

possess their own sub-breeds; ³⁴ and these again differ from the cattle of the other British islands, such as Anglesea, and the western isles of Scotland. Desmarest, who paid attention to the subject, describes 15 French races, excluding sub-varieties and those imported from other countries. In other parts of Europe there are several distinct races, such as the pale-coloured Hungarian cattle, with their light and free step, and enormous horns sometimes measuring above five feet from tip to tip: ³⁵ the Podolian cattle also are remarkable from the height of their fore-quarters. In the most recent work on Cattle, ³⁶ engravings are given of fifty-five European breeds; it is, however, probable that several of these differ very little from each other, or are merely synonyms. It must not be supposed that numerous breeds of cattle exist only in long-civilized countries, for we shall presently see that several kinds are kept by the savages of Southern Africa.

With respect to the parentage of the several European breeds, we already know much from Nilsson's Memoir, ³⁷ and more especially from Rütimeyer's works and those of Boyd Dawkins. Two or three species or forms of *Bos*, closely allied to still living domestic races, have been found in the more recent tertiary deposits or amongst prehistoric remains in Europe. Following Rütimeyer, we have:—

Bos primigenius.—This magnificent, well known species was domesticated in Switzerland during the Neolithic period; even at this early period it varied a little, having apparently been crossed with other races. Some of the larger races on the Continent, as the Friesland, &c., and the Pembroke race in England, closely resemble in essential structure *B. primigenius*, and no doubt are its descendants. This is likewise the opinion of Nilsson. *Bos primigenius* existed as a wild animal in Cæsar's time, and is now semi-wild, though much degenerated in size, in the park of Chillingham; for I am informed by Professor Rütimeyer, to whom Lord Tankerville sent a skull, that the Chillingham cattle are less altered from the true *primigenius* type than any other known breed. ³⁸

³⁴ Mr. H. E. Marquand, in 'The Times,' June 23rd, 1856.

³⁵ Vasey, 'Delineations of the Ox-Tribe,' p. 124. Brace's 'Hungary,' 1851, p. 94. The Hungarian cattle descend, according to Rütimeyer ('Zahmen Europ. Rindes,' 1866, s. 13 from *Bos primigenius*.

³⁶ Moll and Gayot, 'La Connais-

sance Gén. du Bœuf,' Paris, 1860. Fig. 82 is that of the Podolian breed.

³⁷ A translation appeared in three parts in the 'Annals and Mag. of Nat. Hist.,' 2nd series, vol. iv., 1849.

³⁸ See, also, Rütimeyer's 'Beiträge pal. Gesch. der Wiederkäuer' Basel, 1865, s. 54.