

On the segregation of the parental characters in seminal hybrids by bud-variation. — I will now give a sufficient number of cases to show that segregation of this kind, namely, by buds, may occur in ordinary hybrids raised from seed.

Hybrids were raised by Gärtner between *Tropaeolum minus* and *majus*¹¹⁶ which at first produced flowers intermediate in size, colour, and structure between their two parents; but later in the season some of these plants produced flowers in all respects like those of the mother-form, mingled with flowers still retaining the usual intermediate condition. A hybrid *Cereus* between *C. speciosissimus* and *phyllanthus*,¹¹⁷ plants which are widely different in appearance, produced for the first three years angular, five-sided stems, and then some flat stems like those of *C. phyllanthus*. Kölreuter also gives cases of hybrid *Lobelias* and *Verbascums*, which at first produced flowers of one colour, and later in the season, flowers of a different colour.¹¹⁸ Naudin¹¹⁹ raised forty hybrids from *Datura lævis* fertilised by *D. stramonium*; and three of these hybrids produced many capsules, of which a half, or quarter, or lesser segment was smooth and of small size, like the capsule of the pure *D. lævis*, the remaining part being spinose and of larger size, like the capsule of the pure *D. stramonium*: from one of these composite capsules, plants perfectly resembling both parent-forms were raised.

Turning now to varieties. A seedling apple, conjectured to be of crossed parentage, has been described in France,¹²⁰ which bears fruit with one half larger than the other, of a red colour, acid taste, and peculiar odour; the other side being greenish-yellow and very sweet: it is said scarcely ever to include perfectly developed seed. I suppose that this is not the same tree as that which Gaudichaud¹²¹ exhibited before the French institute, bearing on the same branch two distinct kinds of apples, one a *reinette rouge*, and the other like a *reinette canada jaunâtre*: this double-bearing variety can be propagated by grafts, and continues to produce both kinds; its origin is unknown. The Rev. J. D. La Touche sent me a coloured drawing of an apple which he brought from Canada, of which half, surrounding and including the whole of the calyx and the insertion of the foot-stalk, is green, the other half being brown and of the nature of the *pomme gris* apple, with the line of separation between the two

¹¹⁶ 'Bastarderzeugung,' s. 549. It is, however, doubtful whether these plants should be ranked as species or varieties.

¹¹⁷ Gärtner, *ibid.*, s. 550.

¹¹⁸ 'Journal de Physique,' tom. xxiii., 1873, p. 100. 'Act. Acad. St. Petersburg,' 1781, part i. p. 249.

¹¹⁹ 'Nouvelles Archives du Muséum,' tom. i. p. 49.

¹²⁰ L'Hermès, Jan. 14, 1837, quoted in Loudon's 'Gard. Mag.,' vol. xiii. p. 230.

¹²¹ 'Comptes Rendus,' tom. xxxiv., 1852, p. 746.