



IVORY COMB

*With its delicate carvings, this ornament was a part of the treasure buried in ancient Palestine.*

## ARCHAEOLOGY

## Ancient Palestine Treasure Comes to Oriental Institute

**At Armageddon Is Found the Cache of a Prince Who Buried His Wealth in 1350 B.C. Never To Recover It**

See Front Cover

**A**N archaeological treasure in gold and ivory has arrived safely in Chicago, it was announced by Dr. John A. Wilson, director of the Oriental Institute of the University of Chicago. The treasure, from Megiddo (Armageddon) in western Palestine, was discovered during last season's digging and a brief announcement made last March, by cable.

The discoveries will have an important place in disclosing new knowledge of historic Palestine during the troubled years from 1500 to 1200 B. C., when the land was a loosely joined group of "city" states under the nominal leadership of Egypt.

Gordon Loud, field director of the Institute's expedition, who has just returned from Palestine, related the details of the discovery.

"A magnificent palace," he said, "with frescoed walls and floors of sea shell mosaic stood just within the city gate

and dominated the ramp approach to this fortress city. Within this palace lived princes of Megiddo who ruled this small section of the Egyptian Empire from about 1500 to 1200 B. C.

"These were troublous times, and the course of empire was not smooth. The city was constantly threatened with invasion by those who wished to throw off the yoke of Egyptian suzerainty. This threat sometimes became a reality, as is evidenced not only by historical records but by the excavation of five periods during which the palace emerged from partial destruction, each time with a slightly different plan.

"While we were engaged in clearing the floor which served the second phase of the palace we noticed that the lime pavement in the corner of a comparatively inaccessible room had been replaced with tamped earth. Exploring spades exposed a gleam of gold, and then patient and painstaking work with knife

and brush uncovered the entire cache of gold and jewelry under the floor.

"About 1350 B. C. a threatened invasion had caused the prince to bury his valued treasure, hoping it might escape the general looting which inevitably accompanied invasion. His hopes of safety for the gold were fulfilled, but he apparently never lived to reclaim his possessions."

The 250 pieces of carved ivory will probably prove of more scholarly interest to scientists than the beautiful gold ornaments. Some bear hieroglyphic markings which should permit them to be dated by specialists. The first task on these ivory carvings will be to treat them to insure preservation. This will be done before they are made available for study and exhibition.

The discoveries climax 13 years of exploration at the Armageddon site, famous battle site of ancient nations. Previous discoveries include the stables of the blooded horses bred by Solomon for distribution in the east, and an ancient water system.

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## METALLURGY

## U. S. Not Self-Contained In Tin, Nickel and Platinum

**F**ROM the rocks of the earth come many substances that are essential to our daily life. These differ from the crops of the fields and the timber of the forest in not being renewable. The sun's energy can not produce them and seeds can not be taken from one nation to another and planted to produce tin or oil or manganese.

Those minerals that a nation needs but does not have come to be known as "strategic minerals" during the World War. Rising nationalisms in recent years have accentuated their importance.

For the United States, which is far better off in mineral supplies than most nations, Dr. T. T. Read of Columbia University lists the following: Manganese, essential for making open-hearth steel. Tin, for food containers and bearings. Mercury for detonators. Tungsten for high-speed tool steels and electric lamp filaments. Chrome ore for tanning, chemical manufacture, refractories, and metallurgy. Graphite for crucibles. Mica for insulators. Platinum for chemical industry. Asbestos for heat-resisting uses. Nickel for alloy steels and plating.

Tin, nickel and platinum are three materials that apparently can not be produced in this country. A few years ago

potash would have been in this list and there would have been much worry over the fact that Germany had a monopoly. But discovery of large high-grade deposits in New Mexico has practically guaranteed our self-sufficiency.

Other minerals, like graphite of the "chip" and "flake" varieties, this country lacks in those particular forms, while others, like chromium ores and manganese, do not measure up in metallic content or freedom from impurities.

If America could not get tungsten for its incandescent lamps our electric light bills would be a million dollars higher daily, yet the tungsten used in lamps in a year is worth only about \$200,000.

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#### BIOLOGY

## Neutrons Are More Potent Than X-Rays For Sterility

**I**N experiments that involved sending a dozen albino mice by air express from Bar Harbor, Maine, to San Francisco and back again, it was demonstrated that neutron rays are five to six times as effective as X-rays in producing sterility in the male.

Dr. Paul C. Aegersold of the University of California Medical School, exposed the mice to streams of neutrons in the famous Lawrence neutron producing machine, while Dr. George D. Snell of the Roscoe N. Jackson Memorial Laboratory at Bar Harbor furnished the mice and conducted the biological experiments. (*Proceedings of the National Academy of Sciences* July.)

This superior effectiveness of the neutron, atomic particle discovered in 1932, checks with experiments that show neutron radiation to be similarly more potent when directed at cancer cells.

Further experiments are expected to throw new light on the size and structure of the genes, the minute elements within the germ cells that determine hereditary traits.

The sterile period produced by the irradiation treatment extended from three to 12 weeks after the raying.

*Science News Letter, August 7, 1937*

To study how roots of fruit trees grow in the soil, a British scientist has designed observation trenches fitted with plate glass windows.

Finding a scrap of a glass bowl made about 2000 B. C., a Swedish archaeologist reports that glass was made in Egypt five centuries earlier than supposed.

#### ANTHROPOLOGY

# Uncle Sam Hunts America's First Human Inhabitants

## W.P.A. Workers Dig on the Abbott Farm, New Jersey, To Settle Issues of Famous Scientific Battle

**U**NCLE SAM is joining in the hunt for the most elusive people in America—our Ice Age inhabitants, if any.

Scene of the hunt is a farm near Trenton, N. J. Works Progress Administration workers, directed by well-known archaeologists, Dr. Dorothy Cross and Dr. Eugene Golomshtok, are digging for evidence there, where the last ice sheet left its debris of gravel when it melted back toward the northland.

Were there—or weren't there—human beings already roaming America in those days, when the Ice Age ended? That is the most fought-over question in American science. If the answer is yes, then America has been inhabited at least 15,000 years.

Naturally, a country wants to know who its first inhabitants were, how long

ago they arrived. But for America this has proved a baffling, long-drawn-out mystery.

Abbott Farm, scene of the WPA glacial-man hunt, has been famous in American science for over 60 years. As long ago as that, Dr. C. C. Abbott announced finding clumsy stone blades when he dug through black earth into a layer of yellow loam on his land. People who made the rude tools, he asserted, were older and more primitive than the well-known Delaware Indians who were in New Jersey when white men arrived.

In fact, Dr. Abbott was bold enough to suggest that these stone tools came to rest in the loam just above the glacial gravel in the very days when the glacier retreated.

That bombshell of an idea launched



#### PARTIAL BURIAL

*Head-and-leg burials reveal a mysterious custom of New Jersey aborigines. Dr. Eugene Golomshtok removes one of these, wondering whether these Indians were cannibals or headhunters, or whether they merely felt that heads and legs were enough for a spirit existence.*