

and in zones of elevation and depth, and from the time necessary for migration, that similarity of forms in distant deposits cannot be taken as proof of synchrony.

Of this discourse Lyell said: 'I never remember an address listened to with such interest or received with such applause, though there were many private protests against some of his bold opinions.'<sup>1</sup> It is generally admitted that Huxley carried his argument too far in respect to the difficulties of correlation; and Dr. J. E. Marr has since maintained that the time taken for the migration of forms is short compared with the period during which they existed, so that the strata containing similar faunas may truly be spoken of as contemporaneous and not merely as homotaxial.<sup>2</sup> The evidence, however, that has been gathered tends to show that approximate, rather than rigid, correlation is all that can be expected. The researches carried on by one of our Fellows, Professor H. Shaler Williams, among the Devonian rocks in America, prove that there has been transgression of one fauna over another, thus indicating that the limits of a formation founded upon sudden change in the fossil contents cannot be regarded as synchronous for two parts of even the same province.<sup>3</sup>

The subject of nomenclature at an early date occupied the attention of the members of the Geological Society (see p. 23), and has since been fully discussed in the volumes issued by the International Geological Congress. It is now admitted that, as regards geological formations and epochs, a dual nomenclature is necessary. Local names, such as those introduced by William Smith, are needed in all countries for the main stratigraphical divisions; while chronological terms, which cannot be restricted within the limits of stratigraphical divisions,

<sup>1</sup> 'Life of Lyell,' vol. ii. 1881, p. 356.

<sup>2</sup> 'The Principles of Stratigraphical Geology, 1898, p. 51; see also W. T. Blanford, Address to Geol. Soc. 1889.

<sup>3</sup> 'The Correlation of Geological Faunas: a Contribution to Devonian Palæontology,' Bulletin No. 210, U.S. Geol. Survey, 1904; and F. R. Cowper Reed, *Geol. Mag.* 1907, p. 228.