

of species, from a trifling difference of form. Molluscos animals, having no internal skeleton, appear to possess great power of adaptation, and of forming and renewing their shells, according to the circumstances in which they are placed. It therefore seems to be travelling far beyond the bounds of sober experience, to establish such sweeping generalizations, on the evidence of shells alone. Where other concurrent evidence can be adduced, either from the organic remains of plants or the higher classes of animals, the presence or absence of certain species of shells may serve conjointly, as distinctive characters of formations; we may farther admit, that the greater abundance of supposed species of shells, in any formation, analogous to existing species, implies that the conditions under which the strata were deposited, were analogous to the present condition of the globe whether all the shells designated as different species were really so or not.

Change of form, much greater than what exists in the coverings of many testaceous animals said to be of different species, may be observed to take place in the same species of mammiferous animals in different countries. The sheep of Africa, of Asia, and of Europe present great varieties of form; and even in Europe, the difference between one breed of sheep and another, in respect to form, size, or horns, is much greater than between the forms of many different species of shells. Let us suppose the race of sheep to be entirely destroyed in some future revolution of the globe, and the skins and horns alone to be preserved in a fossil state, without any portion of the skeleton or of the hoofs or teeth. The future geologist or naturalist would have as much reason to establish specific distinctions from the fossil skins, as the conchologist has to establish them from fossil shells. The external covering is all that can guide either of them; for of the animals themselves the conchologist knows nothing, absolutely nothing, that can serve for a specific character. The future dealer in fossils might establish forty species or more of the genus *Ovis*. Thus he would have his *Ovis maximus*, *O. medius*, *O. minimus*, *O. lanigerens*, *O. crinigerens*, *O. cornutus*, *O. bicornutus*, *O. quadricornutus*, *O. longicaudatus*, *O. pinguicaudatus*, *cum multis aliis*. Much ingenious and learned speculation would doubtless be expended, to prove the epochs in which each species flourished, and to determine the geological ages of the horned, and the fat-tailed sheep.

Few persons ever made more experiments, for a long series of years, on the change of form and other qualities of animals, that might be permanently produced, than the late Mr. Robert Bakewell, of Dishley in Leicestershire. I have heard him say, that he scarcely knew any assignable limits beyond which these changes, both external and internal, might not be carried. I am fully convinced that the Author of nature has established laws for the preservation of distinct classes and orders of animals; but be it ever remembered, that