

ARCHAEOLOGY

Antiquity Is Restored To Folsom Man

► THE MYSTERIOUS ancient American, Folsom man, is an old-timer after all. He lived about 10,000 years ago. Anthropologists, who have found his distinctive stone spear points in diggings over a wide western U. S. area, had a bad scare when the first "atomic calendar" tests of charcoal of his campfires showed a mere 4,000 years of age.

Dr. Willard F. Libby of the University of Chicago's Institute of Nuclear Science made a recount on other material known to have been associated with Folsom man, whose skeletons have never been found. He extracted the radiocarbon from the charred meat within a burned bone from a long extinct species of bison that Dr. E. H. Sellards found associated at Lubbock, Tex., with things that Folsom man once used. The intensity of the exploding carbon atoms gave an age of 9,900 years, with an indefiniteness of 350 years more or less.

The radioactive age tests can be made because cosmic rays from outer space smash nitrogen of the upper air into a radioactive kind of carbon which disintegrates with a half disappearing in 5,600 years. Weakness of radiation measures the antiquity of living matter that uses the carbon.

Science News Letter, January 6, 1951

MEDICINE

Some Modern Medicine Due to Primitive Indians

► MODERN medicine owes a surprisingly large debt to aboriginal peoples, for both medicinals and psychological attitudes.

This was asserted by Clarence E. Smith, University of California anthropologist, who reported on South American Indian pharmacopoeias to the American Anthropological Association meeting at Berkeley, Calif. Despite the irrational ideas about the causes of disease, the rational use of medicines by primitive peoples is more extensive than is generally realized, Mr. Smith said.

The medicine man used a brightly colored, foul-smelling, or evil-tasting preparation with the idea that it would be unpleasant enough to drive the devils causing the disease out of the sick body.

The patient was prepared for magical effects, so that maximum psychosomatic benefits might result. Moreover, the medicine often was made from purgative or emetic substances which are commonly used today for the same beneficial effects, Mr. Smith said.

Thus the primitive medicine served "to eliminate toxic substances in practice as well as in theory, thus fulfilling physiological functions corresponding to desired magical results."

The Indians had a wide variety of other

medicines which they used correctly: diuretics and sudorifics; tonics, balms, counter-irritants, anesthetics, astringents, stimulants and anti-dysenterics. They had medicines for correct use in catarrhal diseases, malaria, pinworms and tapeworms.

Proper use was made of anti-spasmodics in snakebite and substances to restrict or increase menstrual flow.

Mr. Smith pointed out that as early as the 15th century there began a flow to Europe of the medical lore of the native South American peoples, marking an era of medical as well as geographical discovery.

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PSYCHIATRY

Nystagmus May Be Caused By Emotional Crisis

► ADD to the list of disorders, such as ulcers and colitis, which psychologic or emotional upsets may bring on: the eye condition called nystagmus.

This condition of involuntary shifting or swinging of the eyes from side to side was brought on in a nine-year-old boy as the aftermath of the "nervous crisis" caused when he was forced to change from left to righthandedness.

Previously known causes of nystagmus are congenital defects and diseases of the eye, ear disturbances and disease changes of later life which cause poor vision.

The boy who got his from changing handedness is now a young man of 22. He is not conscious of any disturbance in vision but still has his nystagmus. The eye movements can be seen by others and get worse after any emotional upset. The case is reported by Dr. Mary P. Lord of the Imperial College of Science and Technology, NATURE (Dec. 16).

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ENTOMOLOGY

Spray Guns Used in Fight Against Sheep Ticks

► HIGH POWER spray guns are replacing traditional dipping vats in the fight against sheep ticks that interfere with America's wool production.

Hand spray guns operating at 400 pounds per square inch pressure quickly saturate the fleece with several insecticides, including DDT, toxaphene, chlordane and lindane, all effective.

Developed by Dr. Lee Seghetti and B. D. Firehammer of the Montana Veterinary Research Laboratory, the progress is reported to the American Veterinary Medical Association.

Sheep ticks are properly not ticks at all, but wingless flies, which move about under the fleece, biting and sucking blood, causing the animals to damage their coats by scratching.

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IN SCIEN

GENERAL SCIENCE

New \$1,000 Award Given for First Time

► A NEW national award in science, a thousand dollar prize for scientific achievement founded by Dr. William Procter, Bar Harbor, Maine, biologist, was awarded for the first time by the Scientific Research Society of America at its Cleveland meeting.

The first recipient of this new award is Dr. Karl T. Compton, chairman of the Massachusetts Institute of Technology, who is being honored for his scientific research, administrative and national service.

The new prize will be given annually by the Scientific Research Society of America which in industrial research corresponds to Sigma Xi in university circles.

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CHEMISTRY

New Leak Stopper Hardens Away from Air

► UNLIKE paint which hardens when exposed to air, a new material announced by General Electric scientists hardens when away from air. It is a material to stop invisible leaks, to lock a nut on a bolt and to bond materials together.

The new material, for which there are many industrial applications, is a type of "solventless" varnish which G.E. scientists have developed and call "permafils." Ordinary varnish hardens by evaporation. The permafils harden by chemical action. This new one remains a liquid as long as air is passing through it.

When two metal strips are coated lightly with it and clamped together, the joint will support ten pounds after ten minutes or 100 pounds after 20 hours. More rapid hardening will take place if heat is applied. The material can be used to bond other substances besides metals, including even paper and fabric which can be bonded to themselves or to other materials.

An application suggested is to hold a nut on a bolt without the use of a lock nut. For this purpose, it is put on the threads of the bolt. Similarly, it can be used to make leak-proof pipe joints by application to the threads of the joints.

Dr. Robert E. Burnett and Birger W. Nordlander, both of the G.E. research laboratory staff, are responsible for the new substance. They coined for it a high-sounding name, "anaerobic permafils." In simple language this means non-air-living permanent filling.

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CE FIELDS

MEDICINE

Aureomycin No Help As Cure for Colds

► PATIENTS taking aureomycin in the hope of curing a common cold are wasting their money, it appears from a report in the *NEW ENGLAND JOURNAL OF MEDICINE* (Nov.).

The golden-yellow wonder drug, one of the so-called mold remedies, is good medicine for many serious diseases. But in a carefully controlled study of patients with the common cold, there was no significant differences between results obtained with aureomycin and results obtained with a make-believe medicine.

The study was carried out under the direction of Col. Robert J. Hoagland, M.C., chief of medical service of the Army Hospital at the U. S. Military Academy, West Point, N. Y.

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AERONAUTICS

Bakelite Is Good Shoeing For Airplane Skis

► THE PLASTIC known as bakelite is a good material to use as shoeing on skis for airplanes to permit take-off and landing on snow, the Canadian National Research Council reports.

Experience has shown that laminated bakelite shoeing will out-last sheet metal and rarely needs to be replaced during the life of the ski. The low thermal conductivity and smooth surface of bakelite give it low sliding resistance and low adhesion to snow.

This research organization is making extensive studies of skis for airplanes, the subject being important in Canada because of conditions encountered by planes in many areas during much of the year. The objective is to find the best type of ski design and construction to give reduced sliding resistance and adhesion.

Sliding resistance of aircraft skis on snow is often so great that it is impossible to reach flying speed. At other times, when the skis remain stationary on snow for even a few seconds, they adhere to the surface and difficulty may be experienced in breaking them free.

Several types of skis have been tested. Early in the work it was found that sliding resistance and adhesion are more dependent upon snow conditions than on the design of the ski. Moreover, the skiing quality of snow varies continually and it is not unusual to observe marked changes taking place in less than an hour.

As a result of the studies already made, certain theories have been developed. New types of skis are promised. One type of NRC skis tested during the past winter appears to be somewhat better than the conventional skis.

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MEDICINE

ACTH Prevents Blindness In Korea's Wounded

► ACTH, famous arthritis remedy, may save many wounded in Korea from blindness. The drug's ability to retard growth of fibrous tissue, particularly in scarring wounds, leads Army medical authorities to expect it to have blindness-preventing action.

In wounds close to a nerve, the fast growth of fibrous tissue in the scar may interfere with the nerve's function. In case of wounds to the eye, only a small scar may produce blindness.

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MINERALOGY

Plan To Develop Better Beryl Recovery

► A RATHER common form of quartz known as pegmatite is to be mined in the Black Hills of South Dakota to obtain beryl, an essential minor mineral important in the Defense Program.

Beryl is chemically beryllium aluminum silicate, and from it the metal beryllium is obtained. This metal is used in X-ray tube windows and in many applications in the atomic energy field as a moderator and reflector of neutrons.

Beryl itself has many industrial uses. It is employed directly in the production of high-grade dielectrics for use in airplane sparkplugs. Beryllium-copper alloy goes into current-carrying springs, switches, welding tips, matrix metal in diamond-drill bits, non-magnetite ball-bearings and non-sparking tools.

The new program is an undertaking of the U. S. Bureau of Mines to develop better and more practical methods for the recovery of beryl from granite. Ore-dressing or metallurgical tests will be made in the Bureau's laboratory in Rapid City, S. D. Important in the program is the recovery of all minerals within the pegmatite. Pegmatite may contain feldspar, mica, columbium, tantalum and lithium.

The Black Hills is already the nation's principal source of beryl, but the recovery of beryl has been incidental to the recovery of the other minerals in the pegmatite. Although the area has already produced some 1,800 tons of beryl, the recovery process is not efficient. Better methods are hoped for as a result of the research to be undertaken.

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MEDICINE

New Medical Test For Expectant Mothers

► A SIMPLE test is now available which promises help for physicians in treating complications of early pregnancy, including miscarriage.

The new aid is an application of the smear test which has been applied successfully in diagnosing cancer of the cervix, lung, and stomach.

In this test, cells taken from body fluids are stained and then observed under a microscope. Cancer cells have a distinct appearance to a trained observer. Two University of California School of Medicine physicians, Dr. Herbert F. Traut and Dr. Ralph C. Benson, have found the test also can be a guide in abnormal pregnancy states.

In a study of 201 patients, they found that the test can diagnose pregnancy in a large percentage of cases, determine a trend toward miscarriage, indicate complete miscarriage, and establishes the termination of pregnancy. In each state, the cells from body fluids consistently have distinct appearances.

The physicians expressed the opinion that the use of the test in verifying different states of abnormal pregnancy will help to determine the best treatment. At the present time the methods for differentiating these states are not wholly satisfactory.

The work, financed by the U. S. Public Health Service, has been reported in part in the *JOURNAL OF CLINICAL ENDOCRINOLOGY* (July).

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PHYSICS

How A-Bomb Scientists Received Deferment

► HERE is how the Manhattan Project—which built the A-bomb during World War II—was able to secure deferment for scientists to work on the bomb, as Selective Service Director Lewis B. Hershey revealed it to Science Service.

"I had known Groves (Maj. Gen. Leslie R. Groves, in charge of the Manhattan Project) for a long time," said Gen. Hershey. "One day he came to me and said, 'Hershey, I've got a real Buck Rogers project on my hands and I need certain kinds of men to do the job. If you want, I'll tell you all about it.'

"Well, I told Groves I didn't want to know anything about it, I'd take his word for it. If I knew, I might let it out sometimes because I make most of my speeches off the cuff and I'm inclined to say anything that comes into my head.

"So I passed the word on down the line, and when Groves wanted a man deferred to work on his project, all he had to do was ask."

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