with practically no parts missing, show it to have been much smaller than modern 'gators and crocs—only 32 inches long. Its snout was rather shorter in proportion than a modern alligator's, much shorter than a modern crocodile's. It stood up on its legs in a little more lizard-like fashion, and it did not wear nearly so elaborate a suit of armor as any of its modern descendants.

And it had never heard of the Elephant's Child. There weren't any elephants then.

Science News Letter, April 28, 1934

EVOLUTION

Man's Use of His Hands Depends on His Legs

MAN OWES his tool-adapted arms and hands partly to his legs. His tree-dwelling ancestors probably had arms proportionately much longer, as tree-dwelling animals today mostly have. But when he dropped out of his arboreal home and began to walk about on the ground, his legs lengthened a good deal and his arms shortened somewhat, until they were of the present advantageous length for using tools and handling things.

This idea was put forth by Dr. Charles B. Davenport of the Carnegie Institution of Washington's Department of Genetics, located at Cold Spring Harbor, N. Y., in an address before the meeting of the National Academy of Sciences.

It is also a great advantage to man that his first ground-dwelling ancestors chose to walk instead of hopping like a kangaroo, even though the latter method of locomotion gets one about much faster. For leaping animals of that type have very much reduced arms, which would be of very much less use as tool-handlers.

Shadowed in Embryo

The ancestral history of man's limbs has its reminiscent shadow in the way they grow, before birth and during infancy. At first, the arms grow a little more rapidly than the legs, but some time before birth the legs overtake and pass the arms. At birth, the upper arm and forearm of a baby are about equal in length, but in later life the upper arm becomes the longer. Similarly, the thigh is at first no longer than the lower leg, but later on considerably surpasses it.

Science News Letter, April 28, 1934

EVOLUTION

Evolution Now "Experimental Fact"; Species Made to Order

"ORGANIC evolution is no longer an hypothesis. It is an experimental fact; new species have been built while we look on, and in some cases we know how they have been built."

With this challenging dictum, Prof. Edwin G. Conklin of Princeton University concluded the Penrose Memorial Lecture before the meeting of the American Philosophical Society, oldest of American science organizations, founded in 1727 by Benjamin Franklin.

Prof. Conklin's subject was "A Generation's Progress in the Study of Evolution." More progress has been made in the solution of evolution's riddles during the past quarter century than in all previous centuries, he declared.

The most fruitful field for the study of evolution, the speaker stated, has been found in the very heart of the cells. He said:

"Imagine the amazement and incredulity of the naturalists of a former generation who thought of evolution as the transformations of developed organisms under the influence of changing environment, if they could learn that today the great problems of evolution center in the structures and functions of the germ cells! And yet this is strictly and literally true. The germ cells are the only living bonds not only between generations but also between species, and they contain the physical basis not only of heredity but also of evolution.

"In the microscopic chromosomes which are found in the nuclei of all cells, and in the ultra-microscopic inheritance units, or genes, which lie in the chromsomes are found the causes of heredity, mutation, and evolution."

By the manipulation of mutations, or sudden large changes, it has been possible to create actual new species, Dr. Conklin indicated.

"The most important advances of the past twenty years concern the causes of mutations, or inherited variations, which are the building materials of evolution," he said. "Among these causes are changes in the numbers and composition of the chromosomes of the germ cells and changes in the inheritance units or genes which lie in those chromosomes.

"In many plants it has been found that new mutations are caused by an increase or decrease of their chromosomes and in a few instances absolutely new species have been formed which breed true but are sterile with their parent stocks."

Science News Letter, April 28, 1934

PHYSIOLOGY

Acetyl-Choline May Prevent Benzene Deaths

THE MANY cases of sudden death due to benzene poisoning that occur each year in various industries where benezene is commonly used as a solvent