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MDCCCXXXIX.

Dental Formula:—Incisors, $\frac{2}{2}$; molars, $\frac{3-3}{3-3} = 16$.

Example, *Aspalax typhlus*.

Description.—Head broader than the body, no aperture for the rudimentary eyes, which, no bigger than poppy-seeds, are hid beneath the skin; no external ears; end of the nose covered with a thick skin, nostrils very remote, and placed below; limbs very short, toes separated, except a thin membrane at the base, claws short; hair or fur short, thick, and very soft, dusky at the bottom and cinereous grey at the tip, space about the nose and above the mouth white. Length between 7 and 8 inches.

This is supposed by some to be the *ἀσπάλαξ* of Aristotle (*Hist. Anim.*, i. 9, and iv. 8). It is evident, from both the passages quoted, that he had accurately examined that part of the animal where the eye should be, and the result of his examination clearly agrees with the condition of those parts in the *Aspalax* of the moderns; but it must not be forgotten that those and other passages will equally apply to a second species of Mole (*Talpa*), now named *Talpa caeca*, which inhabits Europe, and in which the eyelids are closed, whilst in the common species they are open. It appears to be the *Spalax typhlus* of Illiger; *Aspalax typhlus* of Desmarest; *Mus typhlus* of Pallas and others; *Marmota typhlus* of Blumenbach; *Georychus typhlus* of Lesson; the *Zemni* of Rzaczynski; the *Slepez* of Gmelin; the *Podolian Marmot* of Pennant; and the *Blind Rat* of Shaw.

Habits, &c.—This species, which the Russians name *Slepez*, or the blind, and the Cossacks *Sfochor Nomon*, signifying the same defect, burrows extensively beneath the turf, driving at intervals lateral passages in its search for roots, particularly that of the bulbous *Chaerophyllum*. Openings to the surface occur at distances of some yards from each other, and there the earth is raised into hillocks, sometimes of two yards in circumference, and of considerable height. It works stoutly and rapidly, and on the approach of an enemy instantly digs a perpendicular burrow. Though it cannot see, it lifts its head in a menacing attitude towards its assailant, and, when irritated, snorts and gnashes its teeth, but emits no cry: its bite is very severe. In the morning it often quits its hole, and during the season of love basks in the sun with the female. It is worthy of notice that there runs a superstition in the Ukraine that the hand which has suffocated one of these animals is gifted with the virtue of curing the *king's evil* (as it is still called), in the same way that it was supposed to vanish before the royal touch of the Stuarts in this country.

Locality.—The southern parts of Russia, from Poland to the Volga, but not to the east of that river; common from the Sysran to the Sarpa; frequent along the Don, even to its origin, and about the town of Ræsk, but not in the sandy parts.



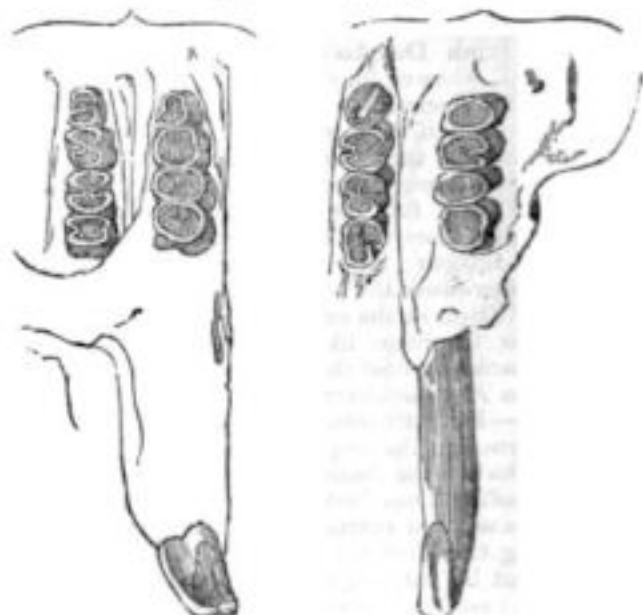
Aspalax typhlus.

Bathyergus (Brants; *Orycterus*, F. Cuv.)

M. F. Cuvier assigns to *Bathyergus* only three molars in each jaw; whilst to *Orycterus* he assigns four.

The Dental Formula of the first, according to this state-

ment, would be:—Incisors $\frac{2}{2}$; molars $\frac{3-3}{3-3} = 16$; and of the second, incisors $\frac{2}{2}$; molars $\frac{4-4}{4-4} = 20$.



Teeth of *Orycterus*. (F. Cuvier.)

Dr. Fischer quotes Professor Kaup for the opinion that the *Bathyergus Capensis* of Brants (*Cape Rat* of Shaw and Pennant) and *Bathyergus maritimus* of Brants (*Coast Rat* of Shaw, *Orycterus maritimus* of F. Cuvier) are identical, the former being the animal in a comparatively early stage of life. The latter is the *Zand Moll* of the Dutch and *Kauw-hoebe* of the Hottentots: it is of a reddish grey or ash-colour above, and hoary beneath. Length from tip of muzzle to origin of tail, 1 foot 1½ inch; of tail without the hair, 1 inch 1 line; of the pencil of hairs, 10 lines. There is a variety all white.

Locality and Habits.—The sand-flats of the Cape of Good Hope, wherein it burrows in great numbers. In every part of those flats Mr. Burchell observed innumerable mole-hills, and his foot often sunk into their galleries: for this reason, he remarks, it is very unpleasant, if not dangerous, to ride on horseback in such places, as persons are liable to be thrown by the feet of their horses unexpectedly sinking into these holes.



Coast Rat.

The following genera are placed by Mr. Swainson among the Squirrels, and, indeed, there is much about them to indicate a near approach to that family of Rodents.

Not Pouched.

Arctomys. (Gmelin.)

Generic Character.—Head and eyes large; ears short; body stout; fore feet with four toes and an obsolete thumb; hind feet five-toed. Tail short. Upper surface of m. ridged and tuberculous.

Dental Formula:—Incisors $\frac{2}{2}$; molars $\frac{5-5}{4-4} = 22$.

Examples, *Arctomys Marmota*, Schreb., and *Arctomys Ametris*, Schreb.; the latter as an example of the American Marmots.

Arctomys Marmota.—This is the *Mus Alpinus* of G. and others; *Mus Marmota* of Linnaeus and others;

Marmota of Klein; *Marmota Alpina* of Blumenbach; *Marmotte* of Buffon; *Murmeltier* of Kramer and of Meyer; and *Alpenmurmeltier* of Schrank.

Description.—Cheeks large; ears round and short, hid in the fur; body stout; head and upper parts brownish ash mingled with tawny; legs and under parts reddish; tail rather full; length from nose to tail, about 16 inches; of the tail, 6.

Habits, Locality, &c.—This well-known species is found in the Alps and Pyrenees, even, it is said, on the summits of those mountain-chains. They live in little societies, feeding on roots and vegetables, and occasionally on insects. Their holes are formed in the ground, generally with three chambers in the shape of a Y, with two entrances. These apartments are comfortably lined with moss and hay, and to them the Marmots retire about Michaelmas, having stopped up the entrances with earth, there to doze away the inclement months, till the warm suns and showers of April arouse them from their torpidity to partake of the renewed vegetation. From five to a dozen are said to be lodged in a chamber. They lift their food to their mouths with their fore-feet, eat it sitting, and will walk on their hind-feet. When on their feed a sentinel is placed to watch, and on the approach of danger his whistle drives them instantly to their subterranean retreats. They are playful creatures, but when angry or before a storm pierce the ear with their shrill whistle. Though they soon become tame, and will eat almost anything, they bite very hard when offended. Milk pleases them greatly, and they lap it with satisfactory murmurs. They become fat, and are sometimes eaten; but they are taken by the Savoyards and others principally that they may be exhibited by those itinerants. The number of young at a birth is generally three or four.



Alpine Marmot.

Arctomys Empetra.—Hoary above, mixed with black, and bright brown shining through; reddish orange beneath; head and feet blackish brown; cheeks whitish; ears flat, round, moderate; tail about half the length of the body, black at the tip. Length of head and body, from 17 to 20 inches; of tail (vertebræ), 5½ inches.

This is the *Quebec Marmot* of Pennant and Godman; the *Common Marmot* of Langsdorff; the *Thick-wood Badger* of the Hudson's Bay residents; the *Siffleur* of the French Canadians, who apply the same name to the other species of Marmot and to the Badger; *Turbagan* of the Russian residents on Kodiak?; *Wenusk* of the Crees; *Kath-hilloo-Koooy* of the Chepewyans; *Mus Empetra* of Pallas; and *Arctomys Empetra* of Sabine and others.

Locality, Habits, &c.—Dr. Richardson, who gives the above synonyms, states that the *Quebec Marmot* inhabits the woody districts from Canada to lat. 61°, and perhaps still farther north. He says that it appears to be a solitary animal, inhabits burrows in the earth, but ascends bushes and trees, probably in search of buds and other vegetable productions, on which it feeds. Mr. Drummond killed two, one on some low bushes, and the other on the branch of a

tree. According to Mr. Graham it burrows perpendicularly, selecting dry spots at some distance from the coast, and feeding on the coarse grass which it gathers on the river-sides. The Indians capture it by pouring water into its holes. The flesh is considered delicate when the animal is fat. The fur is valueless. It much resembles the *Bubac* of Poland in form and general appearance. (*Fauna Boreali-Americana*.) Pennant says, 'Mr. Brooks had one alive a few years ago; it was very tame, and made a hissing noise.'



Quebec Marmot

N.B. This species has a slight folding of the lining of the mouth, forming the rudiment of a cheek-pouch. (Richardson.)

Pouched.

Spermophilus. (F. Cuvier.)

Dental Formula as in *Arctomys*. the molars are narrow. Cheeks with large pouches. Toes narrow and free. Heel covered with hair, hind toes naked.

Example, *Arctomys (Spermophilus) Parryi*.

Description.—Ears very short, body thickly spotted above with white on a grey or black ground, pale rust-coloured beneath, face chestnut-coloured, the tail one-third longer than the hind feet, stretched out flat, black at the extremity, with a narrow white margin, rust-coloured beneath; length of head and body 8 inches 6 lines, of tail (vertebræ) 1 inch 6 lines.

This, according to Dr. Richardson, who first named the species, is the *Ground Squirrel* of Hearne; the *Quebec Marmot* of Forster; the *Seek-Seek* of the Esquimaux; the *Thos-thioy* (Rock Badger) of the Chepewyans; and the *Arctomys Alpina* of Parry's 'Second Voyage.'

Locality, Habits, &c.—The Doctor informs us that this *Spermophile* inhabits the barren grounds skirting the sea-coast from Churchill in Hudson's Bay round by Melville Peninsula, and the whole northern extremity of the continent to Behring's Straits, where specimens precisely similar were procured by Captain Beechey. It is abundant in the neighbourhood of Fort Enterprise, near the southern verge of the Barren Grounds, in lat. 65°, and is also plentiful on Cape Parry, one of the most northern parts of the continent. It is found generally in stony districts, but seems to delight chiefly in sandy hillocks amongst rocks, where burrows, inhabited by different individuals, may be often observed crowded together. One of the society is generally observed sitting erect on the summit of a hillock, whilst the others are feeding in the neighbourhood. Upon the approach of danger, he gives the alarm, and they instantly hurry to their holes, remaining however chattering at the entrance until the advance of the enemy obliges them to retire to the bottom. When their retreat is cut off, they become much terrified, and, seeking shelter in the first crevice, they not unfrequently succeed only in hiding the head and fore part of the body, whilst the projecting tail is, as is usual with them under the influence of terror, spread out flat on the rock. Their cry, in this season of distress, strongly resembles the loud alarm of the Hudson's Bay Squirrel, and is not very unlike the sound of a watchman's rattle. The Esquimaux name is an attempt to express this sound. Hearne states that they are easily tamed, and very cleanly and playful when domesticated. They never come abroad during the winter. Their food appears to be entirely vegetable; their pouches being generally filled, according to the season, with tender shoots of herbaceous plants, berries of the alpine arbutus, and of other trailing shrubs, or the seeds of grasses and leguminous plants. They produce