

sionally vary by layers; and some kinds are so little certain in character that they are called by floriculturists "catch-flowers."<sup>53</sup> Mr. Dickson has ably discussed the "running" of particoloured or striped carnations, and says it cannot be accounted for by the compost in which they are grown: "layers from the same clean flower would come part of them clean and part foul, even when subjected to precisely the same treatment; and frequently one flower alone appears influenced by the taint, the remainder coming perfectly clean."<sup>54</sup> This running of the parti-coloured flowers apparently is a case of reversion by buds to the original uniform tint of the species.

I will briefly mention some other cases of bud-variation to show how many plants belonging to many orders have varied in their flowers; and many others might be added. I have seen on a snapdragon (*Antirrhinum majus*) white, pink, and striped flowers on the same plant, and branches with striped flowers on a red-coloured variety. On a double stock (*Mathiola incana*) I have seen a branch bearing single flowers; and on a dingy-purple double variety of the wall-flower (*Cheiranthus cheiri*), a branch which had reverted to the ordinary copper colour. On other branches of the same plant, some flowers were exactly divided across the middle, one half being purple and the other coppery; but some of the smaller petals towards the centre of these same flowers were purple longitudinally streaked with coppery colour, or coppery streaked with purple. A Cyclamen<sup>55</sup> has been observed to bear white and pink flowers of two forms, the one resembling the Persicum strain, and the other the Coum strain. *Oenothera biennis* has been seen<sup>56</sup> bearing flowers of three different colours. The hybrid *G'adiolus colvillii* occasionally bears uniformly coloured flowers, and one case is recorded<sup>57</sup> of all the flowers on a plant thus changing colour. A Fuchsia has been seen<sup>58</sup> bearing two kinds of flowers. *Mirabilis jalapa* is eminently sportive, sometimes bearing on the same root pure red, yellow, and white flowers, and others striped with various combinations of these three colours.<sup>59</sup> The plants of the *Mirabilis*, which bear such extraordinarily variable flowers in most, probably in all, cases, owe their origin, as shown by Prof. Lecoq, to crosses between differently coloured varieties.

*Leaves and Shoots.*—Changes, through bud-variation, in fruits and flowers have hitherto been treated of; incidentally some remarkable modifications in the leaves and shoots of the rose and Paritium, and

<sup>53</sup> 'Gard. Chron.,' 1843, p. 135.

<sup>54</sup> *Ibid.*, 1842, p. 55.

<sup>55</sup> 'Gard. Chron.,' 1867, p. 235.

<sup>56</sup> Gärtner, 'Bastarderzeugung,' s. 305.

<sup>57</sup> Mr. D. Beaton, in 'Cottage Gardener,' 1860, p. 250.

<sup>58</sup> 'Gard. Chron.,' 1850, p. 536.

<sup>59</sup> Braun, 'Kay Soc. Bot. Mem.' 1853, p. 315; Hopkirk's 'Flora Anomala,' p. 164; Lecoq, 'Géograph. Bot. de l'Europe,' tom. iii., 1854, p. 405; and 'De la Fécondation,' 1862, p. 303.