

which the projections were between three and four inches in length: other instances have occurred in Spain.

That there has been much inherited variation in the horse cannot be doubted, when we reflect on the number of the breeds existing throughout the world or even within the same country, and when we know that they have largely increased in number since the earliest known records.¹⁰ Even in so fleeting a character as colour, Hofacker¹¹ found that, out of 216 cases in which horses of the same colour were paired, only eleven pairs produced foals of a quite different colour. As Professor Low¹² has remarked, the English race-horse offers the best possible evidence of inheritance. The pedigree of a race-horse is of more value in judging of its probable success than its appearance: "King Herod" gained in prizes 201,505*l.* sterling, and begot 497 winners; "Eclipse" begot 334 winners.

Whether the whole amount of difference between the various breeds has arisen under domestication is doubtful. From the fertility of the most distinct breeds¹³ when crossed, naturalists have generally looked at all the breeds as having descended from a single species. Few will agree with Colonel H. Smith, who believes that they have descended from no less than five primitive and differently coloured stocks.¹⁴ But as several species and varieties of the horse existed¹⁵ during the later tertiary periods, and as Rütimeyer found differences in the size and form of the skull in the earliest known domesticated horses,¹⁶ we ought not to feel sure that all our breeds are descended from a single species.

¹⁰ Godron, 'De l'Espèce,' tom. i. p. 378.

¹¹ 'Ueber die Eigenschaften,' &c., 1828, s. 10.

¹² 'Domesticated Animals of the British Islands,' pp. 527, 532. In all the veterinary treatises and papers which I have read, the writers insist in the strongest terms on the inheritance by the horse of all good and bad tendencies and qualities. Perhaps the principle of inheritance is not really stronger in the horse than in any other animal; but, from its value, the

tendency has been more carefully observed.

¹³ Andrew Knight crossed breeds so different in size as a dray-horse and Norwegian pony: see A. Walker on 'Intermarriage,' 1838, p. 205.

¹⁴ 'Nat. Library, Horses,' vol. xii. p. 208.

¹⁵ Gervais, 'Hist. Nat. Mamm.,' tom. ii. p. 143. Owen, 'British Fossil Mammals,' p. 383.

¹⁶ 'Kenntniss der fossilen Pferde,' 1863, s. 131.