

in certain tropical countries.²³ The *Rhododendron ciliatum* produced at Kew flowers so much larger and paler-coloured than those which it bears on its native Himalayan mountain, that Dr. Hooker²⁴ would hardly have recognised the species by the flowers alone. Many similar facts with respect to the colour and size of flowers could be given.

The experiments of Vilmorin and Buckman on carrots and parsnips prove that abundant nutriment produces a definite and inheritable effect on the roots, with scarcely any change in other parts of the plant. Alum directly influences the colour of the flowers of the Hydrangea.²⁵ Dryness seems generally to favour the hairiness or villosity of plants. Gärtner found that hybrid Verbascums became extremely woolly when grown in pots. Mr. Masters, on the other hand, states that the *Opuntia leucotricha* "is well clothed with beautiful white hairs when grown in a damp heat, but in a dry heat exhibits none of this peculiarity."²⁶ Slight variations of many kinds, not worth specifying in detail, are retained only as long as plants are grown in certain soils, of which Sageret²⁷ gives some instances from his own experience. Odart, who insists strongly on the permanence of the varieties of the grape, admits²⁸ that some varieties, when grown under a different climate or treated differently, vary in a slight degree, as in the tint of the fruit and in the period of ripening. Some authors have denied that grafting causes even the slightest difference in the scion; but there is sufficient evidence that the fruit is sometimes slightly affected in size and flavour, the leaves in duration, and the flowers in appearance.²⁹

There can be no doubt, from the facts given in the first chapter, that European dogs deteriorate in India, not only in their instincts but in structure; but the changes which they undergo are of such a nature, that they may be partly due to reversion to a primitive form, as in the case of feral animals. In parts of India the turkey becomes reduced in size, "with the pendulous appendage over the beak enormously developed."³⁰ We have seen how soon the wild duck, when domesticated, loses its true character, from the effects of abundant or changed food, or from taking little exercise. From the direct action of a humid climate and poor pasture the horse rapidly decreases in size in the Falkland Islands. From information which

²³ Godron, 'De l'Espèce,' tom. ii. p. 52.

²⁴ 'Journal of Horticultural Soc.,' vol. vii., 1852, p. 117.

²⁵ 'Journal of Hort. Soc.,' vol. i. p. 160.

²⁶ See Lecoq, on the Villosity of Plants, 'Géograph. Bot.,' tom. iii. pp. 287, 291; Gärtner, 'Bastarderz.,' s. 261; Mr. Masters, on the *Opuntia*, in 'Gard. Chronicle,' 1846, p. 444.

²⁷ 'Pom. Phys.,' p. 136.

²⁸ 'Ampélographie,' 1849, p. 19.

²⁹ Gärtner, 'Bastarderz.,' s. 606, has collected nearly all recorded facts. Andrew Knight (in 'Transact. Hort. Soc.,' vol. ii. p. 160) goes so far as to maintain that few varieties are absolutely permanent in character when propagated by buds or grafts.

³⁰ Mr. Blyth, in 'Annals and Mag of Nat. Hist.,' vol. xx., 1847, p. 391.