SHEEP (Ovis), a genus of ruminant quadrupeds of the family Capridæ, so nearly allied to goats that the propriety of generic distinction is very doubtful. They differ from goats in having the outline of the face more or less arched and convex; the horns spiral, sometimes very large in the males—in domestication, however, often wanting in the females, and also in the males of some breeds; the chin destitute of a beard; a sac or pit between the toes of each foot, lined with hair, and secreting a fatty matter. It is supposed by some that all the wild sheep existing in different parts of the world are mere varieties of one species, but of this there is no sufficient proof, nor is there anything more than unsupported conjecture in any of the opinions advanced concerning the origin of the domestic sheep, such, for example, as that which refers it to the Moufflon (q. v.), or that which ascribes different domesticated breeds to different wild originals, as the Moufflon

and the Argali (q. v.).

All the wild sheep known are natives either of mountainous regions or of dry and elevated tablelands. They are gregarious, a character which the domesticated sheep fully retains. They are generally seen in small flocks, and are not easily approached, taking refuge in flight, a sharp whistling sound, emitted by one of the rams, serving as an alarm to the whole flock; although they are very capable of making a vigorous defence when driven to close combat. A ram of the domestic species is, indeed, able to sustain a conflict with a bull, taking advantage of his far greater agility, and butting against his foe with his strongly armed forehead. A ram has been known to throw a bull on the ground at the first onset, and is always ready to defend himself and his companions against a dog. Many rams exhibit great pugnacity. Sheep differ from goats in their mode of fighting. Goats rear themselves on their hind-legs, and throw themselves sideways on their adversary, to bring the points of their horns to bear. Sheep rush straight at each other, a mode which better suits the different style of armature of the head. Rams of the blackfaced variety are especially powerful with their heads, and often at the rutting season kill each other. Their naturally strong skull is considerably protected in battle by heavy arched horns. A thorough ram fight is a terrifying sight. The two warriors go backwards each some fifteen or twenty yards, and then meet each other with great violence, their heads cracking loudly, and their beam-ends rising in response to the collision of heads. Ewes of this breed fight also. Sheep without horns are not so pugnacious as the mountain breeds.

Pugnacious as the mountain precus.

All the wild sheep have short wool, with an outer clothing of long and nearly straight hair. But even the long hair—at least on the Moufflon—has the peculiar character of wool, in that roughness of surface which gives it the property of felling (see HAIR and Fell). One effect of domestication in the common sheep has been to cause the disappearance of the outer long hair, and to produce instead an increase of the length and abundance of the wool, an object of great importance to the sheep-farmer. In neglected breeds of the common sheep, the two kinds of hair or wool are very apparent. In some tropical climates, the sheep loses its abundant fleece,

and is covered with hair little longer than that of

Although not equal to goats in their adaptation to rocky steeps, and not endowed with such power of leaping from crag to crag, most breeds of sheep exhibit a strong disposition to seek their food in places where no animal not very agile and sure-footed could venture; and those of the domesticated breeds which retain much of their original wildness are thus adapted to situations in which otherwise the pasture would be of little value to man. Every one who has seen the lambs frisking on a Highland hill, in a fine evening, must have admired their nimble movements in places where a herd-boy could with difficulty scramble. In fine weather, sheep ascend the heights; and in cold and stormy weather, they repair to the lower grounds. In modern times it has been customary to remove the large flocks from mountainous regions to lower grounds to pass the winter; and in the fall of the year, shepherds have difficulty in preventing the animals from leaving the summer pastures too early if the weather is unfavourable. On the other hand, if fine spring weather sets in before the period of removal from the winter quarters, the flocks keep pressing towards the summering regions. Mountain sheep have favoured spots whither they go regularly over-night, and the ewes generally have choice localities to which they go to lamb. They get much attached to certain pastures, and many of them have been known to return stealthily, in the course of a few days, to their native or appreciated pastures, though removed some hundreds of miles.

A very interesting species of the wild sheep is the ROCKY MOUNTAIN SHEEP, or BIG-HORN (O. montana), of North America. It is equal in size to



Rocky Mountain Sheep.

the argali, which it much resembles also in its general appearance, and in the size and curvature of its horns. The horns of the old rams attain so great a size, and are so much curved downwards and forwards, that they often effectually prevent the animal from feeding on level ground. The abode of this species is in the most craggy and inaccessible parts of the Rocky Mountains. The flesh is of the very finest quality. The wool is very fine, and fully an inch and a half long; it is completely concealed by long hairs. The general colour is brown, paler on the lower parts; the old rams are almost white in spring. The AOUDAD (O. are almost white in spring. The AOUDAD (O. tragelaphus) is a native of the north of Africa, inhabiting chiefly the lofty parts of the Atlas Mountains. It is sometimes called the Bearded Argali, although it has no beard on the chin; but

are remarkably adorned with long shaggy hair. On other parts the hair is comparatively short, with an underclothing of short wool. The colour is a uniform reddish-yellow. The tail is longer than in the other wild species, and is terminated by a kind of tuft of long hairs. The horns are not so large as in the other wild species. In size, the Aoudad exceeds the Moufflon, but is not equal to the Argali. The French call it Moufflon a mouchettes, or Ruffled

Monfflon, from the long hair of its forelegs.

The Common Sheer (O. aries) was probably the first animal domesticated by man. We are told in the book of Genesis that Abel was 'a keeper of sheep,' and that he brought an offering unto the Lord 'of the firstlings of his flock and of the fat thereof.' And from that time until the death of Christ, lambs continued to be the most frequent sacrificial offerings, both amongst the patriarchs and the Jews. The felting and weaving of wool were unquestionably among the earliest of the arts. The wool was probably at first pulled from the skin, a rude and even cruel practice, which it is said still subsists in some countries, and was not very long ago relinquished in the Orkney Islands. We read in Genesis xxxviii. of Judah shearing his sheep, and there is abundance of other evidence that the better mode of obtaining the fleece has been in use from remote antiquity. The leather made of the skin of the sheep is much employed in bookbinding, and for making gloves. In patriarchal times, the milk was much used, as it still is in some countries; it is richer than cow's milk, and the cheese made of it has a sharp taste and strong flavour, which, however, are greatly relished by some. In Britain the milk is now very little used. In some mountainous parts of India the sheep is even used as a beast of burden, carrying loads of from 35 to 40 pounds, over rough tracks, and up steep crags, where almost no other animal could be employed.

Those who watch sheep carefully, or keep them as pets, find them by no means devoid of intelligence. They have, however, a stupid habit of following, without scruple, the leader of the flock; so that they show that the strength of the flock is a strength of the strength that, when sheep are being driven across a narrow bridge, or where a fence separates the road from a precipice, if anything occur to deter them from proceeding in the proper path, and one break over the fence or parapet, more of the flock may be expected to follow, as has sometimes happened, to their utter destruction. Sheep very soon come to know the voice of the shepherd, and also the appearance as well as the bark of the shepherd's dog. Though they stand more in awe of the shepherd's voice or commands than of any other human being's, the dogs regularly moving amongst them fail to keep them in such subjection as strange ones do.

The 'rutting' is from September till the middle of December, according to the variety of sheep, and the system of feeding. White-faced modern breeds have the tups early among them, and the hill flocks are later. The period of gestation is from 20 to Ewes occupying sown or low-ground 21 weeks. pastures lamb in March, while those not so well provided for—the mountain sheep—do not drop their lambs usually till April. The ancient breeds generally have only one lamb in a season, but modern highly-fed varieties frequently have twins, occasionally triplets, but rarely more. Lambs intended to come early into the market are as often as possible dropped in January. Generally lambs are weaned in July and August. Weaning of breeding or store lambs, however, is a feature of modern sheep-farming; at one time it was not uncommon to see Mountains. It is sometimes called the Bearded Argali, although it has no beard on the chin; but the throat, the chest, and the front of the forelegs 662

description of sheep, the nature of the feeding, &c. Autumn is the most common time for the 'dipping,' 'juicing,' or 'smearing' of the flocks, to kill vermin, prevent skin disease, and preserve and cultivate the wool crop.

The great object for which the ancient Britons possessed sheep before the Roman invasion was the production of wool. The demand for butcher-meat has now raised the value of mutton and lamb so much, that the farmer finds it profitable to devote much of his attention to supply the market with these articles; and those breeds of sheep are reckoned most valuable which are most suitable for this purpose, even although the quality of the wool is inferior. When there was no food for sheep but the natural pasture, the animals could not be fattened for the market except during summer, and not until they had attained an age of three, four, or five years; whereas much of the mutton now consumed is the flesh of sheep not more than two years old, fattening being aided by turnips, mangold,

The young branches of heath, and in lower situations, the shoots of furze, often serve as food for sheep, when the supply of grass fails. Sheep delight in the short grass and peculiar herbage of hill pastures and bare downs; and the mutton produced in such pastures, and by the breeds most suitable to them, is of superior quality to that of the large fat sheep fed on richer soils. The latter are also more liable to many diseases, particularly where the ground is at all moist. Aromatic and bitter herbs are particularly relished by sheep.

The breeds of sheep are very numerous, and very different.—The BLACK-FACED SHEEP of the Highlands of Scotland and of the north of England is perhaps as near the original type as any existing



Black-faced Ewe and Ram.

breed. Both male and female have horns; those of the ram large, with two or more spiral twists, those of the ewe much smaller, and little twisted. The face and legs are not always black. Many are speckled, The Black-faced and some principally white. sheep is robust, very active, and hardy; enduring the rigours of a severe winter when sheep of most of the breeds common in Britain would perish. It survives on little food, and shifts admirably for itself in a snow-storm. The small quantity, and even inferior quality of food with which a Blackfaced sheep will tide over a snow-storm, is most surprising. As an instance of the tenacity of life in Black-faced sheep, under certain circumstances,

a bright, quick eye, with an expression very different from that softness which is seen in many of the breeds preferred for lower grounds and better pastures. The wool is long and coarse, and the pastures. The wool is long and coarse, and the weight of the fleece from three pounds to four pounds; but the mutton is of the finest quality; and on this account, and its hardiness, this breed is preferred to any other in many mountainous districts and on rough elevated moors.—The Welsh Sheep is much smaller than the Black-faced; both sexes horned; smaller than the Black-laced; both sexes norned; the colour various; the mutton highly esteemed; the fleece seldom weighs two pounds.—A very little larger breed with big bushy tail, hornless, or with short and little twisted horns, has long existed in the Shetland and Orkney Islands; its wool affording the material for the manufacture of Shetland hose. The Shetland and Orkney sheep are very hardy, and in winter feed much or seawed.—Smeller than either of these much on seaweed.—Smaller than either of these, and, indeed, remarkably diminutive, is the hornless Breton Sheep.—The Forest Sheep of England, so called from being pastured in the royal forests, has now in most places been supplanted by other breeds. They are still to be seen on the barren grounds between the British and Bristol Channels; and the mutton is in much request in the London market. The original Forest Sheep was generally small, with face and legs russet brown or gray, wild, restless, and difficult to fatten, but producing wool of fine quality.—The DORSET SHEEP is one of the best of the old English upland breeds. Both sexes have small horns. The wool and mutton are of medium quality; but the ewes are remarkable for their fecundity, and the abundance of their milk; and this breed is valued as affording a supply of early lamb for the London market.—The RYELAND SHEEP has long existed in Herefordshire and some neighbouring counties of England. It is small, short-limbed, white, hornless; produces excellent mutton; and before the introduction of Merino wool, its wool was preferred to every other kind for the manufacture of the finest broadcloths.—The CHEVIOT SHEEP has existed from time immemorial on the Cheviot Hills, and is now very widely diffused over a considerable part of England and almost all parts of Scotland, being hardy and well adapted for high grounds, although it is inferior in hardiness to the Black-faced. Cheviots, however, rather excel the Black-faced both in size and in the value of the fleece; but require a richer pasture. Ewes are hornless, and the rams almost The general figure is longer than that of the so. The general figure is longer than that of the Black-faced sheep. They are narrow in shape, with slender forequarters and long pricked ears. The colour is white, the face and legs occasionally mottled with gray, but generally quite white. The fleece weighs from three to five pounds. Great attention has for many years been devoted to the improvement of this breed.—The LEGESTER SHEEP is another of the most valuable breeds. This breed, as it now exists, is a result of the skill and care of Mr Bakewell, who, soon after the middle of last century, began to make experiments for the improvement of the old Leicester sheep—a large, coarse-boned sheep, not easily fattened, and with coarse long wool, of which, however, the fleece weighed from eight to ten pounds. The new Leicester sheep has wool moderately long, of better quality, the average weight of the fleece being about fatally, the average weight of the freeze being about seven or eight pounds; and is easily rendered very fat. It is naturally very broad on the back, with finely arched ribs. The colour is white. Both sexes are hornless. The Leicester sheep is now common in all but the mountainous parts of Britain, and other they have been known to be buried five weeks breeds have been improved by crossing with it, under a snow-wreath and come out alive. It has particularly various breeds of long-woolled sheep,

which have long existed in different parts of England, as those of Lincolnshire, Romney Marsh, &c. A famous long-woolled breed is that called the COTSWOLD or GLOUCESTER, the wool of which was in great esteem in the 14th and 15th centuries, bearing a higher price than any other wool. In 1464, Edward IV. sent a present of Cotswold rams to Henry of Castile; and in 1468 a similar present was sent to John of Aragon. The Cotswold breed, however, as it at present exists, has been modified by crossing with the Leicester, and produces shorter wool and better mutton than in former times.-The wool and better mutton than in former times.—The South Down Sheep has recently been improved with the utmost care. The colour is generally white, and the face and legs are generally dun, black, or speckled. Both sexes are hornless. The wool is short, very close, and curled. The South Down derives its origin and name from the chalky downs of the south of England; but is now met with throughout England and the south of Scotland. The Shropshire sheep are large, with thick wool something like the South Down. They are hornless, and black or dun in the face and legs. They come early to maturity, but are suited only for finer climates and good keep. The Oxford Down is a heavy, somewhat soft sheep, without horns, and capable of rapid and great development under good treatment. It is not suited to very cold and exposed situations.

The ICELAND SHEEP is remarkable for very frequently having three, four, or five horns. They are good butchers' animals, being deep and thick in the carcase, though rather short in the quarter. The same peculiarity, or montrosity, as it may be deemed, is exhibited by the sheep of some of the most northern parts of Russia.—The north of Africa possesses a breed of sheep with legs of great length, pendulous ears, and much arched face; the wool short and curled, except on the neck and shoulders, which have a kind of mane.—India has also a hornless breed, with pendulous ears, short tail, and very fine much curled wool.—The BROAD-TAILED or FAT-TAILED SHEEP is found in many parts of Asia, as in Syria, India, and China, also in Barbary, and is now very abundant in the colony of the Cape of Good Hope. It is rather of small size, with soft and short wool. Its chief characteristic is the enormous development of the tail, by the accumulation of a mass of fat on each side, so great that the tail has been known to weigh 70 or 80 pounds. The tail is highly esteemed as a delicacy, and to protect it from being injured by dragging on the ground, the shepherd sometimes attaches a board to it, or even a small carriage with wheels. The fat of the tail is often used instead of butter. It is less solid than other fat.—The FAT-RUMPED SHEEP of Southern Tartary has a similar accumulation of fat on the rump, falling down in two great masses behind, and often entirely concealing the short tail.—The ASTRAKHAN OF BUCHARIAN SHEEP has the wool twisted in spiral curls, and of very fine quality. The Circassian sheep has a remarkably long tail, covered with fine long wool, which trails on the ground.—The WALLACHIAN SHEEP, common in Hungary, as well as in the country from which it derives its name, is distinguished by the magnitude of its horns, and their direction. They make one great spiral turn, and then generally rise up from the head to a great height, twisting round as they rise. The wool is soft, and is concealed by long hair.