

ARCHAEOLOGY

Earliest Skeleton Found

Hotu Cave in northeastern Iran yields bones that may prove to be the most complete remains of modern man yet found. Dating by radiocarbon calendar attempted.

► **DISCOVERY OF** skeletons of what may prove to be the earliest, most complete remains of modern man in southwestern Asia, was reported to the American Philosophical Society meeting in Philadelphia.

The find was made in Hotu Cave in northeastern Iran by members of the University Museum Iranian Expedition of the University of Pennsylvania and was reported by Prof. Carleton S. Coon and Louis B. Dupree of the University Museum and Dr. John Lawrence Angel of Jefferson Medical School.

No one yet knows just how long ago the bones of the three Old Stone Age Iranians were laid to rest. Specimens have been submitted for dating by the radiocarbon calendar, but this may not be successful. This method works only for material under 25,000 years old; the skeletons, it is estimated, may have an antiquity of anywhere between 15,000 and 75,000 years.

Although these Iranians lived so long ago and had extremely massive brains, they were not chinless like the Neanderthal predecessor of modern man and had no other Neanderthal traits. They were definitely Homo sapiens, Dr. Angel told the meeting.

They are more like Cro-Magnon Europeans than like the Iranians who followed them in the Iron Age.

Even so long ago, the Iranians suffered from very modern aches and pains. One of the skeletons was of a woman who had arthritis. They must have had a good deal of toothache because all had abscessed upper first molars.

Evidence of three distinct cultures was found in Hotu Cave. Near the surface were remains of the Iron Age with some bronze. This layer dates back to 2,000 or 2,500 B.C. Digging down through about 12 feet of this material, the scientists came to a New Stone Age level with very interesting pottery. The designs indicate that the style of pottery originated at this site as did also a style known to archaeologists as Sialk II, found elsewhere in Iran.

In the lowest level, thousands of flints and flakes and flake tools were discovered. Blades and blade tools were much fewer in number and were of poor quality. This does not necessarily mean that the ancient craftsman lacked skill; the flint they had was of such poor quality that it was impossible to make a good blade with such tools.

In the upper New Stone Age level better flint had been brought in from some other

region by the beginning of trade and the quality of the blades found had greatly improved.

The new finds stress the fact that the evolution of modern man did not proceed at an even rate and order in all parts of the world and that there was a mixture of races even in the earliest days of Homo sapiens' existence.

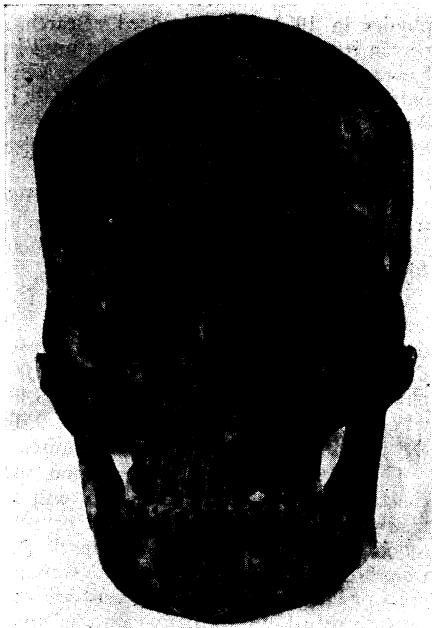
Science News Letter, November 24, 1951

ASTRONOMY

Giant Planet Jupiter Now Has Twelve Moons

► **THE GIANT** planet Jupiter seems definitely to have 12 moons. The faint object discovered late in September by Dr. Seth B. Nicholson of the Mount Wilson and Palomar Observatories is now believed to be a new satellite.

When first announced, astronomers thought the 19th magnitude object found on plates taken with the 100-inch Hooker telescope might be one of Jupiter's other satellites. Repeated photographs of this new



HOTU MAN—Skull found in Hotu Cave, part of one of the most complete remains of modern man yet discovered.

object and a search for the other satellites with which it might be confused, however, indicate it is a new moon.

Jupiter's four large satellites were discovered in 1610 by Galileo Galilei. Now, over 340 years later, Dr. Nicholson appears to have equalled his record by becoming the second person to have discovered four moons for Jupiter. Sir William Herschel was another famous moon-finder, having spotted two satellites for Uranus in 1787 and two for Saturn in 1789.

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MEDICINE

Enzyme Chemical Helps Prevent Adhesions

► **SUCCESS WITH** a medical treatment to prevent painful, life-threatening adhesions of the intestines was reported by Drs. John E. Connolly and Victor Richards of Stanford University School of Medicine at the meeting of the American College of Surgeons in San Francisco.

The medicine used is an enzyme chemical called hyaluronidase. After successful trial on dogs, the Stanford surgeons put a solution of this chemical into the abdomen of 14 patients. The patients had adhesions which were causing intestinal obstruction. The adhesions were freed mechanically before the hyaluronidase solution was applied.

The first 12 patients have not had any symptoms of obstruction in the three to 14 months since the operation and treatment. The last two became obstructed about seven and 30 days after the treatment respectively. In these cases the surgeons think the failure of the treatment to prevent reforming of adhesions was due to having used too little of the enzyme chemical. The work with the dogs had shown that when enough of the chemical was used, it prevented reformation of adhesions in all the animals.

Science News Letter, November 24, 1951

GENERAL SCIENCE

NSF to Give 400 Study And Research Fellowships

► **THE NATIONAL** Science Foundation plans to award about 400 studying and research fellowships in sums ranging from \$1,400 to \$3,000 a year. The awards will be made in the mathematical, physical, medical, biological and engineering sciences.

The National Research Council will conduct testing and evaluation of all applicants. Most of the awards will go to those who are about to begin postgraduate study, although some will be given to persons who already have their Ph.D. degrees. Results of any research done by the fellows will be made available to the public without restriction, except in the national interest.

Applications must be made before Jan. 7, 1952, to the Fellowship Office, National Research Council, Washington 25, D. C.

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