

We usually know nothing of the geographical varieties of the post-pliocene and pliocene species, least of all, those successive changes of form which they must have undergone in the pre-glacial epoch between the upper miocene and post-pliocene eras. Such being the poverty of our paleontological data, we cannot wonder that osteologists are at variance as to whether certain remains found in caverns are of the same species as those now living; whether, for example, the *Talpa fossilis* is really the common mole, the *Meles morreni* the common badger, *Lutra antiqua* the otter of Europe, *Sciurus priscus* the squirrel, *Arctomys primigenia* the marmot, *Myoxus fossilis* the dormouse, *Schmerling's Felis Engihou-lensis* the European lynx, or whether *Ursus spelæus* and *Ursus priscus* are not extinct races of the living brown bear (*Ursus arctos*).

If at some future period all the above-mentioned species should be united with their allied congeners, it cannot fail to enlarge our conception of the modifications which a species is capable of undergoing in the course of time, although the same form may appear absolutely immutable within the narrow range of our experience.

Longevity of Species in the Mammalia.

In the 'Principles of Geology,' in 1833,* I stated that the longevity of species in the class mollusca exceeded that in the mammalia. It has been since found that this generalisation can be carried much farther, and that, in fact, the law which governs the changes in organic beings is such, that the lower their place in a graduated scale, or the simpler their structure, the more persistent are they in form and organisation. I soon became aware of the force of this rule in the class mollusca, when I first attempted to calculate the

* 1st edit., vol. iii. pp. 48 and 140.