

ancients are still in existence, exhibiting to this day the characters they exhibited of old. The geological record, even with all its imperfections exaggerated to distortion, tells now, what it has told from the beginning, that the supposed intermediate forms between the species of different geological periods are imaginary beings, called up merely in support of a fanciful theory. The origin of all the diversity among living beings remains a mystery, as totally unexplained as if the book of Darwin had never been written; for no theory, unsupported by fact, however plausible it may appear, can be admitted in science.¹

which may be observed among them prove the variability of species? The fact seems to me to be, that, while species are based upon definite relations among individuals, which differ in various ways among themselves, each individual, as a distinct being, has a definite course to run from the time of its first formation to the end of its existence, during which it never loses its identity nor changes its individuality, nor its relations to other individuals belonging to the same species, but preserves all the categories of relationship which constitute specific or generic or family affinity, or any other kind or degree of affinity. *To prove that species vary, it should be proved that individuals, born from common ancestors, change the different categories of relationship which they bore primitively to one another; while all that has thus far been shown is, that there exists a considerable difference among individuals of one and the same species. This may be new to those who have looked upon every individual picked up at random, as affording the means of describing satisfactorily any species; but no naturalist who has studied carefully any of the species now best known, can have failed to perceive that it requires extensive series of specimens accurately to describe a species, and that the more complete such series are, the more precise appear the limits which separate species. Surely the aim of science cannot be to furnish amateur zoölogists or collectors a recipe for a ready identification of any chance specimen that may fall into their hands. And the difficulties with which we may meet in attempting to characterize species do not afford the first indication that species do not exist at all, as long as most of them can be distinguished, as such, almost*

at first sight. I foresee that some convert to the transmutation creed will at once object, that the facility with which species may be distinguished is no evidence that they were not derived from other species. It may be so. But, as long as no fact is adduced to show that any one well-known species among the many thousands that are buried in the whole series of fossiliferous rocks is actually the parent of any one of the species now living, such arguments can have no weight; and thus far the supporters of the transmutation theory have failed to produce any such facts. Instead of facts, we are treated with marvellous bear, cuckoo, and other stories. *Credat Judæus Apella!*

¹ It seems generally admitted, that the work of Darwin is particularly remarkable for the fairness with which he presents the facts adverse to his views. It may be so; but I confess that it has made a very different impression upon me. I have been more forcibly struck with his inability to perceive when the facts are fatal to his argument, than with any thing else in the whole work. His chapter on the Geological Record, in particular, appears to me to be, from beginning to end, a series of illogical deductions and misrepresentations of the modern results of Geology and Palæontology. I do not intend to argue here, one by one, the questions he has discussed. Such arguments end too often in special pleading; and any one familiar with the subject may readily perceive where the truth lies, by confronting his assertions with the geological record itself. But, since the question at issue is chiefly to be settled by palæontological evidence, and I have devoted the greater part of my life to the special study of the fossils, I wish to record my protest against his mode