

ARCHAEOLOGY

Oldest Houses Unearthed

Pinto houses, built more than 3,000 years ago of wooden posts interlaced with wattlework of reeds and twigs unearthed near Little Lake, California.

► **UNEARTHING** of three of America's oldest houses—probably constructed more than 3,000 years ago—has been reported at the foot of the Sierra Nevada, 60 miles north of the town of Mojave, Calif.

Dr. George W. Brainerd, associate professor of anthropology at the University of California at Los Angeles, finds the houses are undoubtedly among the oldest known in the New World.

Working in the Stahl site near Little Lake, California, with his associate M. R. Harrington, research associate at U.C.L.A. and curator of the Southwest Museum in Los Angeles, Dr. Brainerd has stated that the area is one of the richest archaeological sites in southern California.

The ancient houses are constructed of wooden posts driven into the ground and interlaced with a wattlework of reeds, twigs,

etc., possibly plastered with mud for weather-proofing. Its roof probably corresponded with other flat roofs in western North America.

Architects of the period apparently stuck to no general style. Each of the three houses varies slightly in shape, two being rectangular while the third is round. Traditionally, the skin-covered doorways opened to the east.

Indians living in these houses were of the Pinto Culture, which thrived prior to 1,000 B.C.

Many of their implements have been found in the diggings, including well-shaped obsidian spearheads (they had no bows and arrows), knives, grinding stones, skinning and scraping tools and partially fossilized animal bones—such as native American camels and horses, now extinct.

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CHEMISTRY

Synthetics Satisfactory

Substantial savings in production costs and improved operation of machines possible through use of synthetic lubricants instead of petroleum products.

► **SYNTHETIC** lubricants, instead of petroleum products, have been found satisfactory in certain industrial applications, and their use is recommended because of superior qualities and the saving of petroleum for other purposes.

Substantial savings in production costs and improved operation of mechanical equipment are possible through the substitution of synthetic lubricants for petroleum products in certain industrial applications, the American Society of Mechanical Engineers was told.

C. H. Sweatt and T. W. Langer, Union Carbide and Carbon Corporation, presented a paper stating that these synthetics are particularly valuable where unusual and severe operating conditions are present. In addition to use as lubricants in the ceramic, dairy, metal working and rubber industries, they are finding applications as antifoaming agents, in nylon, glass, wool and rayon fibers, and as a substitute for oil in printing inks.

The polyalkylene glycols and their derivatives constitute one class of synthetics differing considerably from petroleum products in physical and chemical properties,

they said. These lubricants range in consistency from very light to highly viscous liquids. Some are water soluble while others are not.

Properties of these lubricants include excellent anti-wear action, good load-carrying capacity, favorable viscosity-temperature relationships, low stable pour points, little or no solvent and swelling effect on either natural or synthetic rubber, and stability at elevated temperatures.

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ASTRONOMY

No New Stars in Small Magellanic Cloud

► **NO NEW** stars will be born in the small Magellanic cloud, Dr. Harlow Shapley, director of Harvard College Observatory, predicts.

The large Magellanic cloud, however, will continue to give birth to stars.

These Magellanic clouds of hundreds of thousands of stars look to the naked eye like detached portions of the Milky Way.

They are so far south they are never seen from the United States.

Recent theories of star origin make cosmic dust the building-material for super-giant stars such as commonly are found in the large cloud. In its central regions the Greater Magellanic Cloud is so rich in the pre-star stuff that the light of more distant objects is scattered and absorbed to the extent of one magnitude or more.

But the small cloud is almost completely free of interstellar dust and gas. Here the epoch of star birth has passed, Dr. Shapley stated at the meeting of the Harvard Observatory's Visiting Committee. This report marks the completion of the first quantitative measure of a galaxy's content of dust and gas from which its future stars may be born.

The large angular diameters of these two Magellanic clouds, nearest of external galaxies, made it possible for Dr. Shapley and his associates to complete a survey in and around the clouds. The frequency of the more distant galaxies was found, and from their numbers the transparencies and the amount of light-scattering material calculated.

Between galaxies, space is essentially clear of absorbing material, but in our own Milky Way galaxy there is much of this star-stuff. Its study is one of the main topics of modern astronomical research.

The so-called Great Rift in the Milky Way is caused by such material, which is so heavy near the Milky Way plane that it blocks our view of remote parts of our own galaxy. Of the billions of outside galaxies, only the two Magellanic clouds of the southern sky cover large enough areas of the sky to use these statistical methods of "translucent" galaxies employed by the Harvard astronomers.

Around the large cloud, for example, down to magnitude 17.5, about 30 galaxies are found in each square degree, indicating complete transparency. But in the axis of the cloud and in its central "deserts," only three or four galaxies per square degree are able to shine through.

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MEDICINE

Surgery Is Only Cure For Lung Cancer

► **"THE ONLY** possible chance of cure" of lung cancer is by surgical removal of all or part of the lung, Dr. Brian Blades, chief of surgery of George Washington University Hospital, Washington, D. C., declared at the meeting of the American Medical Association in Cleveland, Ohio.

Of all deep cancers in the body, the possibility for surgical cure is probably best in the case of lung cancer, he said. Lung cancer is one of the commonest forms of cancer and apparently is increasing.

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