

"kind of an animal". Thus the horse is a different "kind" or species from a donkey, a bluebird from a robin. They are sharply marked off from each other, regularly breeding together within the species only and producing like species as offspring. Distinct species do not commonly interbreed, but, when they do so, they form crosses or hybrids that are usually sterile. Up to comparatively recent years no smaller division was recognized, but with intensive study of material it has become evident to advanced students that within the species there is considerable individual and geographic variation.

Individual variation is the natural difference that may occur at any time between members of common parentage such as amongst full brothers and sisters. Just as like begets like so within certain limits like begets unlike for no two creatures are ever exact duplicates. This is individual variation, usually small and irregular in appearance and direction, but sometimes persisting progressively generation after generation in one direction and forming the basis upon which present day evolutionists explain the origin of new species. Individual variation, however, is disregarded in classification, unless it has proceeded far enough to produce marked and constant differentiation over a definable natural group of a species.

Geographical variation can be regarded as the result of a common tendency of individual variation acting over a whole community of individuals tending towards a common goal and is held to be induced and directed by local climatic and other conditions. Thus we often find that within a widespread species all individuals inhabiting certain localities have characteristics that separate them from those of the surrounding areas. Individuals in a dry desert country are apt to be smaller and lighter in coloration, whereas those in a warm, moist country are usually larger and darker. These differences are sometimes marked and obvious; at other times they are so slight as to be noticeable only by comparison of large numbers of specimens and can be detected only by averages. Thus there is every degree of differentiation, due to geographical habitat, from pronounced departures from type, of almost specific value, to the finest shades of differentiation that skilled specialists can distinguish and which are inappreciable to the ordinary eye. The outstanding fact, however, that prevents the most marked geographical variation from full specific standing is that these minor forms intergrade and in intermediate localities every shade of differentiation between the extremes can be found. Between species this gradual merging of character is not supposed to occur, and however fine the distinctions may be, the divisions should be sharp and defined. We, therefore, recognize these intergrading variations due to or based upon geographical distribution as Geographical Races, Varieties, or Subspecies, the latter term being now in best current use, and we regard them as species in the making before the connecting stages binding them to the original stock have disappeared, owing to the growing sterility between the extreme variants. Except in such rare cases of physical isolation, as where an oceanic island habitat precludes continuous distribution, we take, in practice, the existence of intergrades as the evidence of subspecific status. Besides these divisions of taxonomic value there are a few other variants that, owing to their erratic occurrence, cannot be recognized in our classification. These are "Albinos," "Melanos," and "Dichromatic Forms."