

*On a new Variety in the Breeds of Sheep.* By Colonel David Humphreys, F.R.S. In a Letter to the Right Hon. Sir Joseph Banks, Bart. K.B. P.R.S. Read January 14, 1813. [*Phil. Trans.* 1813, p. 88.]

The breed here described by Col. Humphreys, first occurred as an accidental variety in the State of Massachusetts, about sixteen miles distant from Boston, in the year 1791; a lamb was produced, having a singular appearance, from the shortness of its legs; and by some chance rather than by any particular design, was reserved for breeding. In the first season only two lambs were yeaned, resembling the father; but in subsequent years several more were produced, having the same peculiarities; and a breed was thence established, which, from the shortness of their legs, and comparative length of back, were at first called the Otter breed; but from a surgeon who afterwards dissected one of them, they were called Ancon, from the elbow-like crookedness of the fore-leg.

Experiments in crossing have in very few instances mixed the qualities of this breed with those of others; but the singularity of form is so far established, that when both parents are of the true otter or ancon breed, the descendants inherit, almost without exception, their peculiar appearance and properties of form.

When an ancon ewe is impregnated by a common ram, the progeny resembles wholly either the ewe or the ram; and the same is the consequence of breeding from the common ewe with an ancon ram.

The most obvious difference between the young of this and of other breeds, consists in the shortness and crookedness of their legs, by which, as well as by some general debility of constitution, they become cripples as they advance in age. The contrast is very striking when a common ewe has twins by an ancon ram, when it sometimes occurs that one is ancon and the other common; so that one short-legged and one long-legged lamb are seen sucking the same dam at the same time.

In the fleece of the true ancon there seems to be nothing decisively different from common; but in the ancon-merino, by which is meant the offspring of the merino ram from the ancon ewe, though the shape of the progeny be exactly that of the ewe, its fleece partakes strongly of the silky feel of the merino wool.

When ancons are put into the same inclosure with other sheep, they are observed to keep together, separate from the rest of the flock.

Although they arrive at maturity somewhat later, they are said to live as long as other sheep; but in consequence of their deformity they can neither run nor jump, and move with a very awkward gait, having their fore-legs always crooked, and their feet turned inwards.

The principal reason for propagating a breed with such appearance of imperfection, has been the advantage that arises from their incapacity to leap over fences. In that part of the United States where

they have been encouraged, there are few commons, no hedges, no shepherds, no dogs to attend the flocks; and the fences of wood and stone are not sufficient to prevent active sheep from breaking pasture, to the great destruction of adjacent crops.

The advantage, however, in this respect, is counterbalanced by a corresponding inconvenience arising from the same source, namely, the great difficulty of driving such cripples to market, at the same time that they are generally not so fat as others, from the greater labour they undergo in gathering their food.

These objections are indeed such, that since the introduction of Merinoes, which are equally gregarious, quiet, and orderly, in addition to the strong recommendation of their fleeces, the ancon breed appears in danger of becoming wholly extinct; so that the author had some difficulty in procuring one in Boston to be dissected, for the purpose of sending a skeleton, which accompanied the letter, and was laid before the Society.

*Experiments to ascertain the coagulating Power of the Secretion of the gastric Glands. By Sir Everard Home, Bart. F.R.S. Communicated by the Society for promoting the Knowledge of Animal Chemistry. Read January 21, 1813. [Phil. Trans. 1813, p. 96.]*

It has long since been observed, that the first step in the process of digestion is the conversion of the food into a jelly; but whether this is effected by means of the gastric liquor alone, or by a joint operation of other secretions, has not been ascertained. From Mr. Hunter's experiments, it appeared that the same species of coagulation takes place in the same food admitted into the stomach of a great variety of animals; and that in the calf's stomach this power resided in the fourth cavity alone; since the mucus taken from the surfaces of the first, second, or third cavities, had no such effect as rennet, which is prepared by infusion of the inner membrane of the fourth cavity.

The same inquiry is here pursued by the author, with a view to ascertain more accurately what part it is that possesses this property in the highest degree, by comparison of the effects of rennet prepared from different portions.

By this mode of trial no part of the hog's stomach was found to coagulate milk, but that near the pylorus, where the gastric glands are situated.

Experiments were next made with rennets prepared from the crop and gizzard of a cock, from the stomach of a shark, the stomach of a salmon, and that of a thornback, all of which had the power of coagulating milk.

Other experiments were afterwards made, with the assistance of Mr. Hatchett and Mr. Brande, on the comparative powers of different parts of the same stomach, and the difference in various species of animals, the chicken, hawk, turkey, and calf.

In a chicken the horny lining of the gizzard gave a firmer curd