immensely extended periods a continuous cord of existence. New species had come into being ere the old ones dropped away and disappeared; and there occurred for long ages no break or hiatus in the course, just as in the human family there occurs no abrupt break or hiatus, from the circumstance that new generations come upon the stage ere the old ones make their final exit. But in the geological thread, as in that of the sybil, the continuity is *twice* abruptly broken, and the thread itself divided, in consequence, into three parts. It is continuous from the present time up to the commencement of the Tertiary period; and then so abrupt a break occurs, that, with the exception of the microscopic diatomaceæ, to which I last evening referred, and of one shell and one coral, not a single species crosses the gap. On its further or remoter side, however, where the Secondary division closes, the intermingling of species again begins, and runs on till the commencement of this great Secondary division; and then, just where the Palæozoic division closes, we find another abrupt break, crossed, if crossed at all,—for there still exists some doubt on the subject,—by but two species of plant.[1] And then, from the further side of this second gap the thread of being continues unbroken, until we find it terminating with the first beginnings of life upon our planet. Why these strange gaps should occur,—why the long descending cord of organic existence should be thus mysteriously broken in three,—we know not yet, and never may; but, like the division into books and chapters of some great work on natural history, such as that of Cuvier or Buffon, it serves to break up the whole according to an intelligible plan, the scheme of which we may, in part at least, aspire to comprehend. The three great divisions of the geologist,—Tertiary, Secondary, and Palæozoic,—of which these two chasms, with the be-

[1] For a reference to the research of the last two years, which has been busily at work upon this precise epoch, see Preface.