

lection of Pouters, the wings and tail varied greatly in length; and were sometimes so much elongated that the birds could hardly play upright. In the relative length of the few first primaries I have observed only a slight degree of variability. Mr. Brent informs me that he has observed the shape of the first feather to vary very slightly. But the variation in these latter points is extremely slight compared with the differences which may be observed in the natural species of the Columbidae.

In the beak I have seen very considerable differences in birds of the same breed, as in carefully bred Jacobins and Trumpeters. In *Carriers* there is often a conspicuous difference in the degree of attenuation and curvature of the beak. So it is indeed in many breeds: thus I had two strains of black Barbs, which evidently differed in the curvature of the upper mandible. In width of mouth I have found a great difference in two Swallows. In Fantails of first-rate merit I have seen some birds with much longer and thinner necks than in others. Other analogous facts could be given. We have seen that the oil-gland is aborted in all Fantails (with the exception of the sub-race from Java), and, I may add, so hereditary is this tendency to abortion, that some, although not all, of the mongrels which I reared from the Faintail and Pouter had no oil-gland; in one Swallow out of many which I have examined, and in two Nuns, there was no oil-gland.

The number of the scutellæ on the toes often varies in the same breed, and sometimes even differs on the two feet of the same individual; the Shetland rock-pigeon has fifteen on the middle, and six on the hinder toe; whereas I have seen a Runt with sixteen on the middle and eight on the hind toe; and a short-faced Tumbler with only twelve and five on these same toes. The rock-pigeon has no sensible amount of skin between its toes; but I possessed a Spot and a Nun with the skin extending for a space of a quarter of an inch from the fork, between the two *inner* toes. On the other hand, as will hereafter be more fully shown, pigeons with feathered feet very generally have the bases of their *outer* toes connected by skin. I had a red Tumbler, which had a coo unlike that of its fellows, approaching in tone to that of the Laugher: this bird had the habit, to a degree which I never saw equalled in any other pigeon, of often walking with its wings raised and arched in an elegant manner. I need say nothing on the great variability, in almost every breed, in size of body, in colour, in the feathering of the feet, and in the feathers on the back of the head being reversed. But I may mention a remarkable Tumbler²⁸ exhibited at the Crystal Palace, which had an irregular crest of feathers on its head; somewhat like the tuft on the head of the Polish fowl. Mr. Bult reared a hen Jacobin with the feathers on the thigh so long as to reach the ground, and a cock having, but in a lesser degree, the same peculiarity: from these two birds he bred others similarly characterised, which were exhibited

²⁸ Described and figured in the 'Poultry Chronicle,' vol. iii., 1855, p. 82.