exercise of the faculty of discovering these often very minute differences of form. The shepherd, for example, knows every individual of his flock, solely by accurately observing their peculiarities, while the uninitiated are incapable of distinguishing at all the different individuals of one and the same flock.

This fact of *individual difference* is the extremely important foundation on which the whole of man's power of breeding rests. If individual differences did not exist everywhere, man would not be able to produce a number of different varieties or races from one and the same original stock. We must, at the outset, hold fast the principle that the phenomenon is universal; we must necessarily assume it even where, with the imperfect capabilities of our senses, we are unable to discover differences. Among the higher plants (the phanerogams, or flower-plants), where the individual stocks show such numerous differences in the number of branches or leaves, and in the formation of the stem and branches, we can almost always easily perceive these differences. But this is not the case in the lower plants, such as mosses, algæ, fungi, and in most animals, especially the lower ones. The distinction of all the individuals of one species is here, for the most part, extremely difficult or altogether impossible. But there is no reason for ascribing individual differences only to those organisms in which we can perceive them at once. We may, on the contrary, with full certainty assume such individuality as a universal quality of all organisms, and we can do this all the more surely since we are able to trace the mutability of individuals to the mechanical conditions of *nutrition*. By a mere change of nutrition we are able to produce