we find, immediately on entering the great Palæozoic division, an entire change. The unequal-lobed or *heterocercal* tail becomes not only the prevailing, but the only form, save in a few exceptional cases, as in that of the *Coccosteus* of the Old Red Sandstone, where there were no lobes at all, or as in that of its contemporary the *Diplopterus*, where the lobes strike out laterally from a prolongation of the column. In short, the equally-lobed tail ceases with the Trias, to re-appear no more, and the unequally-lobed tail takes its place. Similar changes manifest themselves in other divisions and classes of the animal kingdom. Waiving for the present the question raised by the French geologist, M. Michelin, in Britain at least the Belemnite, so abundant in the Secondary formations, and so characteristic of them, has no place among the formations of the Palæozoic period. Save, too, in a few rare and somewhat equivocal species, the equally characteristic Ammonite disappears.[1] We take leave also of the scarce less characteristic Gryphites, of the Trigonia, Plagiostoma, and Perna, with several other well-marked types of shell; but we find their places amply occupied by types exclusively Palæozoic. The Orthoceratites, straight, conical, chambered shells, anticipated, we see, the place of the Belemnites; the Goniatites, that of the Ammonites proper; the Bellerophon and the Euomphalus, unseen in any other period, fall into the general group, and add to the peculiarity of its aspect; with a whole array of unwonted forms among the brachiopoda, such as Spirifers, Producta, Atrypa, and Pentamerus, etc. etc. But it was perhaps in the vegetable world that the Palæozoic ages most remarkably differed from those of the subsequent periods of the geologist, whether Secondary, Tertiary, or Recent. We read in the older poets of enchanted forests; but the true enchanted forests, stranger, in their green luxuriance, than poet ever yet fancied, and where the botanist,

[1] These views require much modification. See Sir Charles Lyell's *Supplements*, 1857.—W. S. S.