

The ALPINE MARMOT*.

OF all modern naturalists, Gefner has brought greatest advantages to the science. To great erudition, he has joined good sense and enlarged views. Aldrovandus is only the commentator of Gefner, and authors of less note have implicitly copied him. We hesitate not, therefore, to borrow facts from him with regard to the marmots, which are natives of his country, and concerning which he was better informed than us, though, like him, we have kept several of them

* Marmot with short round ears, hid in the fur; cheeks large; colour of the head and upper part of the body, brownish ash, mixed with tawny; legs and lower part of the body reddish; subject to vary in colour, the Polish marmot being much more red, and of a brighter hue; four toes before, five behind; tail pretty full of hair; length from nose to tail about sixteen inches, tail six; and body thick; *Pennant's Synops. of Quad.* p. 258.

In Latin, *Mus Alpinus*; in Italian, *Marmont*, *Marmota*, *Marmotana*; in German and Swiss, *Marmaltbier*, *Marmotte*, *Mißbellerle*; in Polish, *Bobak*, *Szwifow*; in French, *La Marmotte*.

Mus Alpinus Plinii; *Gesner, Quad.* p. 743. *Icon. Quad.* p. 108. *Ray, Synops. Quad.* p. 221.

Mus marmota, cauda abbreviata subpilosa, auriculis rotundis, buccis gibbis; *Lin. Syst.* p. 81.

Glis, *Marmota* Italis; *Klein. Quad.* p. 56.

Glis, pilis e fusco et flavicante mixtis vestitis. *Marmota Alpina*; *Briffon. Regn. Animal.* p. 165.

in a state of confinement. What he says corresponds so exactly with our own observations, that we doubt not the truth of his remarks, when he relates facts of which we have no knowledge.

The marmot, when taken young, may be rendered nearly as tame as our domestic animals. He learns to seize a stick, to dance, to perform various gesticulations, and to obey the voice of his master. Like the cat, he has an antipathy against dogs. When he begins to be familiar in the house, and perceives that he is protected by his master, he attacks and bites dogs of the most formidable kind. Though not so large as a hare, he is stouter, and his strength is aided by a peculiar suppleness and dexterity. With his fore-teeth, which are pretty long, he bites most cruelly. He attacks not, however, either dogs or men, unless when he is irritated. If not prevented, he gnaws furniture and stuffs, and, when confined, even pierces through wood. As his limbs are short, and his toes fashioned like those of the bear, he often sits on end, and walks with ease on his hind-legs. He carries food to his mouth with the fore legs, and eats in the manner of a squirrel. He runs pretty quickly up hill, but slowly on a plain. He climbs trees, and mounts between the clefts of rocks, or two adjoining walls; and the Savoyards, it is said, learned from the marmots to climb for the purpose of sweeping chimneys. They eat every thing presented to them, as flesh, bread, fruit, roots, pot-herbs, may-bugs,

grafs-

grafs-hoppers, &c.; but milk and butter they prefer to every other aliment. Though less inclined to theft than the cat, they endeavour to slip into the dairy, where they drink great quantities of milk, making, like the cat, a purring noise expressive of pleasure. Besides, milk is the only liquor that is agreeable to them; for they rarely drink water; and they refuse wine.

As to figure, the marmot has some resemblance both to the bear and to the rat. It is not, however, as Perrault and some others imagined, the *arctomys* or *bear-rat* of the ancients. Its nose, lips, and form of the head, resemble those of the hare; it has the hair and claws of the badger, the teeth of the beaver, the whiskers of the cat, the eyes of the fat squirrel, and the legs of the bear. The tail is short, and the ears terminate abruptly. The hair on the back is of a reddish brown colour, more or less deep: This hair is pretty rude; but that of the belly is reddish, soft, and bushy. Its voice resembles the murmuring of a young dog, when caressed, or in a sporting humour. But, when irritated or frightened, it makes a whistling noise, so loud and piercing, that it hurts the ear. It loves cleanliness, and retires, like the cat, to void its ordure. But, like the rat, it has a very strong disagreeable smell, especially in summer. It is remarkably fat in autumn: Besides a large epiploon, it has two very thick fatty follicles. All the parts of its body, however, are not equally fat. The

back

back and reins are loaded with firm and solid fat, similar to the flesh of a cow's udder. Thus the marmot would make very good eating, if it had not always a disagreeable odour, which cannot be concealed but by very strong seasonings.

This animal, which delights in the regions of frost and snow, and which is found only on the tops of the highest mountains, is more subject than any other to be rendered torpid by cold. In the end of September, or beginning of October, he retires into his hole, from which he comes not out till the beginning of April. His retreat is made with precaution, and furnished with art. It is capacious, broader than long, and very deep, so that it can contain several marmots, without any danger of corrupting the air. With their feet and claws, which are admirably adapted for the purpose, they dig the earth with amazing quickness, and throw it behind them. It is not a hole or a straight or winding tube, but a species of gallery made in the form of a Y, each branch of which has an aperture, and both terminate in one, where the animal lodges. As the whole is made on the declivity of a mountain, the innermost part alone is on a level. Both branches of the Y are inclined, and the one is used for depositing the excrements of the animals, and the other for their going out and coming in. The place of their abode is well lined with moss and hay, of which they make ample provision during the summer. It is even affirmed, that this labour

labour is carried on jointly; that some cut the finest herbage, which is collected by others, and that they alternately serve as vehicles for transporting it to their dens. One, it is said, lies down on his back, allows himself to be loaded with hay, extends his limbs, and others trail him in this manner by the tail, taking care not to overset him. These repeated frictions are assigned as the reason why the hair is generally rubbed off from their backs. But, it is more probable, that this effect is produced by their frequent digging of the earth, which is sufficient to peel the hair off their backs. Whatever may be in this, it is certain, that they dwell together, and work in common at their habitations, where they pass three fourths of their lives. Thither they retire during rain, or upon the approach of danger, and never go out but in fine weather, and even then to no great distance. One stands sentinel upon a rock, while the others sport on the grass, or are employed in cutting it to make hay. When the sentinel perceives a man, an eagle, a dog, &c. he alarms the rest by a loud whistle, and is himself the last to enter the hole.

They make no provisions for winter, as if they divined that they would then have no use for victuals. But, when they perceive the first approaches of the sleeping season, they shut up the two entrances of their habitation; and this they perform with such labour and solidity, that it is more easy to dig the earth any where else,

else, than in the parts they have fortified. They are at this time very fat, weighing sometimes twenty pounds; and they continue to be plump for three months; but afterwards gradually decay, and are extremely emaciated at the end of winter. When discovered in their retreats, they are rolled up in the form of a ball, covered with hay; and they are carried off in so torpid a state, that they may be killed without seeming to feel pain. The fattest are chosen for eating, and the young ones for taming. Like the dormice, they are revived by a gradual heat; and those which are fed in houses, and kept warm, never become torpid, but are equally lively and active in winter as in summer. As to the sleeping of the marmot, we shall not repeat what was said under the article of the fat squirrel. The cooling of the blood is the sole cause of this phenomenon; and it has been remarked by other writers, that, in this torpid condition, the circulation, as well as all the secretions, were extremely languid, and that the blood, not being renewed by fresh accessions of chyle, has no ferocity*. Whether they remain constantly torpid for seven or eight months, as is alledged by most authors, is uncertain. Their holes are deep, and they live together in numbers; a considerable heat, therefore, must be preserved for some time, and they may eat the herbage they have amassed. We are even told by M. Altmann, in his treatise

* Phil. Trans. No. 397.

on the animals of Switzerland, that the hunters allow the marmots to remain unmolested for three weeks or a month; that they never dig in soft weather, or during a warm wind; that, without these precautions, the marmots awaken and dig still deeper; but that, by opening their retreats during hard frosts only, they find them so torpid as to be carried off with ease. We may, therefore, conclude, that they, in every respect, resemble the dormice; and that, if they remain longer torpid, it is because they inhabit a climate where the winter is longer.

These animals produce but once a year, and the litter generally consists of three or four. The growth of their young is very quick; they live only nine or ten years; and the species is neither numerous nor much diffused. The Greeks were unacquainted with the marmot, or, at least, they have made no mention of it. Among the Latins, Pliny is the first who takes notice of it, under the name of *mus Alpinus*, or Alpine rat: And, indeed, though there are several species of rats in the Alps, none of them is so remarkable as the marmot, or, like it, lives in the summits of the highest mountains. The other species confine themselves to the valleys, the sides of the hills, or first mountains. Besides, the marmot never descends from the heights, but seems peculiarly attached to the chain of the Alps, and to prefer a south or east exposure to that of the north or west. He is found, however, in the Apennines,

nines, the Pyrenees, and the highest mountains of Germany. The *bobak* of Poland *, to which M. Brisson †, and, after him, Messrs. Arnault de Nobleville et Salerne ‡, have given the name of *marmot*, differs from this animal, not only in colour, but in the number of toes; for it has five toes on the fore-feet. The claw of the great toe appears beyond the skin; and we find within, the two phalanges of the fifth toe, which is entirely wanting in the marmot. Hence the *bobak*, or Polish marmot, the *monax*, or marmot of Canada, the *cavia*, or marmot of Bahama, and the *cricet*, or marmot of Strasburgh, are all different species from the Alpine marmot.

S U P P L E M E N T.

I HAVE here given the figure of an animal called *Monax*, or *Marmot of Canada*. The design was sent me by Mr. Colinson, but without any description. This species of marmot seems to differ from the other marmots, by its having only *four* toes on the fore-feet, while the Alpine marmot and the *bobak* or Polish marmot have

* Anctuarium Hist. Nat. Poloniz, Auc. Rzaczynski, p. 327.

† Regn. Anim. p. 165.

‡ Hist. Nat. des Animaux.

five toes both on the fore and the hind-feet. There is also some difference in the form of the head, which is more thinly covered with hair. The tail of the *monax* is longer and less bushy than that of the common marmot; so that this Canada animal may be regarded rather as a neighbouring species than as a simple variety of the Alpine marmot. In this species, I presume, the animal called the *Whistler* by Baron Hontan may be ranked *. He says, that it is found in the northern parts of Canada; that it is nearly of the size of a hare, but shorter in the body; that it is hunted for its skin only, which is much valued; but that its flesh is not good. He adds, that the Canadians call these animals *Whistlers*, because, in fine weather, they whistle at the entrance of their holes, which he has frequently heard. Our Alpine marmot makes the same kind of whistling noise.

* Voyage du Baron de la Hontan, tom. i. p. 95.