

are at least now unknown. This double accident is so extremely improbable that the assumed existence of so many abnormal species would require to be supported by the strongest evidence. On the other hand, if all the races are descended from *C. livia*, we can understand, as will hereafter be more fully explained, how any slight deviation in structure which first appeared would continually be augmented by the preservation of the most strongly marked individuals; and as the power of selection would be applied according to man's fancy, and not for the bird's own good, the accumulated amount of deviation would certainly be of an abnormal nature in comparison with the structure of pigeons living in a state of nature.

I have already alluded to the remarkable fact that the characteristic differences between the chief domestic races are eminently variable; we see this plainly in the great difference in the number of the tail-feathers in the Fantail, in the development of the crop in Pouters, in the length of the beak in Tumblers, in the state of the wattle in Carriers, &c. If these characters are the result of successive variations added together by selection, we can understand why they should be so variable: for these are the very parts which have varied since the domestication of the pigeon, and therefore would be likely still to vary; these variations moreover have been recently, and are still being accumulated by man's selection; therefore they have not as yet become firmly fixed.

*Fifthly.*—All the domestic races pair readily together, and, what is equally important, their mongrel offspring are perfectly fertile. To ascertain this fact I made many experiments, which are given in the note below; and recently Mr. Tegetmeier has made similar experiments with the same result.<sup>19</sup> The accurate Neumeister asserts that when doves

<sup>19</sup> I have drawn out a long table of the various crosses made by fanciers between the several domestic breeds but I do not think it worth while publishing. I have myself made for this special purpose many crosses, and all were perfectly fertile. I have united in one bird five of the most distinct races, and with patience I might un-

doubtedly have thus united all. The case of five distinct breeds being blended together with unimpaired fertility is important, because Gärtner has shown that it is a very general, though not, as he thought, universal rule, that complex crosses between several species are excessively sterile. I have met with only two or three