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Animal Life and Intelligence

Extract of essential statements

REdition Schmidt

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PREFACE.

... for human beings, rational and moral though they may be, are still organisms; and man can in no wise alter or annul those deep-lying facts which nature has throughout the ages been weaving into the tissue of life.

CHAPTER I. THE NATURE OF ANIMAL LIFE.

The one animal of whose feelings I know anything definite and at first hand, is myself. Of course, I believe in the feelings of others; but when we come to very lowly organisms, we really do not know whether they have feelings or not, or, if they do, to what extent they feel.

The wonderful thing about this process is the power of the fertilized ovum, produced by the union of two minute cells from different parents, to develop into the likeness of these parents. This likeness, however, though it extends to minute particulars, is not absolute. The offspring is not exactly like either parent, nor does it present a precise mean between the characters of the two parents. There is always some amount of individual variability, the effects of which, as we shall hereafter see, are of wide importance. We are wont to say that these phenomena, the transmission of parental characteristics, together with a margin of difference, are due to heredity with variation. But this merely names the facts. How the special reproductive cells have acquired the secret of developing along special lines, and reproducing, with a margin of variability, the likeness of the organisms which produced them, is a matter concerning which we can at present only make more or less plausible guesses.

CHAPTER IV. VARIATION AND NATURAL SELECTION.

The law of heredity may be regarded as that of persistence exemplified in a series of organic generations. When, as in the amœba and some other protozoa, reproduction is by simple fission, two quite similar organisms being thus produced, there would seem to be no reason why (modifications by surrounding circumstances being disregarded) hereditary persistence should not continue indefinitely.

Where, however, reproduction is effected by the detachment of a single cell from a many-celled organism, hereditary persistence will be complete only on the condition that this reproductive cell is in some way in direct continuity with the cells of the parent organism or the cell from which that parent organism itself developed. And where, in the higher animals, two cells from two somewhat different parents coalesce to give origin to a new individual, the phenomena of hereditary persistence are still further complicated by the blending of characters handed on in the ovum and the sperm; still further complication being, perhaps, produced by the emergence in the offspring of characters latent in the parent, but derived from an earlier ancestor. And if characters acquired by the parents in the course of their individual life be handed on to the offspring, yet further complication will be thus introduced. It is no matter for surprise, therefore, that, notwithstanding the law of hereditary persistence, variations should occur in the offspring of animals.

But even here, without discussing their origin, we must