can find them in their original context. The important thing is to discover the relationship of each object in the site to every other object. We can, for example, analyze bits of charcoal, balls of pollen, animal bones, and man-made stone knives and other tools and perhaps combine the information from all of this into a fairly comprehensive description of what the residents there were like and how they lived. Once a particular area has been dug by an amateur, that particular place is of little value to the scientific archeologist."

Sprague said artifacts discovered in scientific excavation are placed in museums for the public to enjoy in the future.

The program this summer will include excavation of stratified midden deposits, semi-subterranean houses and burials along the Snake. The 20 students and their supervisors will live on the banks of the river for eight weeks. Some will remain for a four-week period following the field school.

Sprague said WSU archeologists are interested in working with and training amateur archeologists who are interested in conducting scientific amateur archeology. He said visitors are always welcome at the archeological field school and urged amateurs wishing to help find out more about the people who preceded us in this area to contact the Department of Anthropology.

WASHINGTON STATE UNIVERSITY, May 7--The U. S. Geological Survey has joined Washington State University in efforts to salvage remains of the Western Hemisphere's earliest known human. This was announced today by Roald Fryxell, assistant professor of Anthropology at Washington State University, and discoverer of the ancient human skeleton found recently at the Marmes Rockshelter Archaeological site in southeastern Washington.

The Survey will contribute analyses of samples for radiocarbon age determination and correlation of volcanic ash layers, according to Director William T. Pecora and Dr. Arthur A. Baker. The officials say the Marmes project will further the Survey's continuing geological research program in the Pacific Northwest.

Fryxell said in order to develop more detailed dating of the recent discovery, the Survey plans to analyze samples of charcoal, bone and shell found at the Marmes site for their content of radio-active carbon or C 14.

Dr. Meyer Rubin, chief of the U.S.G.S. Radiocarbon Laboratory in Washington, D. C., will conduct the analyses. Dr. Rubin has visited the Marmes site previously, in conjunction with the meetings of the International Radiocarbon Conference held in Pullman during June of 1965.

Dr. Ray C. Wilcox, widely-known volcanologist and member of the Survey staff will analyze samples of volcanic ash from the eruptions of Mt. Mazama at Crater Lake in Oregon and from Glacier Peak in the northern Cascades of Washington. Both volcanoes erupted thousands of years ago and deposits of volcanic ash from these sources were located near the ancient remains.

Dr. Wilcox, who currently is on leave from the Survey on a lecture tour of the Pacific Northwest, also had visited the Marmes

site in 1963. Wilcox and Fryxell plan to examine field evidence relating to the discovery this week.

Fryxell said he was delighted at the Survey's offer to participate in salvage of scientific data and commented that "with the reservoir to be flooded in December, removal of all possible information will be critical in terms of time.

"Because of the important nature of the data at Marmes Rockshelter WSU needs the best assistance available, and the generous response of the Geological Survey is most heartening."

Fryxell said that as excavation progresses at the site, several specialists from the Geological Survey will serve as consultants to the WSU staff.

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WASHINGTON STATE UNIVERSITY, June 8--Pinpointing a more exact age for skeletal remains of ancient man will be possible in the future, thanks to a new carbon 14 dating technique described here today. The new process involves recovery and use of a protein substance called collagen from old bones. This development was described to some 125 scientists attending an international conference on radiocarbon dating at Washington State University by Harold W. Krueger, Cambridge, Mass., technical director of Geochron Laboratories, Inc.

Scientists in the past have been able to date ancient skeletons only through the use of carbon deposits found with the skeleton. Krueger said most laboratories have shied away from using bone material itself, as the results were not thought reliable.

"Everyone thought the bones were difficult to date," he said. "They are not. Dating the bones themselves, rather than the associated carbon materials, is much more exact. You can't be certain that the carbon materials near the skeleton were deposited there at the same time."

The scientist said that abundant recoverable collagen has been found in a number of bone samples more than 42,000 years old.

He described collagen as the protein substance that binds inorganic chemicals together in bones.

He said the oldest bones used in his laboratory were animal remains found in ancient caves in Hungary---thus indicating the pre-historic cave man and his lady weren't the best of housekeepers.

The week-long conference has attracted scientists in carbon and tritium dating, and archeologists who provide the material to be dated, from throughout the world.

Part of the travel costs for the visiting foreigners was provided by the Atomic Energy Commission, The National Science Foundation, and the Wenner-Gren Foundation.

WASHINGTON STATE UNIVERSITY, July 11---A team of U. S. Geological Survey specialists this week joined the Washington State University archaeological field project at Marmes Rockshelter in southeastern Washington in efforts to retrieve all possible scientific data from the Marmes early man site before it is flooded by reservoir waters in December.

Dr. Harold E. Halde, an expert in the stratigraphy of Ice-Age and recent geological deposits, and Dr. Ray E. Wilcox, a specialist in the analysis and identification of Volcanic Ash deposits, are spending four days at the site to confer with Roald Fryxell, WSU geologist and director of the project. Both visitors are from Denver, Colo.

Expected to join them later was Dr. Meyer Rubin, head of the Geological Survey's radiocarbon dating laboratory in Washington, D.C.

The geologists are conducting further investigation of the deposits in which the Marmes skeleton was found in efforts to obtain additional information on the sequence of geological events leading to preservation of the ancient bones uncovered by WSU scientists, and of the climatic conditions which existed at the time that "Marmes Man" camped on the fossil stream-bank of the Palouse River 11,000 to 13,000 years ago.

Halde and Wilcox have worked for years in the Western United States on problems similar to those at the Marmes site. Halde is project geologist for U.S. expeditions to the ancient Valsequillo archaeological site in Mexico.

Also at the site this week are Dr. D.J. Easterbrook of Western Washington State College, Warren A. Starr and Ramond A. Gilkeson, both WSU agronomists.

The Marmes project, under the direction of Fryxell and co-director Richard D. Daugherty, currently includes a staff of 25 WSU students and faculty.

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WASHINGTON STATE UNIVERSITY, July 26--Washington State University has received a \$29,100 grant from the National Science Foundation to support the second year of excavation at the Ozette Indian Village at Cape Alava in northwest Washington.

Work at the site was begun last summer under a \$106,200 grant from the NSF. The \$29,100 grant, announced by Leland J. Haworth, director of the NSF, is a continuation of the original grant.

The project is supported by the NSF in cooperation with the National Park Service, the Makah Indian tribe and the Bureau of Sports Fisheries and Wildlife.

Dr. Richard D. Daugherty, professor of anthropology at WSU, is the project director and senior investigator. Co-director is Roald Fryxell, a geologist at WSU.

The project is expected to take four years of field work and one year to prepare a written summary of the expedition, Dr. Daugherty said.

Twenty workers have been digging at the site since July 1, and they will remain at the Ozette Indian Village until Sept. 15. They are shoveling and sifting through a mile long area where the Ozettes dwelled for thousands of years, uncovering artifacts, bones and other items, many of them of ancient vintage.

Particular attention is being devoted this year to the excavation of a series of buried houses, where radiocarbon data over 6,000 years old was found last year.

Others from WSU aiding the project include Carl Gustafson, zoologist in the laboratory of anthropology; Harvey S. Rice, staff archeologist; Dr. Resberg Daubenmire, botanist, who is doing a study on plant ecology, and

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Ozette add 1-1-1

Dr. Roy Chatters, director of the radioisotopes laboratory, who is doing the radiocarbon dating. Dr. William Follett, of the California Academy of Sciences, is investigating and studying fish remains.

The U.S. Coast Guard is assisting the crew again this year by flying in supplies. U.S. Senators Warren G. Magnuson and Henry M. Jackson, both D-Wash., have also given active support to the project.

The project is the first major archeological expedition to be undertaken in western Washington. Considerable digging has been done in eastern Washington.

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WASHINGTON STATE UNIVERSITY, August 17--More than 150 scientists from many foreign countries will visit and study the Ice-Age geologic history of Eastern Washington on August 23 and 24.

They are part of a larger group of some 900 scientists coming to the United States for the seventh congress of the International Association for Quaternary Research in Denver later this month and next. This is the first meeting of the association in the United States. The last congress was held in Poland four years ago.

Better known as INQUA, the group is composed of scientists from throughout the world in all fields of research, who are studying effects of the Ice Age and its relationship to present conditions. The group to visit Washington will include geologists, archeologists, soil scientists, ecologists, meteorologists, oceanographers, paleontologists, and scientists from many other fields as well.

The INQUA trip to Washington will be highlighted by a visit to the State's channeled scablands of Eastern Washington--a unique type of landscape found nowhere else in the world. Geologists now accept the theory that the Scablands were formed by enormous floods of water from what they call "Glacial Lake Missoula"--that swept down the Clark Fork River and across the Columbia Plateau during the Ice Age. The waters, geologists say, were held in "Lake Missoula" by a huge Ice Dam that melted and gave way.

The scientist who first proposed this theory--Dr. J. Harlen Bretz--former University of Chicago geologist--was subjected to many years of criticism from other geologists. His theory was finally accepted in 1956, and next week scientists from throughout the world are providing

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the final vindication by traveling to the State to see the area first hand. Dr. Bretz today is retired and lives in Chicago.

Tours starting in Denver and leading eventually to and through the Northwest will be led by Roald Fryxell, staff geologist with the WSU Anthropology Laboratory, and by Dr. Gerald Richmond, secretary-general of INQUA.