



CAVE MAN'S HOME

In rock caves such as that shown above, were found remains of long-extinct animals and also traces left behind by prehistoric man—his food, tools, bones from his roasts. The building at the right is the laboratory of the National Geological Survey of China at Choukoutien near Peking. This photograph and that on the facing page were furnished by the Carnegie Institution of Washington.

tific deduction makes of a layer of thousands of broken hackberry shells in the cave floor. American hackberries in the Southwest today are commonplace food to Indians who eat the berries raw, and also use them as flavoring for meat or bread. If the innumerable shells in Peking Man's cave were cracked by him for the seed-food inside, that is an important bit of news about man's diet almost a million years ago. If mere rodents ate them, not so important.

Authorities consulted by Dr. Chaney believed rodents would chew a hole, rather than crack shells. Caged rodents put to the test unfortunately refused to take any interest in hackberries. Caged monkeys were more responsive. They ate shell and all.

Altogether, Dr. Chaney concludes, it was probably Peking Man who left the shells, who gathered the hackberries from bushes and mashed them in preparing his meals.

"We can almost hear Peking Woman," says Dr. Chaney, "adjuring Peking Child, in a language lost in the obscurity of a million years, to eat his hackberry pudding in lieu of orange juice, or other vitamin-containing foods of the modern diet."

Peking Woman could talk, for the brain cavity in the skull of this ancient

type shows there was capability of speech. It is also demonstrated that Peking Man lived in caves, and made campfires to cook his food or to warm himself. Whatever part hackberries played in his diet, he was no vegetarian, for his Asiatic cave has yielded abundant fragments of charred animal bones.

The burned bones, Dr. Chaney says, indicate "that here were cooked choice cuts of horse, bison, rhinoceros, and other game animals which ranged the Western Hills and adjacent plains during the past, and which have no living relatives in North China today."

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GEOGRAPHY

Lake in Sahara Seen As The Next Desire of Italy

ETHIOPIA is not the only slice of Africa on which Italian imperialism has fixed hungry eyes. Over a thousand miles due west of Ethiopia, Lake Chad in the Sahara Desert marks another region which Mussolini could well use in his plans for greater Italy.

In all the vast Sahara, this is the one danger spot for international diplomacy foreseen by Prof. E.-F. Gautier of the University of Algiers. Prof. Gautier, noted for his scientific studies of the life and geology of the great African desert, has just seen his famous French work on the Sahara translated into English ("Sahara, the Great Desert"), with the news of present day Sahara happenings worked into a new chapter.

The Sahara has been radically transformed since the World War, Prof. Gautier finds. Necessity proved the mother of invention, when Turkish and Senusi drives in North Africa during the World War forced the armies to try inventions supposedly hopeless for desert application. Wireless telegraph systems worked so excellently that they became permanent, thereby as Prof. Gautier says, "furnishing a powerful auxiliary for keeping peace, order, and security in the desert by permitting every bit of news in the interior to be transmitted immediately to

the local and central authorities, who can communicate and execute their decisions with the same dispatch."

The outside world, also, was brought in close touch with far-flung desert posts, with many advantages, by the telegraphic system.

Automobiles were forced to adapt themselves to the desert, to meet wartime problems. Immediately, says Prof. Gautier, it was discovered that the desert floor offers astonishing facilities for traction. Gasoline, extravagantly high, is still a problem for Sahara travelers, but cars with six-braked wheels and even ordinary cars go everywhere, following the road signs and driven by chauffeurs who form what Prof. Gautier calls a kind of new nomadic tribe. Legionnaires, Frenchmen, and Russian exiles are types who have joined this new desert calling.

In Libya, on the Mediterranean, the Italians have completely discarded camel caravans for official use, and depend entirely on motor transport, says Prof. Gautier.

As elsewhere in the world, the duel between motor highways and railroads is keen in the Sahara. Both systems are making progress.

It is an Italian railroad ambition that causes the French scientist to cast a

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troubled look toward Lake Chad in the heart of the Sahara, lying on a direct north and south route between Italy's North African provinces and the Atlantic Ocean.

"Italy, under Mussolini, would like to construct a trans-Saharan railway from Tripoli to Lake Chad and thence to the Ocean; and would prefer one entirely Italian," writes Prof. Gautier. "The realization of this project would require

France to cede to Italy not only the Chad basin, but also the mandate over the Cameroons; but French public opinion is certainly not prepared to make any such important concession. Chad would seem to be the only portion of the Sahara which threatens to trouble European diplomacy, which has no need for even this small addition to existing complications."

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MEDICINE

Oxygen Injections May Become Life-Saving Means

Experiment by Indian Student in England Keeps Dog Alive 16 Minutes In Pressure Chamber

OXYGEN injected into the veins may become an important means of saving lives in cases of drowning, diffuse broncho-pneumonia and perhaps other conditions in which breathing is hampered or stopped. Such a method of treatment is not practical at present, but the first step toward making it so seems to have been taken by Dr. I. Singh, working at Cambridge University and the Medical College at Rangoon.

A dog was kept alive by this injection method for sixteen minutes without breathing oxygen through the lungs, Dr. Singh reported to the Physiological Society.

The oxygen was supplied to the animal by injection into its veins under an increased atmospheric pressure amounting to three atmospheres. A fault in the injecting apparatus which allowed a sudden gush of oxygen into the veins was apparently all that kept the experiment from continuing much longer.

A way to get oxygen into the blood when disease or accident prevents the

lungs from doing adequately this job which is their normal function would be highly desirable, the editor of *The Lancet* (Aug. 17) points out in calling it to the attention of physicians. Previous workers have tried injecting oxygen into the veins but have found it impossible to give human patients more than very small amounts because of the danger of clogging the veins with air-bubbles. The amounts that could heretofore be given this way have not been scientifically justifiable in treating conditions of oxygen lack.

Dr. Singh's experiments seem to point the way toward a means of giving sufficiently large doses of oxygen by vein. Application of this advance to treatment of human patients will be the next step but a very difficult one.

Working with cats and other animals, Dr. Singh found first that the amount of oxygen the animal could absorb depended on such factors as the distance from the heart and lungs at which the gas was injected and the caliber of the veins along which the bubbles travel.

The size of the veins, however, limited the amount of oxygen that could be absorbed at ordinary pressure. Further experiments showed that increasing the pressure increased enormously the amount of oxygen that could be absorbed. At the pressure of three atmospheres, all the oxygen the dog needed could be supplied through his veins.

During the experiment the dog's breathing was almost normal. A soda-lime tube attached to the windpipe absorbed the expired carbon dioxide. The experiment had to be performed in the pressure chamber.

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PHYSIOLOGY

New "Finger-Printing" For Blood Pressure Tendency

BLOOD-pressure "finger printing" may in the future be used to test every school child from five to eighteen. This is the name Drs. E. A. Hines, Jr., and G. E. Brown of the Mayo Clinic's division of medicine suggest for the test given in their experiments to show whether a child has a tendency towards high blood pressure. The test also shows that high blood pressure is hereditary.

They used what is known medically as the standard cold pressor test in their experiments with 400 children, varying in age from five to eighteen. They found that 18 per cent. were what they called hyper-reactors.

In the cold pressor test the subject rests supinely for thirty minutes. During that time several blood pressure readings are made to establish a basal level. One hand is then immersed over the wrist in a bucket of ice water, and readings are made from the opposite arm at intervals of thirty seconds. After the hand is withdrawn from the ice water, readings are made every two minutes until the blood pressure returns to its previous basal level. The response usually comes within thirty seconds. If a person does not have a tendency to high blood pressure, the blood pressure goes back to its value before the test within two minutes after the hand has been withdrawn from the water.

When family histories were taken of the children showing a tendency to high blood pressure, it was found that 76 per cent. gave a history of hypertension, whereas only 14 per cent. of those with a normal reaction gave a history of hypertension in the family.

Tests were also made on 190 persons belonging to fifteen families. In six of these families there was no history of hypertensive cardiovascular disease, and the tests showed a normal reaction to the cold pressor tests.

The Mayo Clinic investigators believe from their experiments, which have been carried on over a period of three years in which they have studied a large group of subjects, that vasomotor reactions are inherited characteristics and the tendency of an individual as to blood pressure can be accurately told in children of school age.

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Australians made a drive against noisy kingfishers some years ago, not realizing that the birds were keeping snakes in check.

● RADIO

Tuesday, October 1, 4:30 p. m., E.S.T.
FOSSIL FOODS, by Dr. Ralph W. Chaney,
Professor of Paleontology, University of
California.

Tuesday, October 8, 4:30 p. m., E.S.T.
WORLD'S OLDEST LANGUAGE—
ETHIOPIAN, by Dr. John P. Harrington,
Bureau of American Ethnology,
Smithsonian Institution.

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