

provided with stamens, the tree requires artificial fertilisation; and the girls of St. Valery annually go to "*faire ses pommes*," each marking her own fruit with a ribbon; and as different pollen is used the fruit differs, and we here have an instance of the direct action of foreign pollen on the mother plant. These monstrous apples include, as we have seen, fourteen seed-cells; the pigeon-apple,⁹⁵ on the other hand, has only four, instead of, as with all common apples, five cells; and this certainly is a remarkable difference.

In the catalogue of apples published in 1842 by the Horticultural Society, 897 varieties are enumerated; but the differences between most of them are of comparatively little interest, as they are not strictly inherited. No one can raise, for instance, from the seed of the Ribston Pippin, a tree of the same kind; and it is said that the "Sister Ribston Pippin" was a white semi-transparent, sour-fleshed apple, or rather large crab.⁹⁶ Yet it was a mistake to suppose that with most varieties the characters are not to a certain extent inherited. In two lots of seedlings raised from two well-marked kinds, many worthless crab-like seedlings will appear, but it is now known that the two lots not only usually differ from each other, but resemble to a certain extent their parents. We see this indeed in the several sub-groups of Russetts, Sweetings, Codlins, Pearmain, Reinettes, &c.,⁹⁷ which are all believed, and many are known, to be descended from other varieties bearing the same names.

Pears (Pyrus communis).—I need say little on this fruit, which varies much in the wild state, and to an extraordinary degree when cultivated, in its fruit, flowers, and foliage. One of the most celebrated botanists in Europe, M. Decaisne, has carefully studied the many varieties;⁹⁸ although he formerly believed that they were derived from more than one species, he now thinks that all belong to one. He has arrived at this conclusion from finding in the several varieties a perfect gradation between the most extreme characters; so perfect is this gradation that he maintains it to be impossible to classify the varieties by any natural method. M. Decaisne raised many seedlings from four distinct kinds, and has carefully recorded the variations in each. Notwithstanding this extreme degree of variability, it is now positively known that many kinds reproduce by seed the leading characters of their race.⁹⁹

Strawberries (Fragaria).—This fruit is remarkable on account of the number of species which have been cultivated, and from

⁹⁵ 'Gardener's Chronicle,' 1849, p. 24.

⁹⁶ R. Thompson, in 'Gardener's Chron.,' 1850, p. 788.

⁹⁷ Sageret, 'Pomologie Physiologique,' 1830, p. 263. Downing's 'Fruit Trees,' pp. 130, 134, 139, &c. Loudon's 'Gardener's Mag.,' vol. viii. p. 317. Alexis Jordan, 'De l'Origine

des diverses Variétés,' in 'Mém. de l'Acad. Imp. de Lyon,' tom. ii., 1852, pp. 95, 114. 'Gardener's Chronicle,' 1850, pp. 774, 788.

⁹⁸ 'Comptes Rendus,' July 6th, 1863.

⁹⁹ 'Gardener's Chronicle,' 1856, p. 804; 1857, p. 820; 1862, p. 1195.