

domesticated quadrupeds can be distinguished from those of wild animals by the state of their surface and general appearance. It is scarcely possible to read Nathusius's excellent 'Vorstudien,'³⁸ and doubt that, with the highly improved races of the pig, abundant food has produced a conspicuous effect on the general form of the body, on the breadth of the head and face, and even on the teeth. Nathusius rests much on the case of a purely bred Berkshire pig, which when two months old became diseased in its digestive organs, and was preserved for observation until nineteen months old; at this age it had lost several characteristic features of the breed, and had acquired a long, narrow head, of large size relatively to its small body, and elongated legs. But in this case and in some others we ought not to assume that, because certain characters are lost, perhaps through reversion, under one course of treatment, therefore that they were at first directly produced by an opposite treatment.

In the case of the rabbit, which has become feral on the island of Porto Santo, we are at first strongly tempted to attribute the whole change—the greatly reduced size, the altered tints of the fur, and the loss of certain characteristic marks—to the definite action of the new conditions to which it has been exposed. But in all such cases we have to consider in addition the tendency to reversion to progenitors more or less remote, and the natural selection of the finest shades of difference.

The nature of the food sometimes either definitely induces certain peculiarities, or stands in some close relation with them. Pallas long ago asserted that the fat-tailed sheep of Siberia degenerate and lose their enormous tails when removed from certain saline pastures; and recently Erman³⁹ states that this occurs with the Kirgisian sheep when brought to Orenburgh.

It is well known that hemp-seed causes bullfinches and certain other birds to become black. Mr. Wallace has communicated to me some much more remarkable facts of the same nature. The natives of the Amazonian region feed the common green parrot (*Chrysotis festiva*, Linn.) with the fat of large Siluroid fishes, and the birds thus treated become beautifully variegated with red and yellow feathers. In the Malayan archipelago, the natives of Gilolo alter in an analogous manner the colours of another parrot, namely, the *Lorius garrulus*, Linn., and thus produce the *Lori rajah* or King-Lory. These parrots in the Malay Islands and South America, when fed by the natives on natural vegetable food, such as rice and plaintains, retain their proper colours. Mr. Wallace has, also, recorded⁴⁰ a still more singular fact. "The Indians (of S. America) " have a curious art by which they change the colours of the feathers " of many birds. They pluck out those from the part they wish to " paint, and inoculate the fresh wound with the milky secretion " from the skin of a small toad. The feathers grow of a brilliant

³⁸ 'Schwemeschädel,' 1864, s. 99.

³⁹ 'Travels in Siberia,' Eng. translat., vol. i. p. 228.

⁴⁰ A. R. Wallace, 'Travels on the Amazon and Rio Negro,' p. 294.