

selection which we have seen is occasionally and unconsciously followed by man even during the rudest periods of history.

Let us now look to the action of natural selection on special characters. Although nature is difficult to resist, yet man often strives against her power, and sometimes with success. From the facts to be given, it will also be seen that natural selection would powerfully affect many of our domestic productions if left unprotected. This is a point of much interest, for we thus learn that differences apparently of very slight importance would certainly determine the survival of a form when forced to struggle for its own existence. It may have occurred to some naturalists, as it formerly did to me, that, though selection acting under natural conditions would determine the structure of all important organs, yet that it could not affect characters which are esteemed by us of little importance; but this is an error to which we are eminently liable, from our ignorance of what characters are of real value to each living creature.

When man attempts to make a breed with some serious defect in structure, or in the mutual relation of the several parts, he will partly or completely fail, or encounter much difficulty; he is in fact resisted by a form of natural selection. We have seen that an attempt was once made in Yorkshire to breed cattle with enormous buttocks, but the cows perished so often in bringing forth their calves, that the attempt had to be given up. In rearing short-faced tumblers, Mr. Eaton says,⁵ "I am convinced that better head and beak birds have perished in the shell than ever were hatched; the reason being that the amazingly short-faced bird cannot reach and break the shell with its beak, and so perishes." Here is a more curious case, in which natural selection comes into play only at long intervals of time: during ordinary seasons the Niata cattle can graze as well as others, but occasionally, as from 1827 to 1830, the plains of La Plata suffer from long-continued droughts and the pasture is burnt up; at such times common cattle and horses perish by the thousand, but many survive by browsing on twigs, reeds, &c.; this the

⁵ 'Treatise on the Almond Tumbler,' 1851, p. 33.