

occasionally occurs even with plants in a state of nature. Variegation, however, appears still more frequently in plants produced from seed; even the cotyledons or seed-leaves being thus affected.<sup>65</sup> There have been endless disputes whether variegation should be considered as a disease. In a future chapter we shall see that it is much influenced, both in the case of seedlings and of mature plants, by the nature of the soil. Plants which have become variegated as seedlings, generally transmit their character by seed to a large proportion of their progeny; and Mr. Salter has given me a list of eight genera in which this occurred.<sup>66</sup> Sir F. Pollock has given me more precise information: he sowed seed from a variegated plant of *Ballota nigra* which was found growing wild, and thirty per cent. of the seedlings were variegated; seed from these latter being sown, sixty per cent. came up variegated. When branches become variegated by bud-variation, and the variety is attempted to be propagated by seed, the seedlings are rarely variegated: Mr. Salter found this to be the case with plants belonging to eleven genera, in which the greater number of the seedlings proved to be green-leaved; yet a few were slightly variegated, or were quite white, but none were worth keeping. Variegated plants, whether originally produced from seeds or buds, can generally be propagated by budding, grafting, &c.; but all are apt to revert by bud-variation to their ordinary foliage. This tendency, however, differs much in the varieties of even the same species; for instance, the golden-striped variety of *Euonymus japonicus* "is very liable to run back to the green-leaved, while the silver-striped variety hardly ever changes."<sup>67</sup> I have seen a variety of the holly, with its leaves having a central yellow patch, which had everywhere partially reverted to the ordinary foliage, so that on the same small branch there were many twigs of both kinds. In the pelargonium, and in some other plants, variegation is generally accompanied by some degree of dwarfing, as is well exemplified in the "Dandy" pelargonium. When such dwarf varieties sport back by buds or suckers to the ordinary foliage, the dwarfed stature still remains.<sup>68</sup> It is remarkable that plants propagated from branches which have reverted from variegated to plain leaves<sup>69</sup> do not always (or never, as one observer asserts) perfectly resemble the original plain-leaved plant from which the variegated branch arose: it seems that a plant, in passing by bud-variation from plain leaves to variegated, and back again from variegated to plain, is generally in some degree affected so as to assume a slightly different aspect.

*Bud-variation by Suckers, Tubers, and Bulbs.*—All the cases hitherto given of bud-variation in fruits, flowers, leaves, and shoots, have been confined to buds on the stems or branches, with the

<sup>65</sup> 'Journal of Horticulture,' 1861, p. 336; Verlot, 'Des Variétés,' p. 76.

<sup>66</sup> See also Verlot, 'Des Variétés,' p. 74.

<sup>67</sup> 'Gard. Chron.,' 1844, p. 86.

<sup>68</sup> Ibid., 1861, p. 968.

<sup>69</sup> Ibid., 1861, p. 433; 'Cottage Gardener,' 1860, p. 2.