ARCHAEOLOGY

Arrowheads Found With New Mexican Fossils

THE DISCOVERY of man-made objects associated with fossil animal remains, made by road builders working near Clovis, New Mexico, has impelled the Philadelphia Academy of Natural Sciences and the University of Pennsylvania Museum to send to the site Edgar Howard, research associate of the two institutions, to see that full scientific information is obtained before the evidence is destroyed in the course of further road construction.

The importance of this locality was recognized by Mr. Howard in the course of his explorations last summer, when a local investigator, A. W. Anderson, brought to his attention several unusual arrowpoints.

The site was apparently the bed of an ancient lake, long since dried up. Here the animals came for water, and here, it is supposed, the primitive hunters waited to kill them. A considerable number of the distinctive arrowpoints have been picked up in this area. They show a surprisingly high technical quality. Other points of this same type have been found in the Southwest in recent years, the most striking discovery being at Folsom, New Mexico, where the points were found in close association with an extinct species of bison.

Science News Letter, November 26, 1932

PATHOLOGY

Turkey Disease May Have Helped Kill Heath Hens

BLACKHEAD disease, which has long been one of the most troublesome of the turkey raiser's problems, may have been a factor in the wiping out of one of America's most interesting wild birds, the heath hen of Martha's Vineyard off the coast of New England. At last reports, only one male of this species was known to be alive.

The suggestion that blackhead may have helped in the extermination of the heath hen is made by Prof. E. E. Tyzzer of Harvard University, who has been one of the most active of investigators working on the problem of blackhead infection. He states that dead birds found near the keeper's headquarters on Martha's Vineyard showed lesions characteristic of the disease.

One of the tragic things about this fatal infection of the heath hens is that the birds' own friends may have unwittingly brought it about. Human settlements on the island of course had chicken yards about them, and chickens are semi-immune carriers of blackhead. The causal agent of the disease is a protozoon, which is transmitted by means of the eggs of a parasitic worm. It is thus not necessary for susceptible birds, such as heath hens or turkeys, to be intimately in contact with chickens; if they merely occupy ground on which chickens have previously lived they will become infected.

Other game birds seem to be susceptible to blackhead if they cross the trail of domestic poultry, Prof. Tyzzer states. Ruffed grouse raised in captivity are especially subject to it; captive quail somewhat less so. However, only negative results were obtained from observations on ring-necked pheasants.

It is perhaps worthy of note that the immune or resistant birds, domestic fowl and ring-necked pheasants, are Old-World species, while the susceptible heath-hen, turkey, grouse and quail are native to this continent.

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PALEONTOLOGY

Louisiana Oil Well Yields 50,000,000 Year Old Skull

THE BROKEN skull of a little animal that just missed living in the age of the dinosaurs, brought up apparently by accident from a deep oil well in Louisiana, has been given a habitation in the U. S. National Museum in Washington, and a name by Dr. George Gaylord Simpson of the American Museum of Natural History.

The little creature was one of the earliest of the mammals, and lived something over 50,000,000 years ago, in the early paleocene age. It was so remote in time that no living animal can be said to resemble it in any but the most general way.

The skull was brought up when a hollow tool, lowered into a drill hole to recover a broken drill shaft, gouged out a piece of the wall, in which the pieces of bone were lodged. The skull is incomplete, but enough was recovered to make an identification possible.

Other skulls of somewhat similar animals have been known for some time. But this new find is adjudged to stand in a species by itself, and Dr. Simpson has given it the scientific name *Anisonchus fortunatus*.

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IN SCIENC

PALEONTOLOGY

Earliest Known Dinosaur Comes To Harvard Museum

PLATEOSAURUS, the ancestor of all dinosaurs, is "at home" in the Harvard Museum of Comparative Zoology. An eighteen-foot skeleton, the first mounted specimen of this particular dinosaur to be exhibited in any museum in this country, has been received from Germany, where its scattered bones were found in a deposit in Württemberg.

Plateosaurus was apparently a flesh-eater, for the skull is armed with sharp-pointed teeth; yet he was ancestor to the great lumbering herbivorous dinosaurs like *Diplodocus* as well as to the smaller but more active Tyrannosaur tribe. Like the latter group, *Plateosaurus* walked on his hind legs and apparently used his shortened, claw-armed forelegs for holding his prey. His forefeet have five toes, instead of the three of later dinosaurs, but two of the toes already show signs of evolutionary degeneration.

The geologic age of *Plateosaurus* is Upper Triassic. This dates back some 160 million years.

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ENTOMOLOGY

European Corn Borer Spread Retarded

WEATHER conditions unfavorable for the flight of the adults retarded the spread of the European corn borer during the past season, so that it added little new territory to the infested area, the U. S. Department of Agriculture has announced. The corn borer area now includes territory as far west as Wisconsin, and extends from the corn-growing provinces of Canada to Kentucky, Virginia and Maryland.

Department of Agriculture engineers have devised special types of farm implements with which farmers in the infested area can clean up their fields thoroughly in autumn, thereby depriving the borer larvae of refuges in which to spend the winter.

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E FIELDS

BIOLOGY

Transplanted Tissues Stick To Ancestral Pattern

A SALAMANDER tadpole can change a transplanted bit of frog body-tissue into a mouth—but it will be a frog's mouth growing on the salamander tadpole!

This is the outcome of an experiment reported at the recent meeting of the Society of German Physicians and Scientists at Mainz, by Dr. H. Spemann of Freiburg. It has produced something of a sensation in German biological circles.

Dr. Spemann was following up a fact that has been known for many years; that body tissues of very young tadpoles can be transplanted freely from one individual to another, or from one place to another on the same individual. What he wanted to find out was how tissue from one animal would behave when grafted on an alien animal and also in a body region widely different from its source. So he took a bit of body-wall tissue from a frog tadpole and grafted it on the mouth region of a larval salamander. The graft took hold and became a mouth for its new owner. But that was as far as it would go; in its toothlessness and other characteristics it remained faithful to its frog ancestry.

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MINING-ARCHAEOLOGY

Stone Age Africans Sent Manganese to Egypt

EVIDENCE which convinces him that Stone Age miners of South Africa supplied the Egyptians with manganese, thousands of years ago, has been found by Dr. Raymond A. Dart, professor of anatomy at the University of the Witwatersrand, Johannesburg.

Sophisticated Egyptian fashion called for manganese to adorn the eyebrows of Egyptian women. Manganese also was a cosmetic for giving appearance of life to mummies. Manganese was probably used, too, in coloring glassware.

The strange circumstances of Stone Age men, using no metals themselves, mining manganese for a more advanced civilization of their own time is believed to be revealed as a result of the discovery of mining implements. The implements of stone were found at Broken Hill, Rhodesia. They show that miners were active in that region between 5,000 and 6,000 years ago, Dr. Dart concludes, and the minerals they extracted, including manganese, were used in distant Egypt.

Dr. Dart has completed his manuscript for a book on the old mines of Rhodesia, in which he places their age at a much older figure than has been generally given. He offers evidence for an antiquity of the period about 3000 to 4000 B. C.

The Stone Age Rhodesian miners worked under supervision of strangers, belonging to one of the contemporary civilizations, Dr. Dart repoits. These supervisors came probably from Egypt or Mesopotamia, or else were traders with Egypt. It is possible, he says, that the land of "Punt" in the Bible was the name for unknown southern Africa.

Egypt and Babylon got metals for bronze from ancient workings at Rooiberg in the Transvaal, is another of Dr. Dart's conclusions from his research.

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ARCHAEOLOGY

Houses of Dead Painted Like Stage Scenery

HOUSES of the dead, painted like stage scenery, have been unearthed at the famous site of Hermopolis, about 150 miles south of Cairo, by the Egyptian University.

The tombs are two-story houses with stairways, galleries, and chambers where the dead were laid to rest in state. But magnificent marble pillars and stone carvings which adorn the rooms and halls are all just "scenery" painted on the walls. The artist with his paint pot produced make-believe columns and wall facings of green marble, red-flecked marble, yellow, gray, and black marble, all most realistic, in imitation of the ornate villas in which wealthy people lived. Painters' tricks of perspective and light and shade were employed to heighten the illusion of grandeur in the halls of the dead.

The period of the tombs is set at about the second and third centuries of the Christian era. The method of painting architectural features on the walls is pronounced very like that employed in houses of Pompeii in an earlier period.

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SEISMOLOGY

Earthquakes Recorded From Coasts of Asia and Mexico

EASTERN Asia got its second severe earthquake within a few weeks when the seacoast region between the Japan Sea and the Gulf of Tartary was shaken by a deep-seated quake on Saturday night, Nov. 12, at 11:46.5 p. m., eastern standard time. A previous quake had shaken the general region of the Amur river valley. Both were located by the U. S. Coast and Geodetic Survey, using data gathered by Science Service. The epicenter of the recent quake was approximately 45 degrees north latitude, 137 degrees east longitude.

An earthquake of medium intensity shook the sea bottom off the Pacific coast of Mexico on the morning of Thursday, Nov. 17 at 1:02.6 a. m. eastern standard time. The approximate epicenter was given as latitude 18 degrees north, longitude 105 degrees west. This is just off the coast of Oaxaca, where severe earthquakes have been felt recently.

Science News Letter, November 26, 1932

PHYSIOLOGY

Heart Muscle Receives Superior Protection

THE HEART MUSCLE has certain protective mechanisms which are apparently inherent and which no other tissues of the human body possess in the same measure, Prof. Carl V. Weller of the University of Michigan, told the National Academy of Sciences.

One of the most obvious of these depends on the pattern of the arterial supply, Prof. Weller pointed out.

These protective mechanisms are of biological significance. They have been developed and perpetuated in order to maintain, as far as possible, the soundness of the heart muscles, so essential for the preservation of the organism.

One example of these protective mechanisms which Prof. Weller called attention to is the comparative freedom of the heart muscle from cancer.

Another example is in syphilis when the big blood vessel, the aorta itself, may be affected without the heart muscle showing much change.

"Perhaps the most striking example of all is found in the inability of young trichinae to encyst in heart muscle, although a defensive myocarditis is produced by them," Prof. Weller said.

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