

imperfection of the record, or to the movements or migrations of species. The record is now, in many important parts, too complete, and the simultaneousness of the entrance of the faunas and floras too certainly established, and moving species from place to place only evades the difficulty. The truth is that such hypotheses are at present premature, and that we require to have larger collections of facts. Independently of this, however, it appears to me that from a philosophical point of view it is extremely probable that all theories of evolution, as at present applied to life, are fundamentally defective in being too partial in their character; and perhaps I cannot better group the remainder of the facts to which I wish to refer than by using them to illustrate this feature of most of our attempts at generalization on this subject.

First, then, these hypotheses are too partial, in their tendency to refer numerous and complex phenomena to one cause, or to a few causes only, when all trustworthy analogy would indicate that they must result from many concurrent forces and determinations of force. We have all, no doubt, read those ingenious, not to say amusing, speculations in which some entomologists and botanists have indulged with reference to the mutual relations of flowers and suctorial insects. Geologically the facts oblige us to begin with Cryptogamous plants and chewing insects, and out of the desire of insects for non-existent honey, and the adaptations of plants to the requirements of non-existent suctorial apparatus, we have to evolve the marvellous complexity of floral form and colouring, and the exquisitely delicate apparatus of the mouths of haustellate insects. Now; when it is borne in mind that this theory implies a mental confusion on our part precisely similar to that which, in the department of mechanics, actuates the seekers for perpetual motion; that we have not the smallest tittle of evidence that the changes required have actually occurred in any one case, and that the thousands of other structures and relations of the plant and the