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EVOLUTION

Man's Age Now Set at Millions of Years



PROF. HENRY FAIRFIELD OSBORN, President of the American Museum of Natural History, in New York City, who holds that man is not descended from an ape-like ancestor. Dr. Osborn is the author of "Men of the Old Stone Age," and other works on the prehistory of man.

By WATSON DAVIS

Whence and when came man? This question, particularly since the time of Darwin, has raised as much controversy and debate as the more unsettled question: Whither goeth man?

Tennessee anti-evolution laws and fundamentalists notwithstanding, scientists today are agreed that man is an animal, that he is a mammal, that his brain and his body are much like those of the rest of the animal world. The roots of man extend into a rich and arduous past and his family tree traced back far enough will show his close kinship to the apes, monkeys, and tree-shrews and other primates and his distant relationship to the rest of the animals. Evolution of man and the rest of the animate world is the most funda-

mental theory existent in biology today.

Upon such specific questions, however, such as whether man is a mere million or some twenty million years old, whether a primitive anthropoid, called Dryopithecus, was a great, great, ever so great grandfather or merely a distant cousin of the human race, or whether primitive man older than the Indians existed upon the American continent, scientists do differ.

The average person whose only acquaintanceship with gorillas and chimpanzees is through zoo cage bars or the antics of the circus monkeys has a quite understandable repugnance to these animals and is not particularly flattered to learn that they are man's nearest animal relatives. When these anthropoids are studied carefully, psychologists and physiologists find so many similarities between them and man that the conclusion can not help being drawn that tailless apes, including the gorilla and the chimpanzee, are more nearly related to modern man than they are to the tailed monkeys with whom they are usually classed by the ordinary person.

The latest evolution controversy within the ranks of science is between Prof. Henry Fairfield Osborn, president of the American Museum of Natural History and Dr. William King Gregory, of the same institution. Prof. Osborn is author of "Men of the Old Stone Age" and other authoritative books on ancient man and evolution, while Dr. Gregory is one of the leading American anatomists who has devoted himself to the study of man's evolution. Their scientific difference of opinion is marked by close friendly personal relations.

Science must abandon the theory



DR. WILLIAM KING GREGORY, anatomist of the American Museum of Natural History, in New York City, who differs with Prof. Osborn. He believes that man and the apes sprang from the same stocks not earlier than about 7,000,000 years ago.

that man descended from an ancestor who was both ape and man. This is the contention of Prof. Osborn. And he believes that man is immensely older than science has hitherto believed. The prologue of the human drama occurred some 16,000,000 years ago in the period of the earth's history that geologists know as the Upper Oligocene. It was at this time that the Dawn Man sprang from a primitive primate stock, which branching in another direction gave rise to the ancestors of the anthropoid apes, the gorillas and chimpanzees of today. The opening act in human evolution, according to Osborn, occurred on the high plateaus and plains of northern Asia, where the dawn man, great, great grand-

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Man's Age Extended

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daddy of the present day human races, lived on the ground and used tools skillfully and well. Prof. Osborn reads the apes out of the human family tree, an act that appeals sentimentally to many people. The apes under his theory become remote and distant cousins instead of fairly close relatives.

Dr. Gregory, on the other hand, holds to the older and more generally accepted view that man and the apes had common ancestors as late in the earth's history as 5,000,000 to 7,000,000 years ago. From anatomical studies of brain, teeth and bodily structure of living and fossil men, apes, and other primates, he concludes that the anthropoid apes as a whole are undoubtedly man's nearest known relatives and he lists the primates in order of their relationship to man as: Primitive man, gorrilla, chimpanzee, orang, gibbon, Old World monkey, New World monkey, Tarsius, lemur, pentailed tree-shrew. Moreover Dr. Gregory considers that the primitive anthropoid, *Dryopithecus*, whose fossil remains have been found in the Siwalik hills in India, is a joint ancestor of the apes and man, a sort of missing link between the two stocks.

Man's Age From Teeth

Fortunately teeth, which are more readily preserved through the ages than nearly any other part of the skeleton, give the most information about the ancestry of the individual. Prof. Gregory has found that the distinctive pattern of the ape-man ancestor, *Dryopithecus*, is preserved in the teeth of the primitive Piltown man whose jaw was found in England. And reasoning statistically he finds that a period of some 800,000 generations of evolution can be allowed as the interval between the *Dryopithecus* and the

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News-Letter Features

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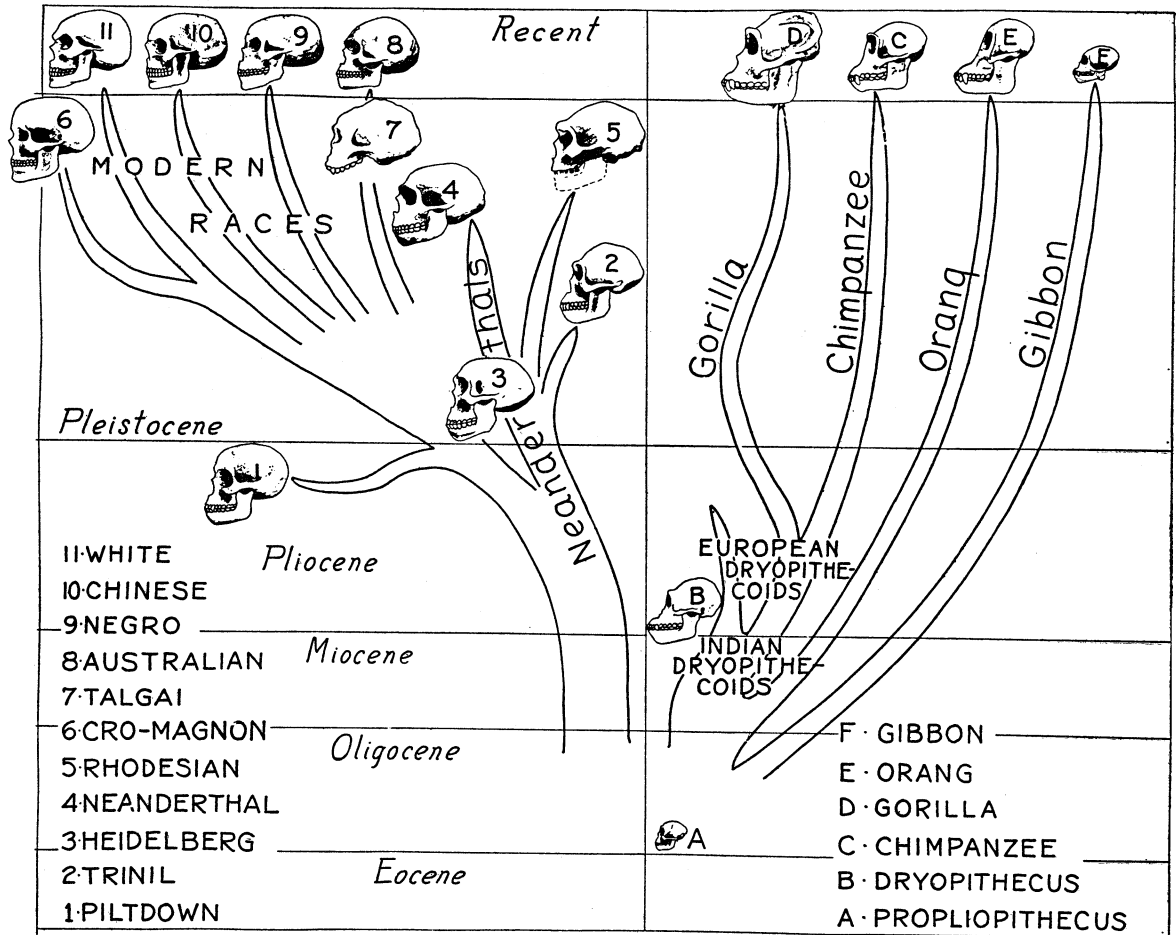
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THE FAMILY TREES of men and the apes according to Prof. Osborn. The Oligocene era in which he believes man had his roots ended some 19,000,000 years ago. Dr. Gregory, Prof. Osborn's associate, holds that man and the apes rose from the same stock only about 7,000,000 years ago, and he believes that *Dryopithecus*, assigned to the ape line by Prof. Osborn, was one of man's ancestors.



Man's Age Extended

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Piltown man, a time sufficient in his opinion for primitive man to assume the characteristics which distinguish him from the apes.

That Asia is the place to look for the ancestor of man is the belief of both Prof. Osborn and Dr. Gregory. There on the open plains of that continent, now the home of the yellow race and one of the most inaccessible parts of the globe, the Dawn Men lived and grew, and became men because of the hard life that they lived. Existence on the open plains was more hazardous and exciting than in the forests to the south, where the ape cousins of the dawn men were living a life of comparatively little exertion. The dawn men had to use their gray matter, and brains, like muscles, grow when used. The human race, still at its best in the temperate zones, has the hardships of the Asiatic plains to thank for its large heads, progressive actions and mental superiority to the best of the animal world.

Asia Early Home

So convinced have Prof. Osborn and other members of the American

Museum of Natural History been of the existence of the dawn men in Asia that the elaborate and ambitious expeditions into Asia's past that have been made under the leadership of Roy Chapman Andrews have been particularly instructed to be on the lookout for traces of the ancestors of modern man. And the American Museum scientists have not been unsuccessful, for they brought back flint implements and other cultural remains from different localities in Mongolia and China. These, however, are assigned to the Stone Age, a period in human evolution that is much more recent than the time of the dawn men.

But out of China, land of mystery, there have come dragon's bones. The yellow men use ground-up fossil bones as medicine. Over twenty years ago an eminent German paleontologist purchased in a Peking drugstore a fossil tooth that he declared was probably that of an ancient man. That incident was recalled when last fall there came from Asia the news that Dr. J. G. Andersson of the Geological Survey of China and Dr. O. Zdansky of the University of Upsala had found evidences of the dawn man in Asia. Imbedded in geologic

deposits with the bones of various mammals they found two teeth which experts declare are essentially human. The strata of the earth in which these teeth were found are believed to have been laid down in the Upper Pliocene age some million to three million years ago. Before such antiquity, the ancient temples of China appear as new as the shacks of a boom town.

In Europe remains of ancient man have been found with considerable frequency. Whole and perfectly preserved skeletons of Neanderthal men have been unearthed at various localities. In the caves of southern France and Spain there have been found the earthly remains of the artistic Cro-Magnons, that skillful race that most anthropologists believe to have been in direct ancestral line of modern man. Long before these early men there must have lived in England some sort of human race, for among Pliocene strata along the coast of Sussex there are found worked flints considered to be of human manufacture.

To the Old World, therefore, the birthplace of man has been assigned. The most generally accepted location

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