

without entering here into a discussion respecting the possibility or practicability of setting aside this difficulty by introducing the consideration of the limited fertility of the progeny of individuals of different species, I will only remark, that as long as it is not proved that all the varieties of dogs, and of any others of our domesticated animals, and of our cultivated plants, are respectively derived from one unmixed species, and as long as doubts can be entertained respecting the common origin of all races of men from one common stock, it is not logical to admit that sexual connection resulting even in fertile offspring is a trustworthy evidence of specific identity.

To justify this assertion, I would only ask, where is the unprejudiced naturalist who in our days would dare to maintain: 1st, that it is proved that all the domesticated varieties of sheep, of goats, of bulls, of llamas, of horses, of dogs, of fowls, etc., are respectively derived from one common stock; 2d, that the supposition that these varieties have originated from the complete amalgamation of several primitively distinct species is out of the question; and 3d, that varieties imported from distant countries and not before brought together, such as the Shanghae fowl, for instance, do not completely mingle? Where is the physiologist who can conscientiously affirm that the limits of the fertility between distinct species are ascertained with sufficient accuracy to make it a test of specific identity? And who can say that the distinctive characters of fertile hybrids and of unmixed breeds are sufficiently obvious to enable anybody to point out the primitive features of all our domesticated animals, or of all our cultivated plants? As long as this cannot be done, as long as the common origin of all races of men, and of the different animals and plants mentioned above, is not proved, while their fertility with one another is a fact which has been daily demonstrated for thousands of years, as long as large numbers of animals are hermaphrodites, never requiring a connection with other individuals to multiply their species, as long as there are others which multiply in various ways without sexual intercourse, it is not justifiable to assume that those animals and plants are unmixed species, and that sexual fecundity is the criterion of specific identity. Moreover, this test can hardly ever have any practical value in most cases of the highest scientific interest. It is never resorted to, and, as far as I know, has never been applied with satisfactory results to settle any doubtful case. It has never assisted any anxious and conscientious naturalist in investigating the degree of relationship between closely allied animals or plants living in distant regions or in disconnected geographical areas. It will never contribute to the solution of any of those difficult cases of seeming difference or identity between extinct animals and plants found in different geological formations. In all critical cases, requiring the most minute accuracy and precision, it is discarded as unsafe, and of necessity questionable. Accurate science must do without it, and the sooner it is altogether discarded, the