

sacral and caudal vertebræ have been augmented in number; the sternum has likewise increased in length (but not in the depth of the crest) by $\cdot 4$ of an inch more than would follow from the greater bulk of the body in comparison with that of the rock-pigeon. In Fantails, the length and number of the caudal vertebræ have increased. Hence, during the gradual progress of variation and selection, the internal bony framework and the external shape of the body have been, to a certain extent, modified in a correlated manner.

Although the wings and tail often vary in length independently of each other, it is scarcely possible to doubt that they generally tend to become elongated or shortened in correlation. This is well seen in Jacobins, and still more plainly in Runts, some varieties of which have their wings and tail of great length, whilst others have both very short. With Jacobins, the remarkable length of the tail and wing-feathers is not a character which is intentionally selected by fanciers; but fanciers have been trying for centuries, at least since the year 1600, to increase the length of the reversed feathers on the neck, so that the hood may more completely enclose the head; and it may be suspected that the increased length of the wing and tail-feathers stand in correlation with the increased length of the neck-feathers. Short-faced Tumblers have short wings in nearly due proportion with the reduced size of their bodies; but it is remarkable, seeing that the number of the primary wing-feathers is a constant character in most birds, that these Tumblers generally have only nine instead of ten primaries. I have myself observed this in eight birds; and the Original Columbarian Society³⁷ reduced the standard for Bald-head Tumblers from ten to nine white flight-feathers, thinking it unfair that a bird which had only nine feathers should be disqualified for a prize because it had not ten *white* flight-feathers. On the other hand, in Carriers and Runts, which have large bodies and long wings, eleven primary feathers have occasionally been observed.

Mr. Tegetmeier has informed me of a curious and inexplicable case of correlation, namely, that young pigeons of all breeds which when mature become white, yellow, silver (*i.e.*, extremely pale blue), or dun-coloured, are born almost *naked*;

³⁷ J. M. Eaton's Treatise, edit. 1858, p. 78.