

THE BEAVER*.

IN proportion as man rises above a state of nature, the other animals sink below that standard: Reduced to slavery, or treated as rebels, and dispersed by force, their societies have vanished, their industry and genius have become barren, their arts have disappeared, each species has lost its general qualities, and the whole have preserved only their individual properties, matured, in some, by example, by imitation, and by instruction; and, in others, by fear, and by the necessity of perpetually watching over their own safety. What views, what designs can be

* The beaver has two cutting teeth in each jaw, five toes on each foot, and a tail compressed, and covered with scales. He has strong cutting teeth, short ears hid in the fur, a blunt nose, hair of a deep chestnut brown, a broad, almost oval, tail, compressed horizontally, and with scales; the fore-feet are small, and the hind-feet large; the length, from nose to tail, is about three feet; and the tail is eleven inches long, and three broad; *Pennant's Synops. of Quad.*

In Greek, *καστος*; in Italian, *Beavers*, *Bevere*; in Spanish, *Bevers*; in German, *Biber*; in Swedish, *Bofsjwer*; in Polish, *Biber*; in French, *Le Castor*, or *Le Biverre*.

Castor; *Göther. Hist. Quad.* p. 309. *Icen. Quad.* p. 84.

Castor five fiber; *Raf. Synops. Quad.* p. 209. *Klein, Quad.* p. 91.

Castor castaneus coloris, cauda horizontaliter plana; *Brisson. Regn. Anim.* p. 133.

Castor fiber, cauda ovata plana; *Linna. Syst. P.* 78.

possessed by slaves without spirit, or exiles without power? Compelled to fly, and to exist in solitude, they can attain to no improvement; they can neither acquire nor transmit knowledge, but must continually languish in calamity, and decay; they must perpetuate without multiplying; and, in a word, they must lose by their duration more than they acquire by experience.

It is for this reason that there are now no remains of that astonishing industry of animals, except in those distant and desert regions where, for a long succession of ages, they have received no disturbance from man, where each species can display with freedom its natural talents, and mature them in quiet, by uniting into permanent societies. The beavers afford, perhaps, the only subsisting monument of the antient intelligence of brutes, which, though infinitely inferior in principle to the human intellect, supposes common projects and relative views; projects which, having society for their basis, and, for their object, a dike to construct, a town to build, or a republic to found, imply some mode of making themselves understood, and the capacity of acting in concert.

The beavers are said to be, among quadrupeds, what the bees are among the insect tribes. There are in Nature, as she now appears, three species of societies, which must be examined before we can compare them: The free society of man, from which, next to God, he derives all his power;

power; the constrained society of the larger animals, which always flies before that of man; and the necessary society of certain small creatures, which, being all produced at the same time, and in the same place, are obliged to live together. An individual, solitary as he comes from the hand of Nature, is a sterile being, whose industry is limited to the simple use of his senses. Even man himself, in a state of pure nature, deprived of the light and assistance of society, neither multiplies nor constructs. Fertility, on the contrary, is the necessary result of every society, however blind or fortuitous, provided it be composed of creatures of the same nature. From the necessity alone of desiring to approach or to avoid each other, common movements arise, from which there often results a work, that has the air of being concerted, managed, and executed with intelligence. Thus the works of bees, each of whom, in a given place, such as a hive, or the hollow of an old tree, builds a cell; the works of the Cayenne bee, or fly, which not only makes the cells, but the hive that is to contain them; are operations purely mechanical, and imply no intelligence, no concerted project, no general views; they are labours which being the produce of a physical necessity, a result of common movements*, are at all times, and in all places, uniformly executed in the same manner, by a multitude not assembled from choice, but united by the force of nature.

* See above, vol. iii. Dissertation on the Nature of Animals.

Hence, it is not society, but numbers alone, which operate here. It is a blind power, never to be compared to that light by which all society is directed. I speak not of that pure light, that ray of divinity, which has been imparted to man alone. Of this the beavers, as well as all the other animals, are most assuredly deprived. But their society, not being a union of constraint, but proceeding from a species of choice, and supposing, at least, a general concert and common views in its members, implies likewise a certain degree of intelligence, which, though different in principle from that of man, produces effects so similar as to admit of comparison, not, indeed, to the luminous society of polished nations, but to the rudiments of it, as they appear among savages, whose union and operations can alone, with propriety, be compared to those of certain animals.

Let us then examine the product of each of these associations; let us see how far the art of the beaver extends, and to what the talents of the savage is limited. To break a branch, and to make a staff of it, to build a hut, and to cover it with leaves, for shelter, to collect hay or moss, and to make a bed of these materials, are operations common to the animal and to the savage. The beavers build huts, the monkeys carry slaves, and several other animals make commodious and neat houses, which are impenetrable to water. To sharpen a stone by friction, and make a hatchet of it, to use this hatchet for cutting

ting or peeling the bark off trees, for pointing arrows, for hollowing a vessel, or for slaying an animal in order to clothe themselves with its skin, to make bow-strings of its sinews, to fix the sinews to a hard thorn or bone, and to use these for needles and thread, are actions purely individual, which man in solitude may perform without the aid of others; actions which depend solely on conformation, because they suppose nothing but the use of the hand. But, to cut and transport a large tree, to build a village, or to conduct a large canoe, are operations, on the contrary, which necessarily suppose common labour and concerted views. These works are the result of infant society in savage nations; but the operations of the beavers are the fruits of society already matured among these animals; for it must be remarked, that they never think of building, but in countries where they are perfectly free and undisturbed. There are beavers in Languedoc, and in the islands of the Rhone; and they abound in many of the northern provinces of Europe. But, as all these countries are inhabited, or, at least, frequented by men, the beavers there, like all the other animals, are dispersed, solitary, fugitive, and timid creatures. They have never been known to unite, or to construct any common work. But, in desert regions, where men in society were long of arriving, and where some vestiges only of savages could be traced, the beavers have every where united, formed

associations, and constructed works which continue to excite admiration. Of this I shall endeavour to quote the most judicious and irreproachable authorities, and shall hold as certain only those facts concerning which authors agree. Less inclined, perhaps, than some of them, to indulge admiration, I shall venture to doubt, and even to criticise, every article that appears too hard to be credited.

It is universally allowed, that the beaver, in his purely individual qualities, instead of possessing any marked superiority over the other animals, appears, on the contrary, to sink considerably below some of them: And I am enabled to confirm this fact, being possessed of a young beaver, sent me from Canada*, which I have kept alive near twelve months. This animal is very gentle, peaceable, and familiar. It is somewhat melancholy, and even plaintive; but has no violence or vehemence in its passions. Its movements are flow, and its efforts feeble; yet it is seriously occupied with a desire of liberty, gnawing, from time to time, the gates of its prison, but without fury or precipitation, and with the sole view of making an opening for its escape. In other matters, it seems to be extremely indifferent, forming no attachments†, and neither wishes to hurt nor

* This beaver was taken when very young, and transmitted to me in the beginning of the year 1758, by M. de Montbelliard, a captain of the Royal Artillery.

† We are told, however, by M. Klein, that he fed a beaver during

to please. In these relative qualities, which would make him approach to man, he seems to be inferior to the dog. He appears to be formed neither for serving, commanding, nor even holding commerce with any other species than his own. His sense, locked up in his own person, never entirely manifests itself but among his own tribe. When alone, he has little personal industry, less artifice, and hardly prudence enough to avoid the grossest snares. Instead of attacking other animals, he is very awkward in defending himself. He prefers flight to combat, though he bites cruelly when he finds himself seized by the hand of the hunter.

If, then, we consider this animal in a state of nature, or rather in a state of solitude and dispersion, he appears not, by his internal qualities, to rise above the other animals. He has not the genius of a dog, the sense of an elephant, the craftiness of the fox, &c. but is more remarkable for some singularities of external conformation, than for any apparent superiority of mental faculties. He is the only quadruped furnished with a flat, oval tail, covered with scales, which he uses as a rudder to direct his course in the water; the only animal that has his hind-feet webbed, and the toes of his fore-feet, which he employs for carrying victuals to his mouth, separate from each other; the only quadruped that

during several years, and that it followed, and went in quest of him, as dogs search for their masters.

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resembles the land-animals in the anterior parts of his body, and the aquatic animals in the posterior. He forms the link between quadrupeds and fishes, as the bat does between quadrupeds and birds. But these peculiarities would be rather defects than perfections, if the beaver knew not how to derive, from this singular conformation, advantages which render him superior to every other quadruped.

The beavers begin to assemble in the month of June or July, for the purpose of uniting into society. They arrive in numbers, from all corners, and soon form a troop of two or three hundred. The place of rendezvous is generally the situation fixed for their establishment, and is always on the banks of waters. If the waters be flat, and never rise above their ordinary level, as in lakes, the beavers make no bank or dam. But, in rivers or brooks, where the waters are subject to risings and fallings, they build a bank, and, by this artifice, they form a pond or piece of water which remains always at the same height. The bank traverses the river, from one side to the other, like a sluice, and it is often from 80 to 100 feet long, by 10 or 12 broad at the base. This pile, for animals of a size so small, appears to be enormous, and supposes an incredible labour*. But the solidity with which the work is constructed,

* The largest beavers weigh 50 or 60 pounds, and exceed not three feet in length, from the end of the muzzle to the origin of the tail.

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ed, is still more astonishing than its magnitude. The part of the river where they erect this bank is generally shallow. If they find on the margin a large tree, which can be made to fall into the water, they begin with cutting it down, to form the principal part of their work. This tree is often thicker than the body of a man. By gnawing the foot of the tree with their four cutting teeth, they accomplish their purpose in a very short time, and always make the tree fall across the river. They next cut the branches from the trunk, to make it lie level. These operations are performed by the whole community. Several beavers are employed in gnawing the foot of the tree, and others in lopping off the branches after it has fallen. Others, at the same time, traverse the banks of the river, and cut down smaller trees, from the size of a man's leg to that of his thigh. These they dress, and cut to a certain length, to make stakes of them, and first drag them by land to the margin of the river, and then by water to the place where the building is carrying on. These piles they sink down, and interweave the branches with the larger stakes. This operation implies the surmounting of many difficulties; for, to dress these stakes, and to put them in a situation nearly perpendicular, some of the beavers must elevate, with their teeth, the thick ends against the margin of the river, or against the cross-tree, while others plunge to the bottom, and dig holes with their fore-feet, to receive the points,

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that they may stand on end. When some are labouring in this manner, others bring earth, which they plash with their feet, and beat firm with their tails. They carry the earth in their mouths, and with their fore-feet, and transport it in such quantities, that they fill with it all the intervals between the piles. These piles consist of several rows of stakes, of equal height, all placed opposite to each other, and extend from one bank of the river to the other. The stakes facing the under part of the river, are placed perpendicularly; but the rest of the work slopes upwards to sustain the pressure of the fluid; so that the bank, which is 10 or 12 feet wide at the base, is reduced to two or three at the top. It has, therefore, not only all the necessary thickness and solidity, but the most advantageous form for supporting the weight of the water, for preventing its issue, and to repel its efforts. Near the top, or thinnest part of the bank, they make two or three sloping holes, to allow the surface-water to escape, and these they enlarge or contract, according as the river rises or falls; and, when any breaches are made in the bank by sudden or violent inundations, they know how to repair them as soon as the water subsides.

It would be superfluous, after this account of their public work, to give a detail of their particular operations, were it not necessary, in a history of these animals, to mention every fact, and were not the first great structure made with a
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view to render their smaller habitations more commodious. These cabins or houses are built upon piles near the margin of the pond, and have two openings, the one for going to the land, and the other for throwing themselves into the water. The form of the edifices is either oval or round, some of them larger and some less, varying from four or five, to eight or ten feet diameter. Some of them consist of three or four stories; and their walls are about two feet thick, raised perpendicularly upon planks, or plain stakes; which serve both for foundations and floors to their houses. When they consist but of one story, the walls rise perpendicularly a few feet only, afterwards assume a curved form, and terminate in a dome or vault, which serves them for a roof. They are built with amazing solidity, and neatly plastered both without and within. They are impenetrable to rain, and resist the most impetuous winds. The partitions are covered with a kind of stucco, as nicely plastered as if it had been executed by the hand of man. In the application of this mortar, their tails serve for trowels, and their feet for plashing. They employ different materials, as wood, stone, and a kind of sandy earth, which is not subject to be dissolved in water. The wood they use is almost all of the light and tender kinds, as alders, poplars, and willows, which generally grow on the banks of rivers; and are more easily barked, cut, and transported, than the heavier and more solid species of timber. When they

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they once attack a tree, they never abandon it till they cut it down, and carry it off. They always begin the operation of cutting at a foot or a foot and a half above the ground: They labour in a sitting posture; and, beside the convenience of this situation, they enjoy the pleasure of gnawing perpetually the bark and wood, which are most palatable to their taste; for they prefer fresh bark and tender wood to most of their ordinary aliment. Of these provisions they lay up ample stores, to support them during the winter*; but they are not fond of dry wood. It is in the water, and near their habitations, that they establish their magazines. Each cabin has its own magazine, proportioned to the number of its inhabitants, who have all a common right to the store, and never pillage their neighbours. Some villages are composed of twenty or twenty-five cabins. But these large establishments are rare; and the common republic seldom exceeds ten or twelve families, of which each has his own quarter of the village, his own magazine, and his separate habitation. They allow not strangers to set down in their neighbourhood. The smallest cabins contain two, four, or six; and the largest

* The provision for eight or ten beavers, is twenty-five or thirty feet in length, by eight or ten feet in thickness. They transport not into their cabins wood or bark, till cut into thin slices, and just prepared for eating. They love fresh wood better than what has been floated, and go out, from time to time, during the winter, to eat fresh provisions in the forests; *Mém. de l'Acad. nov. 1704.*

eighteen,

eighteen, twenty, and, it is alleged, sometimes thirty beavers. They are almost always equally paired, being the same number of females as of males. Thus, upon a moderate computation, the society is often composed of 150 or 200, who all, at first, laboured jointly, in raising the great public building, and afterwards in select tribes or companies, in making particular habitations. In this society, however numerous, an universal peace is maintained. Their union is cemented by common labours; and it is rendered perpetual by mutual convenience, and the abundance of provisions which they amass and consume together. Moderate appetites, a simple taste, an aversion to blood and carnage, deprive them of the idea of rapine and war. They enjoy every possible good, while man knows only how to pant after happiness. Friends to each other, if they have some foreign enemies, they know how to avoid them. When danger approaches, they advertise one another, by striking their tail on the surface of the water, the noise of which is heard at a great distance, and resounds through all the vaults of their habitations. Each takes his part; some plunge into the lake, others conceal themselves within their walls, which can be penetrated only by the fire of heaven, or the steel of man, and which no animal will attempt either to open or to overturn. These retreats are not only very safe, but neat and commodious. The floors are spread over with verdure: The branches of the box and the

VOL. V.

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fir serve them for carpets, upon which they permit not the smallest dirtiness. The window that faces the water answers for a balcony to receive the fresh air, and to bathe. During the greatest part of the day, they sit on end, with their head and anterior parts of the body elevated, and their posterior parts sunk in the water. This window is made with caution, the aperture of which is sufficiently raised to prevent its being stopped up with the ice, which, in the beaver climates, is often two or three feet thick. When this happens, they slope the sole of the window, cut obliquely the stakes which support it, and thus open a communication with the unfrozen water. This element is so necessary, or rather so agreeable to them, that they can seldom dispense with it. They often swim a long way under the ice: It is then that they are most easily taken, by attacking the cabin on one hand, and, at the same time, watching at a hole made at some distance, where they are obliged to repair for the purposes of respiration. The continual habit of keeping their tail and posterior parts in the water, appears to have changed the nature of their flesh. That of their anterior parts, as far as the reins, has the taste and consistence of the flesh of land or air animals; but that of the tail and posteriors has the odour and all the other qualities of fish. The tail, which is a foot long, an inch thick, and five or six inches broad, is even an extremity or genuine portion of a fish attached to the body of a quadruped: It is entirely covered with scales,

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and with a skin perfectly similar to that of large fishes. The scales may be scraped off with a knife, and, after falling, they leave an impression on the skin, which is the case with all fishes.

It is in the beginning of summer that the beavers assemble. They employ the months of July and August in the construction of their bank and cabins. They collect, in September, their provisions of bark and wood: Afterwards they enjoy the fruits of their labours, and taste the sweets of domestic happiness. This is the time of repose, and the season of love. Knowing and loving one another from habit, from the pleasures and fatigues of a common labour, each couple join not by chance, nor by the pressing necessities of nature, but unite from choice and from taste. They pass together the autumn and the winter: Perfectly satisfied with each other, they never separate. At ease in their cabins, they go not out but upon agreeable or useful excursions, to bring in supplies of fresh bark, which they prefer to what is too dry or too much moistened with water. The females are said to continue pregnant four months; they bring forth in the end of winter, and generally produce two or three at a time. About this period they are left by the males, who retire to the country to enjoy the pleasures and the fruits of the spring. They return, occasionally, to their cabins; but dwell there no more. The mothers continue in the cabins, and are occupied in nursing, protecting, and rearing their

young, which, at the end of a few weeks, are in a condition to follow their dams. The females, in their turn, make little excursions to recruit themselves by the air, by eating fishes, crabs, and fresh bark, and, in this manner, pass the summer upon the waters, and in the woods. They assemble not again till autumn, unless their banks or cabins be overturned by inundations; for, when accidents of this kind happen, they suddenly collect their forces, in order to repair the breaches which have been made.

Some places they prefer to others for their habitation, and they have been observed, after having their labours frequently destroyed, to return every summer to repair them, till, being fatigued with this persecution, and weakened by the loss of several of their numbers, they took the resolution of changing their abode, and of retiring to solitudes still more profound. It is in winter that they are chiefly sought by the hunters; because their fur is not perfectly found in any other season: And, after their village is ruined, and numbers of them are taken, the society is sometimes too much reduced to admit of a fresh establishment; but those which escape death or captivity disperse and become vagabond. Their genius, withered by fear, never again expands. They hide themselves, and their talents, in holes; or, sunk to the condition of other animals, they lead a timid and a solitary life. Occupied only by pressing wants, and exerting solely their individual

dual powers, they lose for ever those social qualities which we have been so justly admiring.

However marvellous the society and the operations I have now described may appear, it is impossible to doubt of their reality. All the facts mentioned by numbers of eye-witnesses * correspond with those I have related: And, if my narration differ from some which have been given, it is only in a few points that I judged too marvellous and improbable to be credited. Authors have not limited themselves to the social manners of the beavers, and to their evident talents for architecture, but have ascribed to them general ideas of police and of government. They have affirmed, that, after the beavers have established a society, they reduce strangers and

* See concerning the history of the beavers, *Olaus Magnus* dans sa Description des Pays Septentrionaux; les Voyages du Baron de la Hontan, tom. ii. p. 155. *Et suiv. Muséum Wormianum*, p. 320.; l'Histoire de l'Amérique Septentrionale par Bacqueville de la Poterie, Rouen, 1722, tom. i. p. 133.; Mémoire sur le Castor, par M. Sarrafin, inséré dans les Mémoires de l'Académie des Sciences, année 1704; la Relation d'un Voyage en Acadie, par Dierville, Rouen, 1708, p. 126. *Et suiv.* les Nouvelles Découvertes dans l'Amérique Septentrionale, Paris, 1697, p. 133.; l'Histoire de la Nouvelle-France, par le P. Charlevoix, Paris, 1744, tom. ii. p. 98. *Et suiv.* le Voyage de Robert Laë, traduit de l'Anglois par M. l'Abbé Prevost, tom. ii. p. 226.; le Grand Voyage au Pays des Hurons, par Sagard Theodat, Paris, 1632, p. 319. *Et suiv.* le Voyage à la Baie de Hudson, par Ellis, Paris, 1749, tom. ii. p. 61 & 62. Voyez aussi Gesner, Aldrovande, Johnsson, Klein, &c. à l'Article du Castor; le Traité du Castor par Jean Marius, Paris, 1746; l'Histoire de la Virginie, traduite de l'Anglois, Orleans, 1707, p. 406.; l'Histoire Naturelle du P. Réac-zynsky, à l'Article du Castor, &c. &c.

travellers of their own species into slavery; that these they employ to carry their earth and to drag their trees; that they treat in the same manner the lazy and old of their own society; that they turn them on their backs, and make them serve as vehicles for the carriage of their materials; that these republicans never associate but in an odd number, in order to have always a casting voice in their deliberations; that each tribe has its chief; that they have established sentinels for the public safety; that, when pursued, they tear off their testicles to satisfy the avarice of their hunters; that, in this mutilated state, they exhibit themselves to procure compassion from their persecutors*, &c. In proportion as we reject with contempt those exaggerated fables, we must admit the facts which are established and confirmed by moral certainties. The works of this animal have been a thousand times viewed, measured, overturned, designed, and engraven. What is still more convincing, some of these singular works still subsist, though less common than when North America was first discovered, and have been seen by all the missionaries, and all the latest travellers who have penetrated into the northern regions of that continent.

It is universally agreed, that, beside the beavers who live in society, there are, in the same climate,

* See Elian, and all the ancients, except Pliny, who, like a philosopher, denies the fact. For the other articles, see most of the authors quoted in the preceding note.

others

others who are solitary, and rejected, it is said, from the social state for their crimes, reaping none of its advantages, having neither house nor magazine, and living, like the badger, in holes under the ground. These solitary beavers are called *terriers*. They are easily distinguished by their dirty and tattered robe; for the hair of their back is rubbed off by the friction of the earth. They live, like the other kind, upon banks of waters, where some of them make a ditch of several feet deep, in order to form a pond that may reach to the mouth of their hole, which frequently exceeds 100 feet in length, and all along slopes upward, to facilitate their retreat, in proportion as the water rises during inundations. But there are other solitary beavers, which live at a considerable distance from water. All our European beavers are *terriers* and solitary, and their fur is not nearly so valuable as that of those which live in society. They differ in colour, according to the climate they inhabit. In the northern deserts, they are perfectly black, and their furs are finest; but, even there, some are found entirely white, others white spotted with gray, and others with a mixture of red upon the nap of the neck and haunches*. In proportion as they recede from the north, their colour turns clearer and more mixed. In the north of Canada they are chestnut coloured; farther south, they are bay,

* *Castor albus, cauda horizontaliter plana; Brisson. Rept. Anim. p. 94.*

and of a pale straw colour among the Illinois *. In America, beavers are found from the 30th degree of north latitude to beyond the 60th. They are very frequent in the north, and gradually decrease as we advance southward. The same thing holds in the Old Continent: They never appear in numbers but in the northern regions; and they are very rare in France, Spain, Italy, Greece, and Egypt. They were known to the ancients. The religion of the Magi prohibited the killing of beavers. They were common on the margins of the Pontus Euxinus, and were distinguished by the name of *Canes Pontici*: But they probably were not quiet enough in this situation (for the coasts of this country have been frequented by men from the earliest periods of history), since their society and labours are mentioned by none of the ancients. Aelian, in particular, who betrays so strong an affection for the marvellous, and who, I believe, first said that the beaver cut off his testicles to allow them to be collected by the hunters †, would never have failed to mention the wonders of their republic, and their talents for architecture. Even Pliny himself, whose bold, sublime, and melancholy genius, made him uniformly despise men to exalt Nature, could not have abstained from comparing the labours of Romulus to those of the beavers. It is, therefore, apparent, that their industry in building

* Hist. de la Nouvelle France, par le P. Charlevoix, tom. ii. p. 94.

† Hist. Anim. lib. vi. cap. 34.

was altogether unknown to the ancients; and, although cabined beavers have lately been found in Norway, and in other northern regions of Europe, and though it is probable that the ancient beavers built as well as the modern; yet, as the Romans never penetrated so far north, it is not surprising that their writers are silent on this subject.

Several authors have affirmed, that the beaver, being an aquatic animal, could not live upon land, without water. But this notion is false; for the young beaver sent me from Canada was always kept in the house; and, when first presented to water, it was afraid, and refused to enter into that element. But, after being forced, and retained in a basin, it grew so easy in a few minutes, that it made no attempts to get out; and, when left at liberty, it often returned to the water spontaneously. It likewise avails itself of the mire and moist pavements. One day he escaped, and descended by a stair into the subterraneous vaults in the royal garden. He continued for some time to swim in the stagnant water in the bottom of these vaults. However, as soon as he saw the light of the torches which were brought to search for him, he returned to those who called him, and allowed himself quietly to be taken. He is familiar, without being caressing: He asks to eat from those who are at table; and his petitions consist of a small plaintive cry, and some gestures with his hand. When he receives

ceives a morsel, he carries off and conceals it, to be eaten at leisure. He sleeps pretty often, reposing on his belly. He eats every thing, except flesh, which he constantly refuses, whether it be raw or roasted. He gnaws every thing he can find, stuffs, furniture, wood, &c.; and we have been obliged to line, with a double coat of tinned iron, the barrel in which he was transported.

Though the beavers prefer the margins of lakes, rivers, and other fresh waters; yet they are found on the sea-coasts, but principally on mediterranean gulfs which receive great rivers, where the water has not its usual saltiness. They are hostile to the otter, whom they chase, and will not permit to appear in the waters they frequent. The fur of the beaver is finer and more bushy than that of the otter: It consists of two kinds of hair; the one, which is short, but bushy, fine as down, and impenetrable by water, immediately covers the skin; the other, which is longer, firmer, more splendid, but thinner, serves the former as a sur-tout, defending it from dust and dirt. This second kind of hair is of little value; it is the first alone that is employed in our manufactures. The black furs are generally most bushy, and consequently in greatest esteem. The fur of the terrier beaver is much inferior to that of the cabin-building kind. The beavers, like all other quadrupeds, cast their hair in summer; and the furs of those caught during this season are of little value.

value. The fur of the white beaver is greatly esteemed, on account of its rarity; and the perfectly black furs are nearly as rare as the white.

But, beside the fur, which is the most precious article, the beaver furnishes a matter, of which great use has been made in medicine. This matter, called *castoreum*, is contained in two large bags or bladders, which the ancients mistook for the testicles of the animal. We shall here give neither the description nor the uses of that substance *, because they are to be found in all our dispensaries †. The savages, it is said, extract an oil from the tail of the beaver, and use it as a topical application for several diseases. The flesh of the beaver, though fat and delicate, has always a disagreeable flavour. Their bones are said to be excessively hard; but, concerning this fact, we have had no opportunities of determining, because we dissected only a young one. Their teeth are very hard, and so sharp, that they are used by the savages as knives to cut, hollow, and polish their timber. The savages clothe themselves with beavers skins; and, in winter, turn the shaggy side inward; and these, from their having imbibed much sweat from the perspiration of

* See Le Traité du Castor, par Marius et Francus.

† It is alleged that the beavers press out this liquor with their feet, that it restores their appetite after a disgust, and that the savages rub the snarers with it which they lay for apprehending these animals. It is more certain, however, that they use this liquor for greasing their hair.

their wearers, are called *fat-beaver*, or *coat-beaver*, and are employed for coarse works only.

The beaver uses his fore-feet, like hands, with equal dexterity as the squirrel, the toes being well separated; but those of the hind-feet are united by a membrane. These they employ as fins, and extend them like the toes of a goose, which animal they resemble in their walking upon land. The beaver swims better than herons: As his fore-legs are much shorter than the hind ones, he always walks with his head low, and his back arched. His senses are extremely delicate, especially the sense of smelling. Dirtiness and bad smells seem to be perfectly unsupportable to him. When retained in confinement too long, and obliged to void his excrements, he places them near the threshold of the door, and, as soon as it is opened, he pushes them out. This habit of cleanliness is natural to them; and our young beaver never failed, in this manner, to clean his habitation. At the age of twelve months, he exhibited marks of ardour for a female, which renders it probable that he had then nearly attained his full growth. Hence the duration of life in these animals cannot be very long; perhaps it is too much to extend it to fifteen or twenty years. It is not astonishing that this beaver was smaller than others of his age, having been perpetually confined almost from his birth; and, being unacquainted with water till he was nine months old, he could neither grow nor expand

Plate CV.



BEAVER.

pand like those who enjoy liberty, and the use of that element, which appears to be equally necessary to them as the land.

S U P P L E M E N T.

WE formerly remarked, that the beavers were common to both Continents; and they are, in fact, as frequent in Siberia as in Canada. They may be easily tamed, and even taught to fish, and to bring home their prey to the family. M. Kalm assures us of this fact:

‘ I have seen in America,’ says he, ‘ beavers so fully tamed, that, when sent out to fish, they brought home the booty to their master. I have also seen others which were so familiar with their masters, and with the dogs, that they followed them, accompanied them in the boats, jumped into the water, and, in a moment after, returned with a fish *.’

‘ We have seen,’ says M. Gmelin, ‘ in a small village of Siberia, a beaver that was brought up in the house, and was so exceedingly tractable, that he sometimes made voyages to a considerable distance, decoyed females, and brought them home; after the season of love was over, these females returned without any conductor †.’

* Voyage de Kalm, tom. ii. p. 350.

† Voyage de Kamtschatka, p. 73.