

PALEONTOLOGY

New Link of Man and Ape History Found in India

Fossils Reveal Existence of Apes Nearer Main Trunk Of Man's Evolution Than Any Previously Known

A NEW link in the evolutionary history of man and ape has been discovered by the Yale North India Expedition. Investigation of fossil jaw bones and teeth brought back by the expedition reveals existence of man-like apes nearer to the main trunk of man's evolution than any living or extinct great apes previously known. The family to which these man-like apes belong could develop in several directions, some becoming more like the great apes, others approaching man.

Three entirely new genera are included among the five fossil jaws found in the badlands region of Potwar, India. One has been named *Ramapithecus*, after Rama, the hero of a Sanskrit epic. Another is named *Sugrivapithecus* after Sugriva, king of the monkeys in the same saga. The jaw of *Sugrivapithecus* indicates that the animal had a well-developed chin, a sign of high evolution, said the discoverer of the remains, G. Edward Lewis, the expedition's paleontologist. The chin is more like that of primitive man than that of any living great ape. Many features of the teeth show parallels with human anatomy.

The finds tend to confirm the theory that higher primates originated in this section of the world, said Mr. Lewis. From a Eurasian center they migrated into China, Java, Asia Minor, India, Africa, and Europe. No anthropoid apes or very early humans, however, have ever been found in America.

The expedition discovered many fossils of animals. Curious huge ruminants related to the modern giraffe were found. They resemble a cross between a moose and a bison and have two pairs of horns. Giant land tortoises that make elephant tortoises of the Galapagos Islands look like pygmies were uncovered.

Stone knives and crude scrapers used by men some 500,000 years ago, but millions of years after the era of the fossil anthropoid apes, were discovered by Prof. Hellmut de Terra, leader of the expedition. With the Stone Age implements lay remains of mammoths

and hoofed animals. These discoveries show for the first time that early Stone Age men inhabited the Himalayan Mountain region.

The foothills are called by Prof. de Terra a "cemetery of prehistoric life," because of the fossil bones, wood, and leaves preserved in the rocks.

The Himalayan region is the most dynamic in the world, geologically speaking, Prof. de Terra reported. It has changed from an ocean to the highest mountain land on earth, and in the strata are fossils from every geologic age in earth history. Today, the region north of Benares is rising at the rate of six feet a century.

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CHEMISTRY

Chemists Cure Unpleasant Odors and Imitate Scents

SO ODOR-CONSCIOUS have we become that chemists are now being called on to take away the "big bad breath" of such necessary merchandise as linoleum, galoshes and certain kinds of cloth, and give them an odor of commercial sanctity, Prof. Martson T. Bogert of Columbia University told the

American Chemical Society meeting at St. Petersburg, Fla. He cited the case of European reproductions of oriental shawls, which would not sell until they were scented with the right oriental oil.

Sometimes there is even a real need for a musty odor that ordinarily would not be liked. When the Chicago Museum of Science and Industry installed its famous "indoor coal mine" some months ago, chemists were called upon to reproduce the earthy "underground" odor of a coal mine. This they did, so that now the visitor smells his coal mine while he is seeing it.

Science News Letter, April 7, 1934

NUTRITION—CHEMISTRY

Two Protein Builders Shown Necessary for Life

DISCOVERY of two substances essential for life and growth were reported by Dr. William C. Rose and Madelyn Womack of the University of Illinois to the American Institute of Nutrition. This newly organized scientific body just held its first annual meeting.

The two substances described by Dr. Rose are leucine and isoleucine. They belong to the chemical family of amino acids, which have been called building blocks of the protein substances in our food. There are eighteen or twenty of these amino acids. Previously four of them had been found to be indispensable food elements—indispensable because the body can not make them itself. Now the Illinois investigators have found that two more of these amino acids are indispensable.

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WELL-DEVELOPED CHIN

*The chin of the new-found *Sugrivapithecus* is more like primitive man's than those of living great apes. The region of the Badlands of Potwar is called a "cemetery of prehistoric life" because of the abundance of fossils.*



BADLANDS