

THE SCIENCE NEWS-LETTER

A Weekly Summary of Current Science

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ISSUED BY
SCIENCE SERVICE

B and 21st Streets
WASHINGTON, D. C.

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SUBSCRIPTION: \$5 A YEAR, POSTPAID

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Vol. VII, No. 222

Saturday, July 11, 1925,

SIMILARITIES OF STRUCTURE SHOW RELATIONSHIP OF MAN AND ANIMALS

A Common Sense View of Evolution

By Dr. R.S. Woodworth,
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While much of the evidence on the evolution question is technical and complicated, there is one broad view of the matter that is plain and simple, and it is this broad, simple view that really makes evolution so appealing an idea to all students of plant and animal life,

As you drive along a country road, you come across a poultry farm where all the chickens are pure white. A little farther along, you see another with all red chickens. You ask how it happens that one farmer has all white chickens, and the other all red; and the answer is that one is incubating eggs from one breed of hens, and the other from another breed. The pure white hens have a common ancestry and are all blood relations. So of the reds, and of any pure breed. If the whites are related to the reds, the relationship is not so close, and you would have to go further back in the pedigree to find the common ancestor. But as we know that various special breeds have sprung from the same general stock of hens, we have good reason to believe that all hens are blood relations. Those of the same breed are closer cousins, those of different breeds more distant cousins; but all hens are cousins.

We can say the same of dogs or pigeons. We know, as a matter of breeding history, where and when the more recent breeds of these domestic animals originated; and we know that those of the same breed are descended from the same ancestors, and are comparatively close cousins, while those of different breeds are more distant cousins.

Now suppose we ask, in an open-minded spirit, whether pigeons are closer cousins to hens or to dogs. The answer cannot be in doubt, once we allow the question to be put. Pigeons and hens have the marks of a common descent. It is quite easy to conceive of two similar species as being related species; once we carry over our knowledge of breeds to the larger and more distinct groups which we call species. Take the "cat family", including lions, tigers, bob-cats, house cats and others. The more we know of their internal anatomy, and of their behavior, the easier it becomes to believe them as a real family, in the sense of being all blood relations. Extending this idea still further, we readily come to believe that all mammals are a family, and all birds another family,

We need, of course, to be on our guard against merely superficial resemblances between different sorts of animals. Penguins and seals have considerable

resemblance. The penguin doesn't fly any more than the seal runs on four feet; but they both swim and dive most expertly, and in a very similar manner. The penguin has flippers in place of wings, and the seal has them in place of legs. For all that, when carefully studied, the penguin is certainly a bird, and the seal a mammal. That means that the seal and penguin are by no means close relations. The seal is closer to the cat, by descent, and the penguin is closer to the hen. It certainly seems a sensible view, once you get the hang of it.

But if we have reached the point where we think of mammals as one immense but genuine family, and of birds as another similar family, does common sense force us to stop there? Rather, when we come to know the fundamental resemblances between birds and mammals -- in their bones, their muscles, their hearts, their brains -- we are much inclined to believe in a fairly close relationship between birds and mammals, and indeed between all vertebrates, as contrasted with insects, molluscs, or jellyfish. The whole animal kingdom seems made up of several great families, and probably even these are interrelated, if we could trace the ancestry back far enough. As regards plants, the whole idea could be developed there just as easily as in the case of animals.

One big doubt, however, arises. If all mammals, for example, are a true family of cousins, then should we not expect to find all gradations? Should we not be able, with a complete collection of animals at our disposal, from all parts of the world, to arrange a zoo as a long row of cages, passing from the camel to the lion, for example, by small differences without a break anywhere in the series? As a matter of fact, a collection of living animals could not be arranged without leaving many large gaps. But then, ancestral breeds may have died out, leaving derived breeds in possession of the earth. This is not only a natural supposition, but it is a fact, revealed by the fossil remains of the animals of old. The animals of former geological ages were not the animals of today. The horse as we know him did not exist, though horse-like breeds, that may well have been the ancestors of our horses, were then alive.

In considering the family tree of animals, we have to remember that the live species of today are the leaves on the outer twigs. We have before us, alive, only the outer shell of the tree. We cannot see into the interior of the mass of branches; we cannot see, directly, the past condition of the tree. We can partially reconstruct the past of the tree by laboriously digging up the remains of past seasons now lying buried beneath the tree, and piecing them together as well as may be. In spite of the motley array of leaves which we now see on the outside of our family tree, we find, beneath the tree, good evidence that the tree was formerly more uniform than now, that many branches have died, leaving the rest to fill the space, and that all the branches have arisen from the same parent stem.

But does man fit into this scheme of things, and if so where? Well, there is no manner of doubt that man is a mammal. The more you know about his bones, muscles, blood, nervous system, the clearer it becomes that he belongs in the scheme. Nor is there any doubt as to his nearest living cousins; they are certainly the higher primates, the apes. Man is not descended from the chimpanzee, any more than the chimpanzee is descended from man, but they are leaves on the same branch of the family tree.

Fitting man into a place in the general family tree of animals is not humiliating, nor dangerous to morals. It does not lower man in the least; it leaves him just the same as before, with all his distinctive and remarkable qualities. A great artist may have very commonplace cousins, but he is a great artist

just the same. Man's duties and opportunities correspond to his abilities, and are not abated one whit by the fact of his having cousins less highly endowed. All that sort of objection to evolution is not common-sense, to say the least. If the brotherhood of all men is a humane conception, the cousinhood of man and animals is no less so. Once we see that man has an organic place in nature, we have a sense of being at home in the natural world that is a great satisfaction and, I believe, a great spiritual gain.

But, it may finally be asked, what does the Bible teach regarding evolution? It is fair to say that the Bible never raises the question, and consequently cannot be expected to furnish anything like a direct answer. The answer, at the best, would have to be read into some passage by implication, and would always be open to various interpretations. If anything is clear, in reading the Bible, it is that we have here a religious book, a book concerned with man's religious life, and not with natural science. It is not a treatise on biology any more than a treatise on astronomy or chemistry or arithmetic. It leaves these fields entirely aside. How unfair to the Bible, then, how prejudicial to its continued influence, to lug it in and attempt to extort an answer from it on matters which it does not discuss and which lie outside of its chosen field.

APE-MAN BONES REVEAL TWO GARDENS OF EDEN

That there were at least two independent "Gardens of Eden", one in Asia, and one in Africa, in which two or more different varieties of human beings evolved from distinct species of apes, or ape-like animals, is the startling conclusion tentatively reached and announced by Dr. E.A. Hooton of the Peabody Museum of Harvard University after a comparative study of skulls of apes, apemen, cave men and modern men found throughout the world.

The idea that all men originated from one line of ape-like ancestors should be abandoned, Dr. Hooton declared. Southern Asia, southeastern Asia, and African all fulfill the conditions necessary for the production of man and the giant apes in an equally satisfactory manner. The fossil and climatic evidence makes it quite possible, he said, that the critical steps in human evolution -- the coming down out of the trees and the assumption of the erect posture -- may have taken place in both Asia and Africa. At present he said that he was inclined to think that one or more of the long-headed varieties of man evolved in Africa and one or more round headed varieties in Asia.

Admitting the existence of two or three fundamental near-man stocks, he said that an occasional hybridization followed by a process of interbreeding would satisfactorily account for the varying characteristics of modern races.

The existence of hybrids between the gorilla and the chimpanzee has been reported several times and is not wholly incredible, Dr. Hooton suggested, and said there was no reason for doubting that the ancestors of man have displayed throughout the process of becoming human, qualities of superior adaptability, greater initiative, and less conservatism in their mating habits as well as in other directions, when compared with the existing big apes or their progenitors.

According to Dr. Hooton's conclusions many kinds of apes left the trees beside the baboon, gorilla, and chimpanzee. Several of these ape-like animals developed toward becoming human beings and several may have succeeded. Dr. Hooton could see nothing in the environmental conditions which kept the gorilla from becoming a man and attributed his failure probably to an inherent incapacity of his family to develop further because of specialization along other lines. The baboon lost his chances when he made the fatal choice of walking on four feet instead of two.
