APPENDIX.

icy barrier would extend to the English Channel, and the whole British islands would lie enveloped in one vast glacial winding-sheet, that, overlying the summits of our hills, would furrow with its parallel striæ even the granitic top of Schehallion.

A complete reversal of the conditions of the two poles would account, doubtless, for many of the phenomena existing in connexion with the boulder-clay, which seem otherwise so inexplicable. But is the reversal itself possible? A Laplace or Lagrange could perhaps answer the question. This much, however, men of lower attainments may know: that the meteorological condition of the two poles are very different,-the icy barrier advancing, in the case of the one, many degrees nearer the equator than it does in the case of the other; that their astronomical condition is also very different, the sun being many millions of miles nearer the one in winter, and nearer the other in summer. It may be known, further, that these astronomical conditions are in a state of gradual change; that, so far at least as human observation extends, the change has been steadily progressing in one direction; that should it but continue, a time must inevitably arrive when their astronomical circumstances shall be wholly reversed, -a time when the sun shall look down upon our northern hemisphere in aphelion in winter, and in perihelion in summer. True, we do not yet know that the meteorological differences of the poles depend on their astronomical differences, or whether the gradual diminution in the eccentricity of the earth's orbit, which has been lessening these latter differences ever since astronomers registered their observations, may not be like the change in the ecliptic,-the result of a mere oscillation, limited to a few degrees.

Let us, however, conclude the case to be otherwise : let us deem the oscillations in the earth's orbit to be so great as to involve an alternate progress in the sun, between his two