ANTHROPOLOGY

Earliest American Girl May Have Met Violent Death

Well Preserved Ice Age Skeleton With Injured Shoulder Blade Shows More Ape-Like Traits Than Modern Woman

VIOLENT DEATH, perhaps even a murder of passion, ended the brief career of a seventeen-and-a-half-year-old girl who promises to become America's most famous prehistoric inhabitant, after having been covered by glacial silts for some twenty thousand years. Her youthful skeleton, marvelously preserved, may clinch the argument for the existence of ancient peoples in America.

Dr. A. E. Jenks, University of Minnesota anthropologist, described the death of the ancient Indian maiden when he laid before the National Academy of Sciences in Ann Arbor a detailed report on what was appraised as "one of the best authenticated finds in North America."

In the historically remote days when a great ice sheet covered northern North America, there lived in prehistoric Minnesota this girl who is now the center of discussion by scientists. She was mongoloid in her features and her rounded nose openings indicate a closer relationship to the apes than is the case with modern women.

Little she cared about these scientific facts to be deduced by racially remote scientists of a future of which she did not dream. The rigors and pleasures of primitive life undoubtedly occupied her existence until her death.

How she was killed is suggested by Dr. Jenks' investigations which if the death were more recent would be presented before a coroner's jury instead of to the court of scientific opinion.

The Minnesota maid was about a half mile from the shore of an ice age lake that has since dried up. Probably she was on a raft or in a canoe. An arrow, or perhaps a spear, was projected toward her and its point entered her bosom, piercing the right lung and perhaps entering the heart, causing instant death. The mortal blow was struck from the front, not behind her back. Dr. Jenks knows this from a gouge in the right shoulder blade of the youthful skeleton.

She toppled over into the water, sank to the depths, and the mud and silt of years sealed her bones into a natural grave which was disturbed only twenty millenia later, when Minnesota road repairers dug out her skull and skeleton.

Who wielded the weapon will never be known, nor has the weapon been recovered. But shell ornaments to hold her hair and others with a sexual significance found with her skeleton undoubtedly adorned her. An antler dagger found nearby may have been carried by her at the time of her death.

Dr. Jenks was called into this investigation when a ditching machine on a state highway in Ottertail County, Minnesota, exposed the (*Turn to Page* 342)

PUBLIC HEALTH

Dropsy Outbreaks Traced To Protein-Deficient Diets

EPIDEMICS of dropsy, or edema, have been occurring regularly at certain seasons in Tennessee, Dr. John B. Youmans of Nashville reported to the American Society of Tropical Medicine. The condition seems to be the result of a diet low in calories and in proteins. This diet is more the result of habit and custom than it is of poverty, Dr. Youmans said.

"In itself the edema probably causes little harm," he said, "but the chronic starvation, particularly of protein, that it apparently represents may cause serious disorders.

"The principal remedy is to be found in public health education, in which more attention should be paid to diet."

Science News Letter, November 26, 1932

ARCHAEOLOGY

Arizona Indians Ate Turkey 1000 Years Ago

ARIZONA Indians ate turkey nearly a thousand years ago. They also ate hawks, owls, coots and robins as well as the more appetizing quail, if bones found in two Arizona ruins dating between 1000 and 1100 A.D. are any criteria. The bones were found by Lyndon L. Hargrave of the Museum of Northern Arizona, and identified by Dr. Alden H. Miller of the University of California Museum of Vertebrate Zoology. The turkeys, Dr. Alden says, could have been obtained by the Indians in the neighborhood of the San Francisco Peaks, a prominent mountain range in Arizona.

Science News Letter, November 26, 1932

ASTRONOMY-RADIO

Meteors Cause Reflection Of Short Wave Radio Signals

By DR. A. M. SKELLETT, **radio research engineer for Bell Telephone Laboratories.**

DURING the Leonid meteor shower which occurred on the night of November 15-16 radio pulse measurements were made at the Bell Telephone Laboratories at Deal, N. J.

In the opinion of J. P. Schafer and W. M. Goodall, who carried out these tests, the results confirm my theory that meteors cause sufficient ionization in the layers of the upper atmosphere to reflect short wave radio signals.

It is a well-known fact that there are two ionized regions which reflect short wave radio signals. Coincident with the occurrence of visible meteors overhead, the ionic density of the lower layer was often observed to increase. This ionization was usually found to last from twenty seconds to two minutes; at times, much longer.

The same investigators had previously made observations during all the more important meteor showers of 1931 and 1932, but unfavorable weather conditions had prevented a direct correlation between the measured increases in ionization and the passage of meteors overhead. This correlation has now been obtained, although at times during the night clouds obscured part of the sky.

Science News Letter, November 26, 1932

GENETICS

New Hormones Show Whether Boy or Girl Will be Born

Secretion From Expectant Mother Injected Into Rabbit Enables Scientists to Predict Correctly in 80 Out of 85 Cases

A SCIENTIFIC WAY of predicting whether the baby will be a boy or a girl has just been developed by two San Francisco scientists, Dr. John H. Dorn of the University of California Medical School and Edward I. Sugarman of the Sugarman Laboratory in San Francisco.

They were able to predict the sex of unborn children successfully in 80 out of 85 cases, they stated in reporting to the American Medical Association.

The method depends on the discovery that the kidney secretion of the expectant mother contains one kind of hormone if the baby is going to be a girl and another kind if the baby will be a boy. When the baby is going to be a girl, this hormone will stimulate precocious sexual development in immature male rabbits. When it is going to be a boy, the hormone has apparantly no effect on the young rabbit's sex glands. The test is made by injecting some of the mother's kidney secretion into the rabbit and examining the animal 48 hours later.

Of the five cases in which their diagnoses were incorrect, they explained that in four of the cases, the rabbits used for the test were probably too old and sexual development had already begun. Consequently the changes they found were attributed wrongly to presence of the female hormone, whereas actually the baby was a boy. They were unable to account for the mistake in the fifth case.

The tests were made anywhere between one week and four months before the child was to be born.

Two of the cases were twins, boy and girl in each case. In these, their test showed that a boy would be born. They suggest that the hormone for the boy neutralized the effect of the hormone for the girl, thus leaving the rabbit unchanged and giving reason to believe that a boy would be born, but giving no indication of his twin sister.

"We are reporting our work at this time so that others may repeat it and confirm or disprove our observations," the scientists stated in their recent report to the American Medical Association. They expect to continue their own study.

"As the matter now stands, we believe that we are working with true and hitherto undescribed sex hormones," they declared.

Their work suggests that an old theory, handed down by folk lore from the time of Hippocrates, Father of Medicine himself, that each sex carried two hormones in varying degree may be correct after all.

Science News Letter, November 26, 1932

MEDICINE

Forty Thousand Protected Against Spotted Fever

DURING the last eight years over 40,000 people have been vaccinated against Rocky Mountain spotted fever, Dr. R. R. Spencer, U. S. Public Health Service scientist who developed the vaccine, told members of the New York Electrical Society at the science forum.

This protective vaccine, which has proved to be effective in saving lives, is the most effective weapon against this dreaded disease which was first discovered in the mountainous northwestern part of the United States. It is transmitted to man by the bite of the common wood tick or dog tick, and is not limited to the Rocky Mountain area.

Vaccination is limited to persons whose occupations necessarily expose them to tick bites.

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Minnesota maid's bones in June of last year.

He had previously asked road crews to preserve carefully any bones they found in their excavations. Without undue haste the unusually complete skeleton was studied. Then the site was redug this year for corroborative evidence, and 355 additional fragments were unearthed.

Geologists were asked to date the layers of the earth in which the Minnesota maid was found. Dr. Frank Leverett of the University of Michigan, authority on glacial geology, discovered the extinct glacial Lake Pelican, in the silt of which the skeleton was found. He dates it as some twenty thousand years old. The great ice age Lake Agassiz existed for ten thousand years before natural processes drained it some eight thousand years ago. The geology shows that the earth packed around the bones of the Minnesota maid was washed in by glacier water several thousand years before that great lake was formed. Other geologists concurred with Dr. Leverett's findings.

If further investigations sustain the Minnesota maid's antiquity, she will be written into history as evidence that a primitive type of *Homo sapiens* inhabited America when men of the Stone Age populated Europe.

Science News Letter, November 26, 1932

PALEONTOLOGY

Field Museum Gets Horned Gopher Skull

THE FIELD MUSEUM of Natural History in Chicago has just received a fossil skull more highly prized than the skull of many a species of giant dinosaur or mammoth would be, although it is only a few inches long. The fossil is extremely rare, only four or five such skulls being known.

It is the skull of a horned gopher, a stout little animal about the size of a woodchuck, which burrowed in the prairies of the West about 7,000,000 years ago, in the late miocene age. The animal had a pair of sharp-pointed conical horns on its nose, which presumably were useful to it in its tunnellings.

Science News Letter, November 26, 1932

Field Museum

PRAIRIE DOGS' FORERUNNERS