

artificial and natural breeds; although in extreme cases the distinction is plain, in many other cases it is arbitrary; the difference depending chiefly on the kind of selection which has been applied. Artificial breeds are those which have been intentionally improved by man; they frequently have an unnatural appearance, and are especially liable to lose their characters through reversion and continued variability. The so-called natural breeds, on the other hand, are those which are found in semi-civilised countries, and which formerly inhabited separate districts in nearly all the European kingdoms. They have been rarely acted on by man's intentional selection; more frequently by unconscious selection, and partly by natural selection, for animals kept in semi-civilised countries have to provide largely for their own wants. Such natural breeds will also have been directly acted on by the differences, though slight, in the surrounding conditions.

There is a much more important distinction between our several breeds, namely, in some having originated from a strongly-marked or semi-monstrous deviation of structure, which, however, may subsequently have been augmented by selection; whilst others have been formed in so slow and insensible a manner, that if we could see their early progenitors we should hardly be able to say when or how the breed first arose. From the history of the racehorse, greyhound, gamecock, &c., and from their general appearance, we may feel nearly confident that they were formed by a slow process of improvement; and we know that this has been the case with the carrier-pigeon, as well as with some other pigeons. On the other hand, it is certain that the ancon and mauchamp breeds of sheep, and almost certain that the niata cattle, turnspit, and pug-dogs, jumper and frizzled fowls, short-faced tumbler pigeons, hook-billed ducks, &c., suddenly appeared in nearly the same state as we now see them. So it has been with many cultivated plants. The frequency of these cases is likely to lead to the false belief that natural species have often originated in the same abrupt manner. But we have no evidence of the appearance, or at least of the continued procreation, under nature, of abrupt