

varied less than any other domesticated bird, except the peacock.

Bud-variation is, also, important under our present point of view. In some few cases, as when all the eyes on the same tuber of the potato, or all the fruit on the same plum-tree, or all the flowers on the same plant, have suddenly varied in the same manner, it might be argued that the variation had been definitely caused by some change in the conditions to which the plants had been exposed; yet, in other cases, such an admission is extremely difficult. As new characters sometimes appear by bud-variation, which do not occur in the parent-species or in any allied species, we may reject, at least in these cases, the idea that they are due to reversion. Now it is well worth while to reflect maturely on some striking case of bud-variation, for instance that of the peach. This tree has been cultivated by the million in various parts of the world, has been treated differently, grown on its own roots and grafted on various stocks, planted as a standard, trained against a wall, or under glass; yet each bud of each sub-variety keeps true to its kind. But occasionally, at long intervals of time, a tree in England, or under the widely different climate of Virginia, produces a single bud, and this yields a branch which ever afterwards bears nectarines. Nectarines differ, as every one knows, from peaches in their smoothness, size, and flavour; and the difference is so great that some botanists have maintained that they are specifically distinct. So permanent are the characters thus suddenly acquired, that a nectarine produced by bud-variation has propagated itself by seed. To guard against the supposition that there is some fundamental distinction between bud and seminal variation, it is well to bear in mind that nectarines have likewise been produced from the stone of the peach; and, reversely, peaches from the stone of the nectarine. Now is it possible to conceive external conditions more closely alike than those to which the buds on the same tree are exposed? Yet one bud alone, out of the many thousands borne by the same tree, has suddenly, without any apparent cause, produced a nectarine. But the case is even stronger than this, for the same flower-bud has yielded a fruit, one-