

process which has been at work. Occasionally individuals appear having fully or at least fairly developed organs which are rudimentary in the normal member of the species. These are cases of reversion to an earlier type. Under natural conditions they are rare, but where development is hastened by artificial selection, as in the case of pigeons and dogs, they are very common.

## MAN AND BRUTE.

In a short essay like this it is impossible to enumerate all the facts which have a bearing on the subject under discussion. On that subject books sufficient in point of numbers to form a respectable library have been written. All that is aimed at is the presentation in simple language of a few facts which support the modern scientific theory of evolution. It is hoped, however, that enough has been written to make the broad lines of that theory clear. The contention is that the laws and forces inherent in Nature have in the course of ages evolved all existing species, man included. The reader is asked to note that the explanation of organic existence here given is a natural one, and for that reason alone is infinitely more credible than any theory requiring the supernatural for its support. Miracles and acts of special creation have no place in our philosophy. We do not need them, for we can explain all without them.

The writer feels compelled to point out that the modern scientific theory of evolution is only a small part of the true philosophy of existence. That philosophy will be dealt with in a future essay, when the blanks unavoidable in this will be filled up. The present reasoning is, however, sound as far as it goes.

There is probably no human being alive to-day, whose opinion is of the least value, who will not agree that what are called the lower animals are the result of some such evolutionary process as that described above. But many will insist that man forms a class apart from the others and that his origin must be sought in some different quarter. Yet the most specific inspection of the facts will reveal so many resemblances between man and the lower animals that the theories of a different origin, and of accident, are at once perceived to be untenable. Let the reader place side by side a human skeleton and a skeleton of any of the mammalia, and he cannot fail to notice that the two are built on the same general plan. There is not in the human body a single bone, muscle, nerve, or blood-vessel which has not its counterpart in that of the monkey, bat and seal. Every fold in the human brain has its counterpart in that of the orang-outang. The embryo of man, dog, bat, seal, and reptile are all alike up to a certain point. The human foetus is hairy. The hairs on man's body are the rudimentary remains of a coat which once covered him. That the ear of man was once pointed is shown by the rudimentary point which is still plainly visible, although turned inward, as in the monkey. Every man possesses a rudimentary tail, and instances are known in which this organ attained a length of several inches. Diseases such as hydrophobia, variola, and glanders are communicated by the lower animals