

GENERAL SCIENCE

"Missing Link" Is Found in Human And Monkey Embryos

Study of Forearm Muscles Also Indicates That Man's Evolutionary Ancestors Did Not Swing in Trees

A "MISSING link" between humans (also monkeys) and animals lower in the evolutionary scale such as rabbits and pigs has been discovered by Dr. Chester H. Heuser, of the embryology department, in Baltimore, of the Carnegie Institution of Washington. The discovery was announced to the Institution's annual meeting.

The link consists of a conical or duct-like structure between the outer and inner layers of the protective covering of developing embryos. A definite duct or passage of this sort exists in rabbits, pigs and the like, and there have been several reports of a projection in human embryos that resembled somewhat the duct in lower animals.

Dr. Heuser, however, finds that the duct is very frequently present in human and monkey embryos of 10 to 18 days old. In announcing the discovery, Dr. George W. Corner, director of the embryology department, comments:

"This is indeed the description of an embryological 'missing link,' for it has long seemed that among the mammals there are two quite different ways of arriving at the same end. Now we can see a fundamental similarity between the two methods."

Science News Letter, December 20, 1941

Didn't Swing in Trees

MAN'S EARLY ancestors did not get about by swinging, monkey-fashion, from arm to arm through the trees. Contrary to popular opinion and the conjectures of some scientists, there was no stage of tree-swinging locomotion in man's ancestry, Dr. William L. Straus, Jr., of Johns Hopkins Medical School, is convinced from his studies of man's arm muscles.

A good many detailed characters involving the forearm flexor muscles are found only in the higher primates, that is, gibbons, oranges, gorillas, chimpanzees and humans. The distribution of these characters within that group suggests "a community of origin for man and the anthropoid apes."

Human arm muscles, however, have special characteristics which distinguish them from those of the apes and it is this which Dr. Straus believes shows that man did not pass through an ancestral stage of going from place to place by swinging by his arms through the trees.

Science News Letter, December 20, 1941

Neutrinos Burst Stars

TINY ATOMIC projectiles, smaller but fiercer than any known atomic fragments, capable of penetrating several light-years' thickness of lead, cause the most tremendous explosions in the universe—the bursting of giant stars known to astronomers as super-novae.

This is the explanation of those rare but sudden celestial outbursts, by which a star overnight becomes tens of thousands of times brighter than it was before, as offered in the new *Yearbook* of the Carnegie Institution of Washington, by Prof. G. Gamow of the George Washington University, consultant for nuclear physics of the Institution.

These super-penetrative particles are the neutrino (little neutron) and the anti-neutrino, invented some years ago to overcome certain difficulties connected with radioactivity. Although purely hypothetical, they alone, Prof. Gamow states, can get through the great overlying layers of a star, opaque even to the most penetrating cosmic rays, and carry its central heat rapidly away into outer space, thus causing the collapse.

Science News Letter, December 20, 1941

Rocks From Vapor State

A ELECTRIC furnace in which mixtures of silicate minerals and steam were raised to a high temperature under a pressure of several thousand pounds per square inch, simulating conditions within the earth, showed that deposition from a vapor state may be an important factor in the formation of silicate minerals in the earth.

Clear quartz crystals were formed at a rapid rate. Large crystals of sillimanite,

never before artificially obtained, were also formed, it was found in research at the Carnegie Institution's Geophysical Laboratory.

Science News Letter, December 20, 1941

Virus Acts Like Gene

AN INSTANCE of a disease virus and one of the submicroscopic units of heredity known as a gene producing the same effect in a plant is recorded by Dr. A. F. Blakeslee of the Institution's Department of Genetics at Cold Spring Harbor, N. Y. Exactly similar changes in the shape of the flower of a jimsonweed were brought about in the two widely different ways. Dr. Blakeslee comments that "genes and environmental factors may bring about similar end results through their effects on the developmental processes in the plant."

Science News Letter, December 20, 1941

PUBLIC HEALTH

WPA To Aid Rehabilitation Of Rejected Selectees

WORK Projects Administration "shock troops" of workers trained in non-technical aspects of venereal disease control will shortly begin assistance of rehabilitation of Selective Service registrants rejected because of venereal disease.

Rehabilitation of rejectees and workers in vital defense industries is part of a model venereal disease program outlined by the U. S. Public Health Service. Under it, young men rejected by the Selective Service or the Army because of syphilis or gonorrhea will be traced and encouraged to undergo treatment either by their private physician or at a public clinic. Further, infected persons in the civilian population near Army cantonments known to have passed their disease to soldiers will be traced and put under treatment.

The WPA shock troops will relieve sorely pressed doctors and nurses in contact tracing and clerical work, it was explained.

They will be assigned shortly to aid the venereal disease programs in Colorado, Louisiana, Tennessee and Florida. Oklahoma, California and Oregon have just received their requested quota of WPA shock troops. These are states where mobilization and the booming defense industries have greatly increased the normal problems of venereal disease control.

The augmented venereal disease programs were made possible by allocation of \$5,015,864 in WPA funds by President Roosevelt.

Science News Letter, December 20, 1941