

They seem now so obvious and so well-established, that it may be difficult to conceive a philosophical science without them.

To most of the geologists of his day, Darwin's contention for the imperfection of the geological record, and his demonstration of it, came as a kind of surprise and awakening. They had never realised that the history revealed by the long succession of fossiliferous formations, which they had imagined to be so full, was in reality so fragmentary. And yet when Darwin pointed out this fact to them, they were compelled, sometimes rather reluctantly, to admit that he was right. Some of them at once adopted the idea, as Ramsay did, and carried it further into detail.<sup>1</sup>

Until Darwin took up the question, the necessity for vast periods of time, in order to explain the characters of the geological record, was very inadequately comprehended. Of course, in a general sense, the great antiquity of the crust of the earth was everywhere admitted. But no one before his day had perceived how enormous must have been the periods required for the deposition of even some thin continuous groups of strata. He supplied a criterion by which, to some degree, the relative duration of formations might perhaps be apportioned. When he declared that the intervals which elapsed between consecutive formations may sometimes have been of far longer duration than the formations themselves, contemporary geologists could only smile incredulously in their bewilderment,

<sup>1</sup> See the two Presidential Addresses to the Geological Society, by A. C. Ramsay, *Quart. Journ. Geol. Soc.* vols. xix. (1863), xx. (1864).