ARCHAEOLOGY

"Oldest" Village, Dated 5,000 B. C., Has Modern Look

➤ LIFE IN the world's oldest known village was less primitive in some ways than in some parts of the world today.

Evidence of how people lived in the village of Jarmo, Iraq, some 7,000 years ago has just been brought back by Prof. Robert J. Braidwood of the University of Chicago.

About 50 mud-walled houses built in the space of a small city block housed some 300 inhabitants. Each house, which contained several rooms, had its own chimney and oven.

Two varieties of wheat and a kind of pea found in the ruins showed that the villagers knew how to raise food plants. Over 90% of bones found were of domestic animals.

The people had no tools of metal and they ate from stone vessels and from clay dishes "built in" in the mud floors.

They did not lack art. Clay figurines of animals were found and also markedly pregnant "mother goddess" figures.

Other sites explored by Prof. Braidwood's expedition were even older. Palegawra was occupied some 10,000 years ago toward the end of the Stone Age by a people who were simple hunters and collectors of wild food. Barda Balka, even older, was occupied nearly 100,000 years ago by men who had to fight for existence against now extinct elephants and rhinos. At Barda Balka were dug up the earliest tools found in geological context in western Asia. They are flint and limestone hand-axes, pebble-tools and scrapers.

Science News Letter, October 20, 1951

PUBLIC HEALTH

Rabbit Fever Is a Danger to Hunters

➤ THOSE OF you who are going hunting this fall should remember to be on guard against rabbit fever, or tularemia. You may get it from sick rabbits but you can also get it without ever being near a rabbit.

The germs of this dangerous disease are found in other small wild animals, from field mice to opossums, squirrels, coyotes and skunks. The disease can be contracted from handling an animal sick with it and from the bite of insects which have fed on infected animals. Eating improperly cooked meat from infected animals or drinking contaminated water may also let the germs get into the body.

Hunters and trappers are not the only ones exposed to this danger. Butchers and housewives who skin and clean infected rabbits may get the disease. The germs can go through little cuts or scratches on the hands and arms and even through unbroken skin. The wise thing is to wear rubber gloves when handling the animals and if blood spatters above the gloves, wash it off quickly.

Scientific name for rabbit fever is tularemia, from Tulare County, Calif., where the disease was first discovered in 1910. It has been found in many parts of the world, from Alaska to Turkey.

The sickness starts within three to five days after the germs get into the body. Headache, chills and fever are the first signs. Weakness, loss of weight, prostration, backache, joint pains and drenching sweats mark the acute stage, which lasts two or three weeks, after which the fever drops gradually. The fever is always high, 104 to 105 degrees. Because of the weakening effect of the disease, convalescence usually takes two to three months.

Science News Letter, October 20, 1951

MEDICINE

The Fatter the Men, More Often They Drink

➤ THE FATTER men are, the more often do they partake of alcohol, Dr. R. W. Parnell of the Oxford University department of social medicine has found. There is a significant tendency, also, for stocky men to smoke more than lean men.

Dr. Parnell has found a close relationship between how a man is built and how he behaves.

Dr. Parnell's picture of the total abstainer does not agree with the traditional emaciated figure usually drawn by caricaturists to depict teetotallers. Dr. Parnell found that the teetotaller is light of build, but usually has more than average fat in proportion to build.

Both indigestion and nervous tension, the doctor found, is much more common in men of lean and muscular build.

Delinquency, on the other hand, as previously reported by Dr. W. H. Sheldon in the United States, is more often encountered in stocky men who are muscular, but also running to fat. Dr. Parnell found the same relationship to hold true for women.

Science News Letter, October 20, 1951

TECHNOLOGY

Better Fishing Efficiency to Fight Foreign Competition

➤ EFFICIENCY IN fishing is being investigated to rescue the New England commercial fisheries industry from competition with Canada, Iceland and Norway fishermen.

Recently organized to develop increased efficiency and safety at sea and improve fishing vessels, gear, equipment and methods, the Marine and Fisheries Engineering Institute, Hatchville, Mass., is cooperating with fishery organizations and scientists in a new program.

Science News Letter, October 20, 1951

IN SCIENC

MEDICINE

Electricity, Not Beefsteak, To Prevent Black Eyes

➤ SOMETHING BETTER THAN the traditional beefsteak or hot or cold compresses for black eyes has been worked out by doctors at the Veterans Administration Hospital at Northport, L. I., N. Y.

It consists of a 20-minute treatment with a very small dose of electricity. Given within an hour or so after the injury, before much blackening of the eye has taken place, the treatment gave good results in more than 40 patients. When treatment was delayed until after marked blackening had developed, the results were not so good.

Use of this electrical treatment, called galvanism, is reported by Drs. Daniel Dancik and Anthony Degroot of the VA hospital in ARCHIVES OF PHYSICAL MEDICINE (Sept.).

Science News Letter, October 20, 1951

CHEMISTRY

New Soapless Soaps Promise Whiter Mondays

► "WHITE MONDAY," when dirty, gray clothes can be ashed cleaner and brighter with almost no trouble at all, was brought one step nearer realization with the announcement of a new line of "soapless soaps."

Man-made non-soap cleaning agents, known as detergents, have already lightened the washday load of millions of U. S. housewives. But chemicals many times more efficient than those available now, ones that can be tailored to do specific jobs, are coming from the chemists' laboratories. Some day homemakers may be able to discard their washing machines, simply rinse out dirty clothes in cool water to get them clean.

A line of new chemicals that bring this goal closer was described to the American Oil Chemists Society in Chicago by Thomas H. Vaughn and Drs. Donald R. Jackson and Lester G. Lundsted of the Wyandotte Chemicals Corporation of Wyandotte, Mich. Trade name of the materials is Pluronics, and their principal value, the chemists reported, is that the size of the molecule can be changed to fit various cleaning jobs.

Detergents made from the new chemicals showed twice as much cleansing activity as the ordinary anionic detergent—one of the kinds now in general use—and were far superior to soap, they reported. Chemically, Pluronics are polyoxypropylene glycols. They can be made cheaply by polymerizing propylene oxide and reacting it with ethylene oxide, the discoverers said.

Science News Letter, October 20, 1951

E FIELDS

INVENTION

Basic Method of Artificial Rain-Making Now Patented

➤ MODERN ARTIFICIAL rain-making may not be patentable but the method of forming crystals of ice in supercooled clouds by the use of particles of dry ice dropped through them, thus causing precipitation, brought a patent to the inventor.

Patent 2,570,867 was issued to Dr. Vincent J. Schaefer of Schenectady, N. Y., to whom much of the credit for modern artificial rain-making is given. Patent rights are assigned to General Electric Company under whose sponsorship the experimental work was carried out.

Supercooled clouds, which may have a temperature as low as 38 degrees below zero Centigrade, contain much water but often snow crystals do not form due to the lack of nuclei. Small pellets of dry ice, solid carbon dioxide, with a temperature of about minus 78 degrees Centigrade, create zones of low temperatures as they drop from an airplane through the cloud, causing ice crystals to form spontaneously.

As the crystals grow, the larger ones fall as precipitate. The smaller ones grow larger at the expense of the surrounding vapor and droplets of supercooled liquid. Under certain circumstances crystals collide and break, setting up a chain reaction effect which may lead to the development of even greater numbers of ice nuclei than those originally produced by the initial use of the solid carbon dioxide.

Science News Letter, October 20, 1951

ACOUSTICS

Noise Determines Building Architecture

➤ WHAT TO DO about noise, coming from both outside and in, may well have to be the starting point for architects in designing buildings.

The shape of the building and the materials from which it is built may be the first consideration in its planning, Benjamin Smith, New York architect, told the National Noise Abatement Symposium in Chicago.

Warning against "slavish" use of theoretical forms devised by acousticians—scientists specializing in noise and hearing problems—Mr. Smith said, "We have on occasion rejected some of the weird forms suggested to us by acoustical consultants."

Seemingly simple problems in noise abatement, he said, sometimes are really difficult, and often, the reverse is true. He cited the problem of designing an engine testing room so the noise would not penetrate outside the room, so it would be bearable to to the operator inside the room and, at the same time, so the operator could test the performance of the motor by its sound. Because the conditions were well stated, results in design were readily obtained.

On the other hand, quieting a general office space where telephones, business machines and typewriters are the noise sources, is sometimes a more difficult job.

The symposium was sponsored by the Armour Research Foundation, the Acoustical Society of America, the National Research Council and the National Noise Abatement Council.

Science News Letter, October 20, 1951

INVENTION

Same Machine Cuts Grass, Clears Sidewalk of Snow

➤ THE SAME machine can be used to cut the lawn in summer and remove snow from the sidewalks in winter with an invention on which patent 2,566,724 was awarded to John P. Heil, Melrose Park, Ill. It is a four-wheel affair, powered by a gasoline engine but guided by hand, with the cutter device at the forward end.

The rotating blades that cut the grass are much like those on ordinary lawn mowers. Grass cut is driven toward the rear to be held in a receptacle or discharged to the side. As a snow plow, the same rotating blades gather in the snow, and the snow can be held in the receptacle or discharged to the side.

Science News Letter, October 20, 1951

GENERAL SCIENCE

High Altitude Laboratory Is Nearing Completion

➤ THE U. S. will have another high altitude research station in operation before winter sets in, Navy officials in San Francisco have announced.

Located at 12,500 feet on White Mountain in the White Mountain range of central California, it will be the second highest laboratory in the country. Only the Mount Evans Laboratory near Denver, Colo., at 14,156 feet, is more loftily situated. The buildings, now being rushed to completion, will offer facilities for specially trained scientists, from astronomers to zoologists, to do their research work all year round at high altitudes.

The laboratory is being built by the University of California at Berkeley under contract from the Office of Naval Research. Plans are being considered for a building at the summit, 14,256 feet above sea level. A lower laboratory, at 10,000 feet, has been the main operating base for the scientists and students building the nearly-completed upper laboratory.

Science News Letter, October 20, 1951

AERONAUTICS

New Fast Giant Cargo Plane Converts to Troop Transport

➤ FLYING FREIGHTERS for the armed services, now under order, will be of the family of the four-engined Lockheed Constellations, will have a maximum take-off load of 130,000 pounds and can be quickly converted from cargo carriers to 106-passenger troop transports or to carry as many as 73 litter patients.

This triple-duty military plane will be used both by the Air Force and the Navy. The planes will be sister ships of Lockheed's new five-cent-a-ton-mile all-cargo Super Constellations, recently introduced to commercial airlines. However, they will be faster than commercial models, which are rated at 315 to 335 miles per hour.

Their main cabins will be 82 feet long, more than twice the length of a standard freight car. Cargo capacity will range from 40,000 to 43,000 pounds. They will be powered with four Wright 3250 horsepower compound engines. They will be the first military or commercial transports to use this type of engine in which an exhaust turbine helps spin the propellers.

Science News Letter, October 20, 1951

PHYSICS

Radioactive Objects Behind Concrete Wall Safely Studied

➤ A COMBINATION of horizontal and vertical holes through the three-foot concrete wall behind which are radioactive materials provides a safe way in which the deadly objects may be studied by microscope, and photographed, at the Knolls Atomic Power Laboratory in Schenectady, N. Y. The Laboratory is operated for the government by General Electric.

Horizontal holes enter the wall on each side but at different levels. They are connected at their inner ends with a vertical hole in which a periscope with mirrors is fixed. Two such combinations are provided. Strong light goes through one, assisted by lenses, illuminates the radioactive material and brings the image out the other into a microscope for examination or photographing.

This arrangement permits light for illumination to pass through the wall, and the light giving the image to return, but blocks the passage of the dangerous radiation from the radioactive material under study. Handling materials within the chamber and bringing them into focus for study are done by remote control, permitting researchers to work in complete safety.

The entire assembly of a special microscope for examining the structure of metals, the camera, periscopes and illuminating system was worked out jointly by scientists and engineers of General Electric and the American Optical Company.

Science News Letter, October 20, 1951