

twenty-five years, became constant; and it does not appear that this resulted from the selection of the more constant forms.

On the Accumulative Action of changed Conditions of Life.—We have good grounds for believing that the influence of changed conditions accumulates, so that no effect is produced on a species until it has been exposed during several generations to continued cultivation or domestication. Universal experience shows us that when new flowers are first introduced into our gardens they do not vary; but ultimately all, with the rarest exceptions, vary to a greater or less extent. In a few cases the requisite number of generations, as well as the successive steps in the progress of variation, have been recorded, as in the often quoted instance of the Dahlia.²⁴ After several years' culture the Zinnia has only lately (1860) begun to vary in any great degree. "In the first seven or eight years of high cultivation, the Swan River daisy (*Brachycome iberidifolia*) kept to its original colour; it then varied into lilac and purple and other minor shades."²⁵ Analogous facts have been recorded with the Scotch rose. In discussing the variability of plants several experienced horticulturists have spoken to the same general effect. Mr. Salter²⁶ remarks, "Every one knows that the chief difficulty is in breaking through the original form and colour of the species, and every one will be on the look-out for any natural sport, either from seed or branch; that being once obtained, however trifling the change may be, the result depends upon himself." M. de Jonghe, who has had so much success in raising new varieties of pears and strawberries,²⁷ remarks with respect to the former, "There is another principle, namely, that the more a type has entered into a state of variation, the greater is its tendency to continue doing so; and the more it has varied from the original type, the

²⁴ Sabine, in 'Hort. Transact.,' vol. iii. p. 225; Bronn, 'Geschichte der Natur,' b. ii. s. 119.

²⁵ 'Journal of Horticulture,' 1861, p. 112; on Zinnia, 'Gardener's Chronicle,' 1860, p. 852.

²⁶ 'The Chrysanthemum, its History, &c.,' 1865, p. 3.

²⁷ 'Gardener's Chron.,' 1855, p. 54; 'Journal of Horticulture,' May 9, 1865, p. 363.