Reason for Rarity

"THE ancestors of man were the most clever of all animals and, therefore, the first to avoid natural burial and fossilization."

This ingenious explanation of the rarity of fossils of the higher anthropoid apes and the still greater rarity of fossils of the earliest types of primitive man is put forth by Dr. Henry Fairfield Osborn, president of the American Museum of Natural History. Because of the skill of our remotest ancestors in avoiding the overwhelming natural disasters that have furnished us with vast collections of the bones of less intelligent animals, it may be necessary to continue the search for pre-human fossils for several generations before an adequate amount of paleontological data on human origins will be available.

Dr. Osborn deplores the manner in which parts of his address on evolution at Des Moines last winter have been seized upon by partisan thinkers to make it appear that he had repudiated the main doctrine of evolution.

"Disloyalty to the main features of Darwin's theory of the descent of man is unthinkable," he said.

Paleontology

Science News-Letter, July 26, 1930

Keep Candles Down

WEATHERMEN in California must stop sending up tallow candles in balloons.

This order, that sounds like a belated effort toward a "safe and sane" Fourth of July, is really seriously meant, and is aimed at the prevention of forest fires. The worst fire season in the West comes during the later summer, when the forest floor is dry as tinder and there is no hope of rain for weeks.

Weathermen wishing to learn the direction and velocity of winds aloft send up small drifting balloons, and watch them through theodolites as they sail away. At night, to make the balloons visible, they hang little lanterns containing tallow candles under them, and keep the sighting-hairs of their instruments on these tiny points of light as they climb up toward the stars.

But it occurred to some one to ask what became of these candles when the balloons rose into the thin upper air, burst, and sent their collapsed remains hurtling toward the earth. It was easily possible that the candles, protected within their lanterns, would still be burning at the end of their fall; and if they happened to fall on the tinder-like forest floor—Well, the ukase went forth in short order that there were to be no more night balloons sent up until some less dangerous illuminant could be attached.

Aviators want these night reports on the state of the winds aloft, and they are waiting hopefully for some flashlight manufacturer to come forth with a light battery and bulb that will supersede the tallow candle, give them their night guides, and still leave the forests in safety.

Meteorology—Forestry

Science News-Letter, July 26, 1930

Cancer Preventive

MUSTARD gas, dreaded weapon of the World War, has been reported as possibly preventing and curing a number of diseases. The latest peacetime development of this gas is the announcement by the British Empire cancer campaign that it may prevent cancer in areas of the skin which have been painted with tars that ordinarily produce cancers.

This does not in any way mean that mustard gas will cure cancer. Even its preventive action is extremely limited. But recent investigations may lead to a more general preventive method, it is said.

The starting point for the experiments leading to this discovery may have been the reported British observation that none of the British soldiers who were exposed to mustard gas in the war ever developed cancer, it has been suggested. German experiments along similar lines have also been reported.

Previously mustard gas had been heralded as a cure for locomotor ataxia, and other war gases were tried as cures for colds, tuberculosis, and various respiratory diseases.

Mustard gas is a sulfur compound, dichlordiethyl sulfide. Recently a Philadelphia scientist, Dr. Frederick S. Hammett, suggested that control of cancer might be gained by means of another sort of sulfur compound. He did not claim to have found any cure for the disease. However, he did state that transplantable tumorous growths in mice had been made to diminish and in at least one case to disappear altogether by the application of an organic compound containing partially oxidized sulfur.

Medicine

Science News-Letter, July 26, 1930

IN VARIOUS

Fast Recovery

A NEW method of treating carbon monoxide poisoning with ultraviolet rays brings quicker relief to the patient than ordinary methods of treatment, according to results of a test reported by Dr. Koza of Pressburg.

Carbon monoxide produces its poisonous effect by combining with the hemoglobin of the blood, displacing the oxygen which the body's tissues need and which they get from the blood. Some Italian observers had already found that when blood hemoglobin which was combined with carbon monoxide was irradiated with ultraviolet light, the carbon monoxide disappeared in from 30 to 60 minutes.

Dr. Koza worked on the theory that a considerable part of the blood is in the small blood vessels of the skin. Massage of the skin would stimulate the circulation in these blood vessels and let the ultraviolet rays go deep enough to reach the blood and drive out the carbon monoxide.

He tried this method on two sisters who were brought to the hospital because of carbon monoxide poisoning. One sister was treated by the new method, the other by the usual methods for overcoming carbon monoxide poisoning. At the end of 40 minutes the first sister had lost half the deadly gas from her blood but the other sister had only lost one-quarter of it. The first sister regained consciousness after nine hours, the second after 18 hours.

Medicine

Science News-Letter, July 26, 1930

Want Mercury Uses

A PRIZE of 5,000 pounds sterling, approximately $25,000, is being offered by the European producers of mercury for the inventor and exploiter of a new use for mercury or its salts which will increase the consumption of mercury as much as 1,000 flasks during 1930. To qualify, the new use must be as yet unknown to industry and must be patented not before January 1, 1930, in Germany and the United States.

Information regarding the prize can be obtained from Mercurio Europeo, Bureau de Repartition, Plaza St., Francois 5, Lausanne, Switzerland.

Chemistry

Science News-Letter, July 26, 1930

SCIENCE FIELDS

Sword Swallowers

SOME French physicians have examined the throats of sword swallowers with X-rays and the esophagoscope, the American Medical Association has just reported. The doctors found that in these men the lining of the esophagus, which is the tube leading from throat to stomach, was slightly swollen and very red. However, it did not show any signs of recent or old injuries.

By means of the fluoroscope, which makes use of X-rays, the doctors were able to watch the sword being swallowed all the way into the esophagus. This performance, which seems to be most hazardous, really is very simple and if it is done adroitly the performer is in no danger of injury, the doctors found.

Another interesting fact observed was that the sword swallowers breathed differently from most people. Their breathing was done exclusively by movement of the ribs, without any movement of the diaphragm. This was true of their normal breathing when they were not performing their act, as well as of the breathing while swallowing the sword.

Evidently a special physiologic predisposition, either natural or acquired, is necessary for success in sword swallowing.

Medicine

Science News-Letter, July 26, 1930

New Brain Duty

EXPERIMENTS showing a direct connection between the center of optical function and the skin, which is the organ of tactile impressions, have been reported by Prof. J. G. Dusser de Barenne of Utrecht University pharmacological institute. The experiments also showed the existence of a sense function of the visual organ outside of its optical functions.

Till now the thalamus opticus has been regarded as the organ of vision exclusively. The nervous effect caused by direct or reflected light on the eye travels along the optic nerve into the brain where in the thalamus opticus the visual picture is seen. Destruction of this portion of the brain results in incurable blindness, albeit the optical apparatus may be intact.

Working on cats, Prof. de Barenne injected by means of a specially constructed microinjector a few drops of a weak solution of strychnine sulphate colored with toluidine. The astonishing result of these injections is the development of areas on the skin of extreme sensitiveness to pain and other stimuli. They are most marked on the side of the body opposite to the injected part of the thalamus, and on extremities like the ears.

Medicine

Science News-Letter, July 26, 1930

$50,000 in Butterflies

THE U. S. National Museum will soon be the richer by the addition of one of the greatest collections of butterflies in the world, the famous William Barnes collection, now housed in a special building at Decatur, Ill. It was offered to the U. S. Government for $50,000, and the appropriation bill was recently passed and signed.

Dr. William Barnes, one of the great surgeons of the Midwest, was also an accomplished naturalist, having been a student under Louis Agassiz. He became interested in American butterflies and moths, and devoted much of his time for fifty years to the building up of one of the largest, and easily the most completely identified, collections on this continent. He not only spent his own time on the work, but employed trained entomologists to assist him, and also gathered a very considerable library.

The approximately half-million mounted insects, together with the library and Dr. Barnes' notes, will be housed in the New National Museum building.

Entomology

Science News-Letter, July 26, 1930

Petrified Wood

A PIECE of petrified wood from Yellowstone National Park, so perfectly preserved that even the finest microscopic details are practically as clear under the high-power lens as those of modern wood, is described and illustrated in the American Journal of Botany by Prof. H. S. Conard of Grinnell College.

It was found in a region where the only previously described petrified woods were those of redwood trees.

Paleobotany

Science News-Letter, July 26, 1930

Changing Sea Level

IS the average sea level of the Atlantic Ocean slowly but steadily rising so as to engulf land along the coast?

Fresh discussion of this question has been aroused by the publication by the National Research Council of a bulletin on mean sea level, written by Prof. Douglas Johnson of Columbia University. This bulletin contains a record made over a long period of years of the level of the sea at Fort Hamilton, N. Y., near New York City. Prof. Johnson interprets the figures as indicating that, while the sea level varies greatly from year to year due to weather changes and changes in the outline of the coast, there is no appreciable, progressive change. In other words, if your seaside property becomes submerged, the fault is not with a gradually sinking continent.

However, Prof. Alfred C. Lane and Prof. William F. Cheney, Jr., of Tufts College, disagree with Prof. Johnson's conclusion. Using the same data, but a different method of mathematical computation, they deduce that the sea level is rising at an average rate of one foot in 214 years.

Geophysics

Science News-Letter, July 26, 1930

Flowering Sahara

NEW evidence that the Sahara desert was once a well-watered, fertile region is presented by a small fossil found by an African expedition of the Logan Museum of Beloit College now being studied by University of Chicago scientists. The specimen is the skeleton of a cane-rat, a beast about the size of a woodchuck, which in present times is found only in thickets along the banks of streams in the more fertile parts of central Africa.

The new fossil, to be known as "Logan's cane-rat," appears to be extinct, but the conditions of the find indicate that it is not to be assigned to any remote geological period. The fossil comes from a region known as the Tanezrouft, now one of the dryest and most inhospitable parts of the central Sahara, 500 miles from the nearest flowing stream. The presence there of such an animal indicates that at the time at which it lived (probably only a few thousand years ago), the center of the Sahara was a well-watered country.

Paleontology

Science News-Letter, July 26, 1930