

dominant organisms are crustaceans and molluscs. Now, such being the ascertained facts of our science, we are, I think, justified in still holding against the disciples of the one school to which I have referred, that there has been progress in creation from a lower to a higher level. So far as there exists any evidence on the subject at all, we must hold that, in at least the group, the Palæozoic existences were of a lower and humbler order than those of the Secondary ages, and those of the Secondary ages of a lower and humbler order than those of the periods of the Tertiary. As shown by the vertebrate remains of the geologic epochs, the balance, which greatly preponderated in the times of the Tertiary in favor of the mammals, greatly preponderated in the times of the Secondary in favor of the reptiles, and in the long vanished Palæozoic ages, in favor of the fishes. And so now, as before, these three great periods may be properly described as the periods of the fish, the reptile, and the mammal; nor do the late exceptional cases, in which traces of reptiles have been found among the Palæozoic fishes, or of mammals among the Secondary reptiles, interfere more with the justness of such designations than the existence in New Zealand of one small indigenous mammal of the rat family, among its some fifty or sixty ornithic species, interferes with the propriety of designating it a land of birds, or the existence among the some forty-six *pouched* species of Australia of a few mammals that are not pouched, with the propriety of designating it a land of marsupials. Let us be content, then, as geologists, to found our deductions, until our science shall have provided us with a new class of facts, on the facts which we already possess. No sooner were we introduced, through the discovery of his grace the Duke of Argyll, to a small Tertiary deposit in the island of Mull, than we found that it yielded in abundance leaves of the buckthorn and the plane. No sooner had our boulder clays and drift gravels begun