

*nerian Society for 1837-8, must be esteemed the foundation of a critical investigation of this subject in Britain.]*

2. *Extinction of Species.*—With regard to the extinction of species, Mr. Lyell has propounded a doctrine which is deserving of great attention here. Brocchi, when he had satisfied himself, by examination of the Sub-Apennines, that about half the species which had lived at the period of their deposition, had since become extinct, suggested as a possible cause for this occurrence, that the vital energies of a species, like that of an individual, might gradually decay in the progress of time and of generations, till at last the prolific power might fail, and the species wither away. Such a property would be conceivable as a physiological fact; for we see something of the kind in fruit-trees propagated by cuttings: after some time, the stock appears to wear out, and loses its peculiar qualities. But we have no sufficient evidence that this is the case in generations of creatures continued by the reproductive powers. Mr. Lyell conceives, that, without admitting any inherent constitutional tendency to deteriorate, the misfortunes to which plants and animals are exposed by the change of the physical circumstances of the earth, by the alteration of land and water, and by the changes of climate, must very frequently occasion the loss of several species. We have historical evidence of the extinction of one conspicuous species, the Dodo, a bird of large size and singular form, which inhabited the Isle of France when that island was first discovered, and which now no longer exists. Several other species of animals and plants seem to be in the course of vanishing from the face of the earth, even under our own observation. And taking into account the greater changes of the surface of the globe which geology compels us to assume, we may imagine many or all the existing species of living things to be extirpated. If, for instance, that reduction of the climate of the earth which appears, from geological evidence, to have taken place already, be supposed to go on much further, the advancing snow and cold of the polar regions may destroy the greater part of our plants and animals, and drive the remainder, or those of them which possess the requisite faculties of migration and accommodation, to seek an asylum near the equator. And if we suppose the temperature of the earth to be still further reduced, this zone of now-existing life, having no further place of refuge, will perish, and the whole earth will be tenanted, if at all, by a new creation. Other causes might produce the same effect as a change of climate; and, without supposing such causes to affect the whole globe, it is easy to