

these cases the power of acclimatisation by man consists simply in the selection and preservation of new varieties. But without any direct intention on his part of securing a hardier variety, acclimatisation may be unconsciously effected by merely raising tender plants from seed, and by occasionally attempting their cultivation further and further northwards, as in the case of maize, the orange and the peach.

How much influence ought to be attributed to inherited habit or custom in the acclimatisation of animals and plants is a much more difficult question. In many cases natural selection can hardly have failed to have come into play and complicated the result. It is notorious that mountain sheep resist severe weather and storms of snow which would destroy lowland breeds; but then mountain sheep have been thus exposed from time immemorial, and all delicate individuals will have been destroyed, and the hardiest preserved. So with the Arrindy silk-moths of China and India; who can tell how far natural selection may have taken a share in the formation of the two races, which are now fitted for such widely different climates? It seems at first probable that the many fruit-trees which are so well fitted for the hot summers and cold winters of North America, in contrast with their poor success under our climate, have become adapted through habit; but when we reflect on the multitude of seedlings annually raised in that country, and that none would succeed unless born with a fitting constitution, it is possible that mere habit may have done nothing towards their acclimatisation. On the other hand, when we hear that Merino sheep, bred during no great number of generations at the Cape of Good Hope—that some European plants raised during only a few generations in the cooler parts of India, withstand the hotter parts of that country much better than the sheep or seeds imported directly from England, we must attribute some influence to habit. We are led to the same conclusion when we hear from Naudin <sup>78</sup> that the races of melons, squashes, and gourds, which have long been cultivated

<sup>78</sup> Quoted by Asa Gray, in 'Am. Journ. of Sci.,' 2nd series, Jan. 1865, p. 106.