

England under the most favourable auspices, and placed at once under the fostering protection of royalty, their native merits could not but be speedily appreciated and diffused throughout the kingdom. They have received the name of Merino from a peculiar buff or reddish hue of the countenance, and are supposed to have come originally from Africa; at least Marcus Columella, having seen a strange variety from that country exhibited at Rome, during some public games or shows, took them to his farm, and, having crossed them with the breeds of Tarentum, sent the offspring to Spain. There they thrived remarkably, attracting the attention of other nations, to whom they were from time to time exported, and at present may be found in almost every part of the world.

Merinos were brought to England for the first time in 1783, but attracted little attention, owing to the want of rains. Lord Somerville went to Portugal in 1801, for the purpose of selecting such animals as appeared valuable, from uniting a good carcass with a superior fleece, and he succeeded, notwithstanding the disturbed state of the country, in obtaining specimens, which called forth the praises of the shepherds, through whose travelling flocks they passed. Public attention was attracted to them on the commencement of his Majesty's sales in 1804; and their distribution over the country was accomplished in 1811, by the formation of the principal landed proprietors and eminent breeders into a Merino Society.

The Merinos had much prejudice to encounter on being first brought before the public in 1804; but they soon rose in favour and value, and steadily progressed till the Merino Society was established, when, strange though it may appear, all these advantages were at once destroyed. This paradox may, perhaps, be explained, by supposing that the institution of local committees, which immediately followed, allowed the enemies of the change, in distant parts of the kingdom, ample opportunity of striking at the scheme, now that it was entrusted, in many instances, to persons ill-qualified for the task either of making converts, or retaining the advantages already gained.

The horns of the Merino are of large size, twisted spirally and extended laterally, approaching closely to these characters to the sheep of Mount Parnassus, a specimen of which is delineated in the work by E. T. Bennett, on the Gardens and Menagerie of Zoological Society. The face has a characteristic velvety appearance, but the cheeks and forehead are disfigured by coarse hair. The legs are long and small in the bone; the breast and back are narrow, the sides flat, and too much of the weight is expended in the coarser parts. There is a peculiar looseness of skin beneath the throat, which is admired in Spain as denoting a tendency to weight and fineness of wool, though regarded in this country as a sign of a bad skin and want of aptitude to fatten. The average weight of the fleece in Spain is, 8 lbs. from the ram, and 5 lbs. from the ewe. The abundance of the yolk enables the wool to retain all the filth which comes in contact with it, so much so, that by washing the weight is diminished about three-fifths. The fibre of the wool is finer than that of any other sheep, and the carcass, when fat, averages from 12 lbs. to 16 lbs. a quarter. They are quiet and tractable, and possessed of many good qualities, but they are liable to abortion, are bad nurses, and require a large supply of food, for which, owing to an unprofitable form, they yield no return.

The Merinos were at one time in great request in various countries, from a supposition that they would speedily supplant

other breeds; but this has never been the case, as the animal soon degenerates when out of Spain, and is only valuable so far as giving rise to varieties, which are equal, if not superior to itself. Large profits were at first expected from their wool, but these were reduced to a trifle when the loss of weight, and fineness in the carcass were taken into account. Mr. Hose of Melton Mowbray, put a certain number of Leicester ewes to a ram of the same breed, and an equal number to a Merino ram. The result was, that the Leicester fleece weighed 7 lbs. and the one from the cross with the Merino, 8 lbs.; and that the former brought in the market 1s. per lb., and the latter 1s. 6d., being a gain of 5s. on the fleece. The carcass of the former, however, weighed 27 lbs. per quarter, and the latter only 25 lbs., being a loss of 5 lbs. on mutton. Much advantage may, however, be expected from our crosses with the Saxon Marino, which is in every respect well suited to our notions of a fine animal, as it yields a good wool, and is little inferior in carcass to some of our best breeds.

(17). *Teeth of Sheep*.—In common with the rest of the ruminating animals, sheep have eight incisors in the lower jaw, unopposed by any in the upper, a callous pad, which is substituted, being attached to the distal end of the intermaxillary bones. Between the incisors and molars, or grinding teeth, there is a vacant space of about an inch and a half. There are twenty-four molars, six on each side of each jaw; their crowns are marked with two double crescents, the convexity of which is turned inwards in the upper, and outwards in the lower jaw. The lamb, when newly dropped, is devoid of incisor teeth, though the two central ones are occasionally above the gum at this early period. When one month old, the first set of incisive teeth are complete. The two fore-teeth of the under jaw drop out at the end of the first year; six months after the two next to these are lost; and at the end of five years the teeth are all renewed. When the permanent teeth are fully grown, it is almost impossible to ascertain the age of the animal, as the soil, the texture of the provender, and the original form of the teeth, have all a greater or less influence over their durability.

(18). *Distinctions between the Sheep and Goat*.—Though a comparison of the most common domesticated breeds of sheep and goats, tends to confirm the broad distinctions drawn between them, yet these differences almost entirely disappear, when we attempt to define the characteristics of these races, which still exist in a wild state in various parts of both Continents, where it is so far impossible to determine the precise division to which they belong, that Cuvier holds them unworthy of a generic separation. Sheep and goats, in fact, agree in so many points as regards structure, form, stature, and habit, that were it not that sheep, according to that naturalist, have "their horns directed backwards, running more or less forwards in a spiral manner, with a generally convex line of profile, and no beard," while the goats have "their horns directed upwards and backwards, their chins generally decorated with a long beard, and their line of profile almost always concave," there would hardly exist a difference worth the noting. Some writers place great reliance on the differences indicated by the different coverings of the animals, ascribing wool to the sheep, and hair to the goat, forgetting that most of the wild sheep, and some of the domesticated races, are covered with hair, while some goats, as those of Thibet and Angora, are remarkable for the fineness of their wool. Even supposing these distinctions to hold good, we have still to combat

the fact, that sheep and goats produce mongrels capable of reproduction, a consideration sufficient of itself to prove, that the sheep and goat can never be made to form the types of separate genera.*

(19). *Horns of Sheep*.—As the Chevroians or Musks are distinguished, with the Camels, from other animals of this order by the absence of horns, so are sheep, oxen, goats, and antelopes, distinguished from the rest of the horned genera of the order, by the persistence of their frontal prolongations. The horn is an elastic sheath of *agglutinated hairs*, which appears within the first twelve months, though sometimes present at birth, and increases by layers, one being added every year, so that the age of a ram may be known by the number of rings.—The ewes have commonly no horns, but only a protuberance in place of them. The horn is supported by, and serves to cover, a highly vascular prolongation of the frontal bone, and it is at its root, where large vessels, and nervous filaments are entering, that blows occasion so great agony to the animal, apart from the damage which the other bones sustain by the infliction of violence on so powerful a lever.

(20). *Structure of the Stomach*.—The term ruminating, indicates the power possessed by this animal, in common with many others, of masticating its food a second time, by returning it to the mouth after a short maceration. This they are enabled to do, from the structure of the stomachs, or, more correctly speaking, stomach; as anatomists have now concluded, from all animals being constructed on one common principle, that ruminating animals are not possessed of four stomachs, as formerly supposed, but only of one, which they view as being divided into four compartments. In drawing precise conclusions, we are bound only to admit the existence of two compartments, the other two belonging properly to the gullet; and being equivalent to the cheek pouches of monkeys, or the crop and membranous stomach of birds, may be viewed as an apparatus designed to serve a nearly similar purpose (that of moistening and macerating the food); while the real stomach will cease to excite wonder, or puzzle the ignorant, on being contrasted with that of other animals, in many of which a division exists, and from which even the human stomach, though generally a single sac, is not always exempt.—Dr. Knox, of Edinburgh, being in possession of one that resembles a pair of small globes joined by a narrow tube, and which, when taken from the body of a person who was advanced in life, bore every mark of soundness in texture, and must, therefore, have been congenial.

(21). *Digestion*.—The food descends by the gullet, after being partially crushed, into what is called the first stomach, or paunch, in Latin, *rumen*, or *ingluvies*, in which cavity are found those morbid concretions so much, and so superstitiously, prized in the Eastern world, under the name of Bezoar stones; from this it passes into the second, termed bonnet, king's hood, or honey-comb, in Latin *reticulum*, which is much smaller than the other, and receives its name from the inner coat being arranged into cells; here it is moistened, made into pellets, and, while the animal is at rest, impelled by the antiperistaltic motion of the tube to the mouth, and after undergoing a complete mastication, is returned through the gullet to the third stomach, or smallest

* For further information on this subject, see that excellent paper on the Natural History of the Sheep and Goat, by James Wilson, Esq., in No. IX. of the Quarterly Journal of Agriculture.