

THE ORIGIN OF NEW SPECIES OF ANIMALS AND PLANTS.

At the monthly meeting of the Literary and Philosophical Society, on Tuesday evening, Mr. H. C. SORBY, F.R.S., &c., read an interesting paper "On the origin of new species of animals and plants;" the Rev. S. EARNSHAW, the president, in the chair.... Mr. SORBY said that the origin of new species of animals and plants was a subject that had attracted much attention for many years. Some naturalists maintained that each species was formed by a special act of creation; whilst others believed that species were not permanent, but might originate by descent from others previously existing, in the same manner as new varieties. Within the last year a valuable and important work had appeared, by the very eminent naturalist, Mr. Darwin, in which he endeavoured to show that there was no more essential difference between closely related species than between any distinct varieties; so that new species might originate by means of the well-known tendency of animals and plants to give rise to new varieties. He also showed that instead of wild nature being characterized by peace, it was one continuous war. Even every bank of beautiful flowers was the scene of a quiet but deadly strife; for each organism had a tendency to increase far beyond the means of subsistence, and by far the larger number of individuals must die when young, and leave no descendants behind them. In the struggle for life produced by this cause, the stronger individuals must succeed better than the weak; and, if any favourable variation should occur, it would enable its possessor to triumph over its less favoured brethren. Mr. Darwin, therefore, argued that in nature there was a power to, as it were, select those varieties which were best fitted for the place they occupy in nature as the stock from which a fresh generation was to be produced; and thus the race became gradually altered, in the same manner as our domestic animals are improved by careful breeding. This gradual change taking place continuously for thousands of generations, might ultimately give rise to varieties, differing so widely from each other that they might be looked upon as distinct species. Having pointed out the bearing of this theory, and shown what class of facts it would explain, Mr. Sorby said that one of the chief objections to it was the very usual infertile character of hybrids. This was a question well worthy of a most careful investigation; for, if the same species of animal or plant could, by careful breeding or cultivation, be made to vary to such an extent that the extreme varieties produced infertile young, the theory might be adopted with confidence; but until that had been accomplished, it would be well to withhold entire assent, even whilst it must be admitted that it was a theory which would explain so many very remarkable facts as to be well worthy of our most serious attention.... An animated and lengthy discussion followed the reading of the paper. The PRESIDENT said that the book of Mr. Darwin had made a very favourable impression upon him. It appeared to him that Mr. Darwin's book would take much the same position in regard to natural history, that Sir C. Lyell's "Principles of Geology" had done in relation to that science. The great principle of Sir C. Lyell's book was that he substituted time for force, and so in this case time was substituted for creative energy. Thus the theory agreed with the plan, universally seen throughout creation, of as little creative power being exerted as possible. Mr. Darwin was, however, preparing a fuller explanation of his theory, and he thought they ought not to form any definite opinion upon it until that was published.... Dr. J. C. HALL pointed out various objections to Mr. Darwin's theory. It was a law of the Divine economy, so to form creatures that they might perform the functions of their existence in the least round-about manner possible — if he might so speak; whereas, by Mr. Darwin's theory, the most circuitous course was supposed to be adopted, that of creatures changing their natures by having gradually to adapt themselves to the conditions of their existence.... Mr. C. H. B. HAMBLY thought Mr. Darwin might justly exclaim, "Oh that mine enemy would write a book," for he was convinced that, if that were done, it would be seen that the generally received theory was much more inconsistent than Mr. Darwin's. That gentleman was not in the position of a person laying claim to an estate, which the present possessor held by an indisputable title; but he was rather laying claim to an estate held by very doubtful right... Mr. W. JACKSON, Mr. B. WAKE, the Rev. BROOKE HERFORD, Mr. GRAHAM STUART, and other gentlemen also took part in the discussion. The proceedings terminated with a vote of thanks to Mr. Sorby.