

some bird inflated its crop a little more than other pigeons, as is now the case in a slight degree with the cesophagus of the Turbit. We do not know the origin of the common Tumbler, but we may suppose that a bird was born with some affection of the brain, leading it to make somersaults in the air;⁴⁶ and before the year 1600 pigeons remarkable for their diversified manner of flight were much valued in India, and by the order of the Emperor Akber Khan were sedulously trained and carefully matched.

In the foregoing cases we have supposed that a sudden variation, conspicuous enough to catch a fancier's eye, first appeared; but even this degree of abruptness in the process of variation is not necessary for the formation of a new breed. When the same kind of pigeon has been kept pure, and has been bred during a long period by two or more fanciers, slight differences in the strain can often be recognized. Thus I have seen first-rate Jacobins in one man's possession which certainly differed slightly in several characters from those kept by another. I possessed some excellent Barbs descended from a pair which had won a prize, and another lot descended from a stock formerly kept by that famous fancier Sir John Sebright, and these plainly differed in the form of the beak; but the differences were so slight that they could hardly be given by words. Again, the common English and Dutch Tumbler differ in a somewhat greater degree, both in length of beak and shape of head. What first caused these slight differences cannot be explained any more than why one man has a long nose and another a short one. In the strains long kept distinct by different fanciers, such differences are so common that they cannot be accounted for by the accident of the birds first chosen for breeding having been originally as different as they now are. The explanation no doubt lies in selection of a slightly different nature having been applied in each case; for no

⁴⁶ Mr. W. J. Moore gives a full account of the Ground Tumblers of India ('Indian Medical Gazette,' Jan. and Feb. 1873), and says the pricking the base of the brain, and giving hydrocyanic acid, together with strychnine,

to an ordinary pigeon, brings on convulsive movements exactly like those of a Tumbler. One pigeon, the brain of which had been pricked, completely recovered, and ever afterwards occasionally made somersaults.