

GENUS BISON.—PLINY.

DENTAL FORMULA.

$$\text{Incisive } \frac{0}{8}; \text{ Canine } \frac{0-0}{0-0}; \text{ Molar } \frac{6-6}{6-6} = 32.$$

Head, large and broad; forehead, slightly arched; horns, placed before the salient line of the frontal crest; tail, short; shoulders, elevated; hair, soft and woolly.

The generic name is derived from PLINY, who applied the word Bison, wild ox, to one of the species on the Eastern continent.

There are five species of Buffalo that may be conveniently arranged under this genus: one existing in the forests of Southern Russia in Asia, in the Circassian mountains, and the desert of Kobi; one in Ethiopia and the forests of India, one on the mountains of Central Asia, one in Ceylon, and one in America. In addition to this, the genus Bos, which formerly included the present, contains five well determined species, one inhabiting the country near the Cape of Good Hope, one in Central Africa, one in the Himalaya mountains and the Birman Empire, one in India, and one in the forests of Middle Europe.

BISON AMERICANUS.—GMEL.

AMERICAN BISON.—BUFFALO.

PLATE LVI. MALE.

PLATE LVII. FEMALE, MALE AND YOUNG.

B. capite magno, lato, fronte leviter arcuata; cornibus parvis, brevibus, teretibus, extrorsum dein sursum versis; cauda breve, cruribus gracilibus armis excelsis, villo molli, lanoso.

CHARACTERS.

Forehead, broad, slightly arched; horns, small, short, directed laterally and upwards; tail, short; legs, slender; shoulders, elevated. hair, soft and woolly.



On Size by W^m E. Hitchcock

American Bison or Buffalo

Drawn from Nature by J. J. Audubon, F.R.S. ELS

Engr. Printed & Col^d by J. T. Bowen, Phil.



On Stone by Wm E. Woodcock

American Bison or Buffalo

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SYNONYMES.

- TAURUS MEXICANUS, Hernandez, Mex., p. 587, Fig. male, 1651.
 TAUREAU SAUVAGE, Hennepin, Nouv. Discov., vol. i., p. 186, 1699.
 THE BUFFALO, Lawson's Carolina, p. 115, Fig.
 " " Catesby's Carolina, Appendix xxxii., tab. 20.
 " " Hearne's Journey, p. 412.
 " " Franklin's First Voy., p. 113.
 " " Pennant's Arctic Zool., vol. i., p. 1.
 " " Long's Expedition, vol. iii., p. 68.
 " " Warden's U. S., vol. i., p. 248.
 BOS AMERICANUS, Linn., S. N., ed Gmel. 1, p. 204.
 " " Cuv., Regne an 1, p. 270.
 BOS AMERICANUS, Harlan, 268.
 " " Godman, vol. iii., 4.
 " " Richardson, Fa., p. 79.
 BUFFALO, Hudson's Bay Traders, Le Boeuf, Canadian Voyagers.
 AMERICAN Ox, Dobs, Hudson's Bay, 41.

DESCRIPTION.

Male, killed on the Yellow Stone river, July 16th, 1843.

The form bears a considerable resemblance to that of an overgrown domestic bull, the top of the hump on the shoulders being considerably higher than the rump, although the fore-legs are very short; horns, short, stout, curved upward and inward, one foot one inch and a half around the curve; ears, short and slightly triangular towards the point; nose, bare; nostrils, covered internally with hairs; eyes, rather small in proportion to the size of the animal, sunk into the prominent projection of the skull; neck, and forehead to near the nose, covered with a dense mass of shaggy hair fourteen inches long between the horns, which, as well as the eyes and ears, are thereby partially concealed; these hairs become gradually shorter and more woolly towards the muzzle. Under the chin and lower jaw there is an immense beard, a foot or upwards in length.

Neck, short; hairs along the shoulder and fore-legs about four inches long. The beard around the muzzle resembles that of the common bull. A mass of hair rises on the hind part of the fore-leg, considerably below the knee. A ridge of hairs commences on the back and runs to a point near the insertion of the tail. On the flanks, rump and fore-legs the hairs are very short and fine.

On the hind-legs there are straggling long hairs extending to the knee, and a few tufts extending six inches below the knee; hind-legs, and tail, covered with short hairs; within a few inches of the tip of the tail there is a tuft of hair nearly a foot in length. The pelage on the head

has scarcely any of the soft woolly hair which covers other parts of the body, and approaches nearer to hair than to wool.

A winter killed specimen.

From the neck, around the shoulder and sides, the body is covered with a dense heavy coat of woolly hair, with much longer and coarser hairs intermixed. There is a fleshy membrane between the forelegs, like that in the common domestic bull, but not so pendulous.

Female.

In form and colour the female bears a strong resemblance to the male; she is, however, considerably smaller, and of a more delicate structure. Her horns are of the same length and shape as those of the male, but are thinner and more perfect, in consequence of the cows engaging less in combat than the bulls. The hump is less elevated; the hair on the forehead shorter and less bushy; the rings on the horns are more corrugated than on those of our domestic cattle.

Spinous processes rising from the back bone or vertebræ of the bull, and forming the hump: they are flat, with sharp edges both anteriorly and posteriorly; the two longest are eighteen and a quarter inches long, three inches at the end which is the widest, and two inches at the narrowest; the first, fifteen inches; second, (largest,) eighteen and a quarter inches in length; third, sixteen and a half; fourth, sixteen; the fifth, fifteen inches, and the rest gradually diminishing in size; the fifteenth spinous process being three and a half inches long; the remainder are wanting in our specimen. The whole of the processes are placed almost touching each other at the insertion and at the end, and their breadth is parallel to the course of the back-bone. In the centre or about half the distance from the insertion to the outer end of them, they are (the bone being narrower in that part) from a quarter to one inch apart. The ribs originate and incline outward backward and downward from between these upright spinous bones.

COLOUR.

A summer specimen.

Head, neck, throat, fore-legs, tail and beard, dark brownish-black; hoofs, brown; rump, flanks, line on the back, blackish brown; horns nearly black. Upper surface of body light-brown; the hairs uniform in colour from the roots, the whole under surface blackish-brown.

The colour of the female is similar to that of the male.

At the close of the summer when the new coat of hair has been obtained,

the Buffalo is in colour between a dark umber, and liver-shining brown; as the hair lengthens during winter, the tips become paler.

Young male, twelve months old.

A uniform dingy brown colour, with a dark brown stripe of twisted woolly upright hairs, extending from the head over the neck shoulders and back to the insertion of the tail. The hairs on the forehead, which form the enormous mass on the head of the adult, are just beginning to be developed.

Under the throat and along the chest the hairs extend in a narrow line of about three inches in length; the bush at the end of the tail is tolerably well developed. Hairs on the whole body short and woolly.

A calf, six weeks old, presents the same general appearance, but is more woolly. The legs, especially near the hoofs, are of a lighter colour than the adult.

A calf taken from the body of a cow, in September, was covered with woolly hair; the uniform brownish, or dim yellow, strongly resembling the young of a domesticated cow.

HABITS.

Whether we consider this noble animal as an object of the chase, or as an article of food for man, it is decidedly the most important of all our contemporary American quadrupeds; and as we can no longer see the gigantic mastodon passing over the broad savannas, or laving his enormous sides in the deep rivers of our wide-spread land, we will consider the Buffalo as a link, (perhaps sooner to be forever lost than is generally supposed,) which to a slight degree yet connects us with larger American animals, belonging to extinct creations.

But ere we endeavour to place before you the living and breathing herds of Buffaloes, you must journey with us in imagination to the vast western prairies, the secluded and almost inaccessible valleys of the Rocky Mountain chain, and the arid and nearly impassable deserts of the western table lands of our country; and here we may be allowed to express our deep, though unavailing regret, that the world now contains only few and imperfect remains of the lost races, of which we have our sole knowledge through the researches and profound deductions of geologists; and even though our knowledge of the osteology of the more recently exterminated species be sufficient to place them before our "mind's eye," we have no description and no figures of the once living and moving, but now departed possessors of these woods, plains, mountains and waters, in which,

ages ago, they are supposed to have dwelt. Let us however hope, that our humble efforts may at least enable us to perpetuate a knowledge of such species as the Giver of all good has allowed to remain with us to the present day. And now we will endeavour to give a good account of the majestic Bison.

In the days of our boyhood and youth, Buffaloes roamed over the small and beautiful prairies of Indiana and Illinois, and herds of them stalked through the open woods of Kentucky and Tennessee ; but they had dwindled down to a few stragglers, which resorted chiefly to the "Barrens," towards the years 1808 and 1809, and soon after entirely disappeared. Their range has since that period gradually tended westward, and now you must direct your steps "to the Indian country," and travel many hundred miles beyond the fair valleys of the Ohio, towards the great rocky chain of mountains which forms the backbone of North-America, before you can reach the Buffalo, and see him roving in his sturdy independence upon the vast elevated plains, which extend to the base of the Rocky Mountains.

Hie with us then to the West ! let us quit the busy streets of St. Louis, once considered the outpost of civilization, but now a flourishing city, in the midst of a fertile and rapidly growing country, with towns and villages scattered for hundreds of miles beyond it ; let us leave the busy haunts of men, and on good horses take the course that will lead us into the Buffalo region, and when we have arrived at the sterile and extended plains which we desire to reach, we shall be recompensed for our toilsome and tedious journey : for there we may find thousands of these noble animals, and be enabled to study their habits, as they graze and ramble over the prairies, or migrate from one range of country to another, crossing on their route water-courses, or swimming rivers at places where they often plunge from the muddy bank into the stream, to gain a sand-bar or shoal, midway in the river, that affords them a resting place, from which, after a little time, they can direct their course to the opposite shore, when, having reached it, they must scramble up the bank, ere they can gain the open prairie beyond.

There we may also witness severe combats between the valiant bulls, in the rutting season, hear their angry bellowing, and observe their sagacity, as well as courage, when disturbed by the approach of man.

The American Bison is much addicted to wandering, and the various herds annually remove from the North, at the approach of winter, although many may be found, during that season, remaining in high latitudes, their thick woolly coats enabling them to resist a low temperature, without suffering greatly. During a severe winter, however, numbers of them perish, especially the old, and the very young ones. The breeding season is gen-

erally the months of June and July, and the calves are brought forth in April and May; although occasionally they are produced as early as March or as late as July. The Buffalo most frequently has but one calf at a time, but instances occur of their having two. The females usually retire from the herd either singly or several in company, select as solitary a spot as can be found, remote from the haunt of wolves, bears, or other enemies that would be most likely to molest them, and there produce their young.

Occasionally, however, they bring forth their offspring when the herd is migrating, and at such times they are left by the main body, which they rejoin as soon as possible. The young usually follow the mother until she is nearly ready to have a calf again. The Buffalo seldom produces young until the third year, but will continue breeding until very old. When a cow and her very young calf are attacked by wolves, the cow bellows and sometimes runs at the enemy, and not unfrequently frightens him away; this, however, is more generally the case when several cows are together, as the wolf, ever on the watch, is sometimes able to secure a calf when it is only protected by its mother.

The Buffalo begins to shed its hair as early as February. This falling of the winter coat shows first between the fore-legs and around the udder in the female on the inner surface of the thighs, &c. Next, the entire pelage of long hairs drop gradually but irregularly, leaving almost naked patches in some places, whilst other portions are covered with loosely hanging wool and hair. At this period these animals have an extremely ragged and miserable appearance. The last part of the shedding process takes place on the hump. During the time of shedding, the Bison searches for trees, bushes, &c., against which to rub himself, and thereby facilitate the speedy falling off of his old hair. It is not until the end of September, or later, that he gains his new coat of hair. The skin of a Buffalo, killed in October, the hunters generally consider, makes a good Buffalo robe; and who is there, that has driven in an open sleigh or wagon, that will not be ready to admit this covering to be the cheapest and the best, as a protection from the cold, rain, sleet, and the drifting snows of winter? for it is not only a warm covering, but impervious to water.

The Bison bulls generally select a mate from among a herd of cows and do not leave their chosen one until she is about to calve.

When two or more males fancy the same female, furious battles ensue and the conqueror leads off the fair cause of the contest in triumph. Should the cow be alone, the defeated lovers follow the happy pair at such a respectful distance, as will ensure to them a chance to make their escape, if they should again become obnoxious to the victor, and at the same time

enable them to take advantage of any accident that might happen in their favour. But should the fight have been caused by a female who is in a large herd of cows, the discomfited bull soon finds a substitute for his first passion. It frequently happens, that a bull leads off a cow, and remains with her separated during the season from all others, either male or female.

When the Buffalo bull is working himself up to a belligerent state, he paws the ground, bellows loudly, and goes through nearly all the actions we may see performed by the domesticated bull under similar circumstances, and finally rushes at his foe head foremost, with all his speed and strength. Notwithstanding the violent shock with which two bulls thus meet in mad career, these encounters have never been known to result fatally, probably owing to the strength of the spinous process commonly called the hump, the shortness of their horns, and the quantity of hair about all their fore-parts.

When congregated together in fair weather, calm or nearly so, the bellowing of a large herd (which sometimes contains a thousand) may be heard at the extraordinary distance of ten miles at least.

During the rutting season, or while fighting, (we are not sure which,) the bulls scrape or paw up the grass in a circle, sometimes ten feet in diameter, and these places being resorted to, from time to time, by other fighting bulls, become larger and deeper, and are easily recognised even after rains have filled them with water.

In winter, when the ice has become strong enough to bear the weight of many tons, Buffaloes are often drowned in great numbers, for they are in the habit of crossing rivers on the ice, and should any alarm occur, rush in a dense crowd to one place; the ice gives way beneath the pressure of hundreds of these huge animals, they are precipitated into the water, and if it is deep enough to reach over their backs, soon perish. Should the water, however, be shallow, they scuffle through the broken and breaking ice, in the greatest disorder, to the shore.

From time to time small herds, crossing rivers on the ice in the spring, are set adrift, in consequence of the sudden breaking of the ice after a rise in the river. They have been seen floating on such occasions in groups of three, four, and sometimes eight or ten together, although on separate cakes of ice. A few stragglers have been known to reach the shore in an almost exhausted state, but the majority perish from cold and want of food rather than trust themselves boldly to the turbulent waters.

Buffalo calves are often drowned, from being unable to ascend the steep banks of the rivers across which they have just swam, as the cows cannot help them, although they stand near the bank, and will not leave them to their fate unless something alarms them.

On one occasion Mr. KIPP, of the American Fur Company, caught eleven calves, their dams all the time standing near the top of the bank. Frequently, however, the cows leave the young to their fate, when most of them perish. In connection with this part of the subject, we may add, that we were informed when on the Upper Missouri river, that when the banks of that river were practicable for cows, and their calves could not follow them, they went down again, after having gained the top, and would remain by them until forced away by the cravings of hunger. When thus forced by the necessity of saving themselves to quit their young, they seldom, if ever, returned to them.

When a large herd of these wild animals are crossing a river, the calves or yearlings manage to get on the backs of the cows, and are thus conveyed safely over; but when the heavy animals, old and young, reach the shore, they sometimes find it muddy or even deeply miry; the strength of the old ones struggling in such cases to gain a solid footing, enables them to work their way out of danger in a wonderfully short time. Old bulls, indeed, have been known to extricate themselves when they had got into the mire so deep that but little more than their heads and backs could be seen. On one occasion we saw an unfortunate cow that had fallen into, or rather sank into a quicksand only seven or eight feet wide; she was quite dead, and we walked on her still fresh carcase safely across the ravine which had buried her in its treacherous and shifting sands.

The gaits of the Bison are walking, cantering, and galloping, and when at full speed, he can get over the ground nearly as fast as the best horses found in the Indian country. In lying down, this species bends the fore-legs first, and its movements are almost exactly the same as those of the common cow. It also rises with the same kind of action as cattle.

When surprised in a recumbent posture by the sudden approach of a hunter, who has succeeded in nearing it under the cover of a hill, clump of trees or other interposing object, the Bison springs from the ground and is in full race almost as quick as thought, and is so very alert, that one can scarcely perceive his manner of rising on such occasions.

The bulls never grow as fat as the cows, the latter having been occasionally killed with as much as two inches of fat on the boss or hump and along the back to the tail. The fat rarely exceeds half an inch on the sides or ribs, but is thicker on the belly. The males have only one inch of fat, and their flesh is never considered equal to that of the females in delicacy or flavour. In a herd of Buffaloes many are poor, and even at the best season it is not likely that all will be found in good condition; and we have occasionally known a hunting party, when Buffalo was scarce, compelled to feed on a straggling old bull as tough as leather. For ourselves, this

was rather uncomfortable, as we had unfortunately lost our molars long ago.

The Bison is sometimes more abundant in particular districts one year than another, and is probably influenced in its wanderings by the mildness or severity of the weather, as well as by the choice it makes of the best pasturage and most quiet portions of the prairies. While we were at Fort Union, the hunters were during the month of June obliged to go out twenty-five or thirty miles to procure Buffalo meat, although at other times, the animal was quite abundant in sight of the fort. The tramping of a large herd, in wet weather, cuts up the soft clayey soil of the river bottoms, (we do not mean the bottom of rivers,) into a complete mush. One day, when on our journey up the Missouri river, we landed on one of the narrow strips of land called bottoms, which formed the margin of the river and was backed by hills of considerable height at a short distance. At this spot the tracks of these animals were literally innumerable, as far as the eye could reach in every direction, the plain was covered with them; and in some places the soil had been so trampled as to resemble mud or clay, when prepared for making bricks. The trees in the vicinity were rubbed by these buffaloes, and their hair and wool were hanging on the rough bark or lying at their roots. We collected some of this wool, we think it might be usefully worked up into coarse cloth, and consider it worth attention. The roads that are made by these animals, so much resemble the tracks left by a large wagon-train, that the inexperienced traveller may occasionally imagine himself following the course of an ordinary wagon-road. These great tracks run for hundreds of miles across the prairies, and are usually found to lead to some salt-spring, or some river or creek, where the animals can allay their thirst.

The captain of the steamboat on which we ascended the Missouri, informed us, that on his last annual voyage up that river, he had caught several Buffaloes, that were swimming the river. The boat was run close upon them, they were lassoed by a Spaniard, who happened to be on board, and then hoisted on the deck, where they were butchered *secundum artem*. One day we saw several that had taken to the water, and were coming towards our boat. We passed so near them, that we fired at them, but did not procure a single one. On another occasion, one was killed from the shore, and brought on board, when it was immediately divided among the men. We were greatly surprised to see some of the Indians, that were going up with us, ask for certain portions of the entrails, which they devoured with the greatest voracity. This gluttony excited our curiosity, and being always willing to ascertain the quality of any sort of meat, we tasted some of this

sort of tripe, and found it very good, although at first its appearance was rather revolting.

The Indians sometimes eat the carcasses of Buffaloes that have been drowned, and some of those on board the *Omega* one day asked the captain most earnestly to allow them to land and get at the bodies of three Buffaloes which we passed, that had lodged among the drift-logs and were probably half putrid. In this extraordinary request some of the squaws joined. That, when stimulated by the gnawings of hunger, Indians, or even Whites, should feed upon carrion, is not to be wondered at, since we have many instances of cannibalism and other horrors, when men are in a state of starvation, but these Indians were in the midst of plenty of wholesome food and we are inclined to think their hankering after this disgusting flesh must be attributed to a natural taste for it, probably acquired when young, as they are no doubt sometimes obliged in their wanderings over the prairies in winter, to devour carrion and even bones and hides, to preserve their lives. In the height of the rutting-season, the flesh of the Buffalo bull is quite rank, and unfit to be eaten, except from necessity, and at this time the animal can be scented at a considerable distance.

When a herd of Bisons is chased, although the bulls run with great swiftness their speed cannot be compared with that of the cows and yearling calves. These, in a few moments leave the bulls behind them, but as they are greatly preferred by the hunter, he always (if well mounted) pursues them and allows the bulls to escape. During the winter of 1842 and 43, as we were told, Buffaloes were abundant around Fort Union, and during the night picked up straggling handfuls of hay that happened to be scattered about the place. An attempt was made to secure some of them alive, by strewing hay as a bait, from the interior of the old fort, which is about two hundred yards off, to some distance from the gateway, hoping the animals would feed along into the enclosure. They ate the hay to the very gate; but as the hogs and common cattle were regularly placed there, for security, during the night, the Buffaloes would not enter, probably on account of the various odours issuing from the interior. As the Buffaloes generally found some hay scattered around, they soon became accustomed to sleep in the vicinity of the fort, but went off every morning, and disappeared behind the hills, about a mile off.

One night they were fired at, from a four-pounder loaded with musket-balls. Three were killed, and several were wounded, but this disaster did not prevent them from returning frequently to the fort at night, and they were occasionally shot, during the whole winter, quite near the fort.

As various accounts of Buffalo-hunts have been already written, we will pass over our earliest adventures in that way, which occurred many

years ago, and give you merely a sketch of the mode in which we killed them during our journey to the West, in 1843.

One morning in July, our party and several persons attached to Fort Union, (for we were then located there,) crossed the river, landed opposite the fort, and passing through the rich alluvial belt of woodland which margins the river, were early on our way to the adjacent prairie, beyond the hills. Our equipment consisted of an old Jersey wagon, to which we had two horses attached, tandem, driven by Mr. CULBERTSON, principal at the fort. This wagon carried Mr. HARRIS, BELL, and ourselves, and we were followed by two carts, which contained the rest of the party, while behind came the running horses or hunters, led carefully along. After crossing the lower prairie, we ascended between the steep banks of the rugged ravines, until we reached the high undulating plains above. On turning to take a retrospective view, we beheld the fort and a considerable expanse of broken and prairie-land behind us, and the course of the river was seen as it wound along, for some distance. Resuming our advance we soon saw a number of antelopes, some of which had young ones with them. After travelling about ten miles farther we approached the Fox river, and at this point one of the party espied a small herd of Bisons at a considerable distance off. Mr. CULBERTSON, after searching for them with the telescope, handed it to us and showed us where they were. They were all lying down and appeared perfectly unconscious of the existence of our party. Our vehicles and horses were now turned towards them and we travelled cautiously to within about a quarter of a mile of the herd, covered by a high ridge of land which concealed us from their view. The wind was favourable, (blowing towards us,) and now the hunters threw aside their coats, tied handkerchiefs around their heads, looked to their guns, mounted their steeds, and moved slowly and cautiously towards the game. The rest of the party crawled carefully to the top of the ridge to see the chase. At the word of command, given by Mr. CULBERTSON, the hunters dashed forward after the bulls, which already began to run off in a line nearly parallel with the ridge we were upon. The swift horses, urged on by their eager riders and their own impetuosity, soon began to overtake the affrighted animals; two of them separated from the others and were pursued by Mr. CULBERTSON and Mr. BELL; presently the former fired, and we could see that he had wounded one of the bulls. It stopped after going a little way and stood with its head hanging down and its nose near the ground. The blood appeared to be pouring from its mouth and nostrils, and its drooping tail showed the agony of the poor beast. Yet it stood firm, and its sturdy legs upheld its ponderous body as if nought had happened. We hastened toward it but ere we approached the spot,

the wounded animal fell, rolled on its side, and expired. It was quite dead when we reached it. In the mean time Mr. BELL had continued in hot haste after the other, and Mr. HARRIS and Mr. SQUIRE had each selected, and were following one of the main party. Mr. BELL shot, and his ball took effect in the buttocks of the animal. At this moment Mr. SQUIRE's horse threw him over his head fully ten feet: he fell on his powder-horn and was severely bruised; he called to some one to stop his horse and was soon on his legs, but felt sick for a few moments. Friend HARRIS, who was perfectly cool, neared his bull, shot it through the lungs, and it fell dead on the spot. Mr. BELL was still in pursuit of his wounded animal and Mr. HARRIS and Mr. SQUIRE joined and followed the fourth, which, however, was soon out of sight. We saw Mr. BELL shoot two or three times, and heard guns fired, either by Mr. HARRIS or Mr. SQUIRE, but the weather was so hot that fearful of injuring their horses they were obliged to allow the bull they pursued to escape. The one shot by Mr. BELL, tumbled upon his knees, got up again, and rushed on one of the hunters, who shot it once more, when it paused, and almost immediately fell dead.

The flesh of the Buffaloes thus killed was sent to the fort in the cart, and we continued our route and passed the night on the prairie, at a spot about half way between the Yellow-Stone and the Missouri rivers. Here, just before sundown, seven more bulls were discovered by the hunters, and Mr. HARRIS, Mr. BELL and Mr. CULBERTSON each killed one. In this part of the prairie we observed several burrows made by the swift fox, but could not see any of those animals although we watched for some time in hopes of doing so. They probably scented our party and would not approach. The hunters on the prairies, either from hunger or because they have not a very delicate appetite, sometimes break in the skull of a buffalo and eat the brains raw. At sunrise we were all up, and soon had our coffee, after which a mulatto man called LAFLEUR, an excellent hunter attached to the American Fur-Company, accompanied Mr. HARRIS and Mr. BELL on a hunt for antelopes, as we wanted no more Buffaloes. After waiting the return of the party, who came back unsuccessful, we broke up our camp and turned our steps homeward.

The Buffalo bulls which have been with their fair ones are at this season wretchedly poor, but some of them, which appear not to have much fondness for the latter, or may have been driven off by their rivals, are in pretty good condition. The prairies are in some places whitened with the skulls of the Buffalo, dried and bleached by the summer's sun and the frosts and snows of those severe latitudes in winter. Thousands are killed

merely for their tongues, and their large carcasses remain to feed the wolves and other rapacious prowlers on the grassy wastes.

A large Bison bull will generally weigh nearly two thousand pounds, and a fat cow, about twelve hundred. We weighed one of the bulls killed by our party and found it to reach seventeen hundred and twenty seven pounds, although it had already lost a good deal of blood. This was an old bull and was not fat ; it had probably weighed more at some previous period. We were told that at this season a great many half-breed Indians were engaged in killing Buffaloes and curing their flesh for winter-use, on Moose river, about 200 miles north of us.

When these animals are shot at a distance of fifty or sixty yards, they rarely, if ever, charge on the hunters. Mr. CULBERTSON told us he had killed as many as nine bulls from the same spot, unseen by these terrible animals. There are times, however, when they have been known to gore both horse and rider, after being severely wounded, and have dropped down dead but a few minutes afterwards. There are indeed instances of bulls receiving many balls without being immediately killed, and we saw one which during one of our hunts was shot no less than twenty-four times before it dropped.

A bull that our party had wounded in the shoulder, and which was thought too badly hurt to do much harm to any one, was found rather dangerous when we approached him, as he would dart forward at the nearest of his foes, and but that his wound prevented him from wheeling and turning rapidly, he would certainly have done some mischief. We fired at him from our six-barrelled revolving pistol, which, however, seemed to have little other effect than to render him more savage and furious. His appearance was well calculated to appal the bravest, had we not felt assured that his strength was fast diminishing. We ourselves were a little too confident, and narrowly escaped being overtaken by him through our imprudence. We placed ourselves directly in his front, and as he advanced, fired at his head and ran back, not supposing that he could overtake us ; but he soon got within a few feet of our rear, with head lowered, and every preparation made for giving us a hoist ; the next instant, however, we had jumped aside, and the animal was unable to alter his headlong course quick enough to avenge himself on us. Mr. BELL now put a ball directly through his lungs, and with a gush of blood from the mouth and nostrils, he fell upon his knees and gave up the ghost, falling (as usual) on the side, quite dead.

On another occasion, when the same party were hunting near the end of the month of July, Mr. SQUIRE wounded a bull twice, but no blood flowing from the mouth, it was concluded the wounds were only in the flesh.

and the animal was shot by Mr. CULBERTSON, OWEN McKENZIE, and Mr. SQUIRE, again. This renewed fire only seemed to enrage him the more, and he made a dash at the hunters so sudden and unexpected, that Mr. SQUIRE, attempting to escape, rode between the beast and a ravine which was near, when the bull turned upon him, his horse became frightened and leaped down the bank, the Buffalo following him so closely that he was nearly unhorsed; he lost his presence of mind and dropped his gun; he, however, fortunately hung on by the mane and recovered his seat. The horse was the fleetest, and saved his life. He told us subsequently that he had never been so terrified before. This bull was fired at several times after SQUIRE's adventure, and was found to have twelve balls lodged in him when he was killed. He was in very bad condition, and being in the rutting season we found the flesh too rank for our dainty palates and only took the tongue with us.

Soon afterwards we killed a cow in company with many bulls and were at first afraid that they would charge upon us, which in similar cases they frequently do, but our party was too large and they did not venture near, although their angry bellowings and their unwillingness to leave the spot showed their rage at parting with her. As the sun was now sinking fast towards the horizon on the extended prairie, we soon began to make our way toward the camping ground and passed within a moderate distance of a large herd of Buffaloes, which we did not stop to molest but increasing our speed reached our quarters for the night, just as the shadows of the western plain indicated that we should not behold the orb of day until the morrow.

Our camp was near three conical hills called the Mamelles, only about thirty miles from Fort Union, although we had travelled nearly fifty by the time we reached the spot. After unloading and unsaddling our tired beasts, all hands assisted in getting wood and bringing water, and we were soon quietly enjoying a cup of coffee. The time of refreshment to the weary hunter is always one of interest: the group of stalwart frames stretched in various attitudes around or near the blazing watch-fires, recalls to our minds the masterpieces of the great delineators of night scenes; and we have often at such times beheld living pictures, far surpassing any of those contained in the galleries of Europe.

There were signs of grizzly bears around us, and during the night we heard a number of wolves howling among the bushes in the vicinity. The service berry was abundant and we ate a good many of them, and after a hasty preparation in the morning, started again after the Buffaloes we had seen the previous evening. Having rode for some time, one of our party who was in advance as a scout, made the customary signal from the top of a

high hill, that Buffaloes were in sight ; this is done by walking the hunter's horse backward and forward several times. We hurried on and found our scout lying close to his horse's neck, as if asleep on the back of the animal. He pointed out where he had discovered the game, but they had gone out of sight, and (as he said) were travelling fast, the herd being composed of both bulls and cows. The hunters mounted at once, and galloped on in rapid pursuit, while we followed more leisurely over hills and plains and across ravines and broken ground, at the risk of our necks. Now and then we could see the hunters, and occasionally the Buffaloes, which had taken a direction toward the Fort. At last we reached an eminence from which we saw the hunters approaching the Buffaloes in order to begin the chase in earnest. It seems that there is no etiquette among Buffalo hunters, and this not being understood beforehand by our friend HARRIS, he was disappointed in his wish to kill a cow. The country was not as favourable to the hunters as it was to the flying herd. The females separated from the males, and the latter turned in our direction and passed within a few hundred yards of us without our being able to fire at them. Indeed we willingly suffered them to pass unmolested, as they are always very dangerous when they have been parted from the cows. Only one female was killed on this occasion. On our way homeward we made towards the coupee, an opening in the hills, where we expected to find water for our horses and mules, as our supply of Missouri water was only enough for ourselves.

The water found on these prairies is generally unfit to drink, (unless as a matter of necessity,) and we most frequently carried eight or ten gallons from the river, on our journey through the plains. We did not find water where we expected, and were obliged to proceed about two miles to the eastward, where we luckily found a puddle sufficient for the wants of our horses and mules. There was not a bush in sight at this place, and we collected Buffalo dung to make a fire to cook with. In the winter this prairie fuel is often too wet to burn, and the hunters and Indians have to eat their meat raw. It can however hardly be new to our readers to hear that they are often glad to get any thing, either raw or cooked, when in this desolate region.

Young Buffalo bulls are sometimes castrated by the Indians, as we were told, for the purpose of rendering them larger and fatter ; and we were informed, that when full grown they have been shot, and found to be far superior to others in the herd, in size as well as flavour. During severe winters the Buffaloes become very poor, and when the snow has covered the ground for several months to the depth of two or three feet, they are wretched objects to behold. They frequently in this emaciated state lose

their hair and become covered with scabs ; and the magpies alight on their backs and pick the sores. The poor animals in these dreadful seasons die in great numbers.

A singular trait in the Buffalo when caught young, was related to us, as follows : When a calf is taken, if the person who captures it places one of his fingers in its mouth, it will follow him afterwards, whether on foot or on horseback, for several miles.

We now give a few notes from our journal kept at Fort Union, which may interest our readers.

August 7th, 1843, a Buffalo cow was killed and brought into the fort, and to the astonishment of all, was found to be near her time of calving. This was an extraordinary circumstance at that season of the year.

August 8th, The young Buffaloes have commenced shedding their first (or red) coat of hair, which drops off in patches about the size of the palm of a man's hand. The new hair is dark brownish black. We caught one of these calves with a lasso, and had several men to hold him, but on approaching to pull off some of the old hair, he kicked and bounced about in such a furious manner that we could not get near him. Mr. CULBERTSON had it however taken to the press post, and there it was drawn up and held so closely that we could handle it, and we tore off some pieces of its old pelage, which hung to the side with surprising tenacity.

The process of butchering or cutting up the carcass of the Buffalo is generally performed in a slovenly and disgusting manner by the hunters, and the choicest parts only are saved, unless food is scarce. The liver and brains are eagerly sought for, and the hump is excellent when broiled. The pieces of flesh from the sides are called by the French, fillets, or the depouille ; the marrow bones are sometimes cut out, and the paunch is stripped of its covering of fat.

Some idea of the immense number of Bisons to be still seen on the wild prairies, may be formed from the following account, given to us by Mr. KIPP, one of the principals of the American Fur Company. " While he was travelling from Travers' Bay to the Mandan nation in the month of August, in a cart heavily laden, he passed through herds of Buffalo for six days in succession. At another time he saw the great prairie near Fort Clark on the Missouri river, almost blackened by these animals, which covered the plain to the hills that bounded the view in all directions, and probably extended farther.

When the Bisons first see a person, whether white or red, they trot or canter off forty or fifty yards, and then stop suddenly, turn their heads and gaze on their foe for a few moments, then take a course and go off at full speed until out of sight, and beyond the scent of man.

Although large, heavy, and comparatively clumsy, the Bison is at times brisk and frolicksome, and these huge animals often play and gambol about, kicking their heels in the air with surprising agility, and throwing their hinder parts to the right and left alternately, or from one side to the other, their heels the while flying about and their tails whisking in the air. They are very impatient in the fly and mosquito season, and are often seen kicking and running against the wind to rid themselves of these tormentors.

The different Indian tribes hunt the Buffalo in various ways: some pursue them on horseback and shoot them with arrows, which they point with old bits of iron, or old knife blades. They are rarely expert in loading or re-loading guns, (even if they have them,) but in the closely contested race between their horse and the animal, they prefer the rifle to the bow and arrow. Other tribes follow them with patient perseverance on foot, until they come within shooting distance, or kill them by stratagem.

The Mandan Indians chase the Buffalo in parties of from twenty to fifty, and each man is provided with two horses, one of which he rides, and the other being trained expressly for the chase, is led to the place where the Buffaloes are started. The hunters are armed with bows and arrows, their quivers containing from thirty to fifty arrows according to the wealth of the owner. When they come in sight of their game, they quit the horses on which they have ridden, mount those led for them, ply the whip, soon gain the flank or even the centre of the herd, and shoot their arrows into the fattest, according to their fancy. When a Buffalo has been shot, if the blood flows from the nose or mouth, he is considered mortally wounded; if not, they shoot a second or a third arrow into the wounded animal.

The Buffalo, when first started by the hunters, carries his tail close down between the legs; but when wounded, he switches his tail about, especially if intending to fight his pursuer, and it behooves the hunter to watch these movements closely, as the horse will often shy, and without due care the rider may be thrown, which when in a herd of Buffalo is almost certain death. An arrow will kill a Buffalo instantly if it takes effect in the heart, but if it does not reach the right spot, a dozen arrows will not even arrest one in his course, and of the wounded, many run out of sight and are lost to the hunter.

At times the wounded Bison turns so quickly and makes such a sudden rush upon the hunter, that if the steed is not a good one and the rider perfectly cool, they are overtaken, the horse gored and knocked down, and the hunter thrown off and either gored or trampled to death. But if the horse is a fleet one, and the hunter expert, the Bison is easily outrun and they escape. At best it may be said that this mode of Buffalo hunting is

dangerous sport, and one requires both skill and nerve to come off successfully.

The Gros Ventres, Blackfeet and Assinaboines often take the Buffalo in large pens, usually called parks, constructed in the following manner.

Two converging fences built of sticks logs and brushwood are made, leading to the mouth of a pen somewhat in the shape of a funnel. The pen itself is either square or round, according to the nature of the ground where it is to be placed, at the narrow end of the funnel, which is always on the verge of a sudden break or precipice in the prairie ten or fifteen feet deep, and is made as strong as possible. When this trap is completed, a young man very swift of foot starts at daylight, provided with a Bison's hide and head, to cover his body and head when he approaches the herd that is to be taken, on nearing which he bleats like a young Buffalo calf, and makes his way slowly towards the mouth of the converging fences leading to the pen. He repeats this cry at intervals, the Buffaloes follow the decoy, and a dozen or more of mounted Indians at some distance behind the herd gallop from one side to the other on both their flanks, urging them by this means to enter the funnel, which having done, a crowd of men women and children come and assist in frightening them, and as soon as they have fairly entered the road to the pen beneath the precipice, the disguised Indian, still bleating occasionally, runs to the edge of the precipice, quickly descends, and makes his escape, climbing over the barricade or fence of the pen beneath, while the herd follow on till the leader (probably an old bull) is forced to leap down into the pen, and is followed by the whole herd, which is thus ensnared, and easily destroyed even by the women and children, as there is no means of escape for them.

This method of capturing the Bison is especially resorted to in October and November, as the hide is at that season in good condition and saleable, and the meat can be preserved for the winter supply. When the Indians have thus driven a herd of Buffalo into a pen, the warriors all assemble by the side of the enclosure, the pipe is lighted, and the chiefs smoke to the honour of the Great Spirit, to the four points of the compass, and to the herd of Bisons. As soon as this ceremony has ended, the destruction commences, guns are fired and arrows shot from every direction at the devoted animals, and the whole herd is slaughtered before the Indians enter the space where the Buffaloes have become their victims. Even the children shoot tiny arrows at them when thus captured, and try the strength of their young arms upon them.

It sometimes happens, however, that the leader of the herd becomes alarmed and restless while driving to the precipice, and should the fence be weak, breaks through, and the whole drove follow and escape. It also some

times occurs, that after the Bisons are in the pen, which is often so filled that they touch each other, the terrified crowd swaying to and fro, their weight against the fence breaks it down, and if the smallest gap is made, it is immediately widened, when they dash through and scamper off, leaving the Indians in dismay and disappointment. The side fences for the purpose of leading the Buffaloes to the pens extend at times nearly half a mile, and some of the pens cover two or three hundred yards of ground. It takes much time and labour to construct one of these great traps or snares, as the Indians sometimes have to bring timber from a considerable distance to make the fences and render them strong and efficient.

The Bison has several enemies: the worst is, of course, man; then comes the grizzly bear; and next, the wolf. The bear follows them and succeeds in destroying a good many; the wolf hunts them in packs, and commits great havoc among them, especially among the calves and the cows when calving. Many Buffaloes are killed when they are struggling in the mire on the shores of rivers where they sometimes stick fast, so that the wolves or bears can attack them to advantage; eating out their eyes and devouring the unresisting animals by piecemeal.

When we were ascending the Missouri river, the first Buffaloes were heard of near Fort Leavenworth, some having a short time before been killed within forty miles of that place. We did not, however, see any of these animals until we had passed Fort Croghan, but above this point we met with them almost daily, either floating dead on the river, or gazing at our steamboat from the shore.

Every part of the Bison is useful to the Indians, and their method of making boats, by stretching the raw hide over a sort of bowl-shaped frame work, is well known. These boats are generally made by the women, and we saw some of them at the Mandan village. The horns are made into drinking vessels, ladles, and spoons. The skins form a good bed, or admirable covering from the cold, and the flesh is excellent food, whether fresh or dried or made into pemmican; the fat is reduced and put up in bladders, and in some cases used for frying fish, &c.

The hide of the Buffalo is tanned or dressed altogether by the women, or squaws, and the children; the process is as follows: The skin is first hung on a post, and all the adhering flesh taken off with a bone, toothed somewhat like a saw; this is performed by scraping the skin downwards, and requires considerable labour. The hide is then stretched on the ground and fastened down with pegs; it is then allowed to remain till dry, which is usually the case in a day or two. After it is dry the flesh side is pared down with the blade of a knife fastened in a

bone, called a grate, which renders the skin even and takes off about a quarter of its thickness. The hair is taken off with the same instrument and these operations being performed, and the skin reduced to a proper thickness, it is covered over either with brains, liver or grease, and left for a night. The next day the skin is rubbed and scraped either in the sun or by a fire, until the greasy matter has been worked into it, and it is nearly dry ; then a cord is fastened to two poles and over this the skin is thrown, and pulled, rubbed and worked until quite dry ; after which it is sewed together around the edges excepting at one end ; a smoke is made with rotten wood in a hole dug in the earth, and the skin is suspended over it, on sticks set up like a tripod, and thoroughly smoked, which completes the tanning and renders the skin able to bear wet without losing its softness or pliability afterwards.

Buffalo robes are dressed in the same manner, only that the hair is not removed and they are not smoked. They are generally divided into two parts : a strip is taken from each half on the back of the skin where the hump was, and the two halves, or sides, are sewed together after they are dressed, with thread made of the sinews of the animal ; which process being finished, the robe is complete and ready for market.

The scrapings of the skins, we were informed, are sometimes boiled with berries, and make a kind of jelly which is considered good food in some cases by the Indians. The strips cut off from the skins are sewed together and make robes for the children, or caps, mittens, shoes, &c. The bones are pounded fine with a large stone and boiled, the grease which rises to the top is skimmed off and put into bladders. This is the favourite and famous marrow grease, which is equal to butter. The sinews are used for stringing their bows, and are a substitute for thread ; the intestines are eaten, the shoulder-blades made into hoes, and in fact (as we have already stated) nothing is lost or wasted, but every portion of the animal, by the skill and industry of the Indians, is rendered useful.

Balls are found in the stomach of the Buffalo, as in our common domestic cattle.

Having heard frequent discussions respecting the breeding of the Bison in a domesticated state, and knowing that ROBERT WICKLIFFE, Esq., of Kentucky, had raised some of these animals, we requested his son, then on his way to Europe, to ask that gentleman to give us some account of their habits under his care, and shortly afterwards received a letter from him, dated Lexington Nov. 6th, 1843, in which he gives an interesting account of the Bison breeding with the common cow, and other particulars connected with this animal. After expressing his desire to comply with our request intimated to him by his son, he proceeds to give us the following

information : "as far," he writes, "as his limited knowledge of natural history and his attention to these animals will permit him to do." He proceeds : "The herd of Buffalo I now possess have descended from one or two cows that I purchased from a man who brought them from the country called the Upper Missouri ; I have had them for about thirty years, but from giving them away and the occasional killing of them by mischievous persons, as well as other causes, my whole stock at this time does not exceed ten or twelve. I have sometimes confined them in separate parks from other cattle, but generally they herd and feed with my stock of farm cattle. They graze in company with them as gently as the others. The Buffalo cows, I think, go with young about the same time the common cow does, and produce once a year ; none of mine have ever had more than one at a birth. The approach of the sexes is similar to that of the common bull and cow under similar circumstances at all times when the cow is in heat, a period which seems, as with the common cow, confined neither to day, nor night, nor any particular season, and the cows bring forth their young of course at different times and seasons of the year, the same as our domesticated cattle. I do not find my Buffaloes more furious or wild than the common cattle of the same age that graze with them.

"Although the Buffalo, like the domestic cow, brings forth its young at different seasons of the year, this I attribute to the effect of domestication, as it is different with all animals in a state of nature. I have always heard their time for calving in our latitude was from March until July, and it is very obviously the season which nature assigns for the increase of both races, as most of my calves were from the Buffaloes and common cows at this season. On getting possession of the tame Buffalo, I endeavoured to cross them as much as I could with my common cows, to which experiment I found the tame or common bull unwilling to accede, and he was always shy of a Buffalo cow, but the Buffalo bull was willing to breed with the common cow.

"From the domestic cow I have several half breeds, one of which was a heifer ; this I put with a domestic bull, and it produced a bull calf. This I castrated, and it made a very fine steer, and when killed produced very fine beef. I bred from the same heifer several calves, and then, that the experiment might be perfect, I put one of them to the Buffalo bull, and she brought me a bull calf which I raised to be a very fine large animal, perhaps the only one to be met with in the world of his blood, viz., a three quarter, half quarter, and half quarter of the common blood. After making these experiments, I have left them to propagate their breed themselves, so that I have only had a few half breeds, and they always prove the same, even by a Buffalo bull. The full blood is not as large as the improved

stock, but as large as the ordinary cattle of the country. The crossed or half blood are larger than either the Buffalo or common cow. The hump, brisket, ribs and tongue of the full and half blooded are preferable to those of the common beef, but the round and other parts are much inferior. The udder or bag of the Buffalo is smaller than that of the common cow, but I have allowed the calves of both to run with their dams upon the same pasture, and those of the Buffalo were always the fattest; and old hunters have told me, that when a young Buffalo calf is taken, it requires the milk of two common cows to raise it. Of this I have no doubt, having received the same information from hunters of the greatest veracity. The bag or udder of the half breed is larger than that of full blooded animals, and they would, I have no doubt, make good milkers.

“The wool of the wild Buffalo grows on their descendants when domesticated, but I think they have less of wool than their progenitors. The domesticated Buffalo still retains the grunt of the wild animal, and is incapable of making any other noise, and they still observe the habit of having select places within their feeding grounds to wallow in.

“The Buffalo has a much deeper shoulder than the tame ox, but is lighter behind. He walks more actively than the latter, and I think has more strength than a common ox of the same weight. I have broke them to the yoke, and found them capable of making excellent oxen; and for drawing wagons, carts, or other heavily laden vehicles on long journeys, they would, I think, be greatly preferable to the common ox. I have as yet had no opportunity of testing the longevity of the Buffalo, as all mine that have died, did so from accident or were killed because they became aged. I have some cows that are nearly twenty years old, that are healthy and vigorous, and one of them has now a sucking calf.

“The young Buffalo calf is of a sandy red or rufous colour, and commences changing to a dark brown at about six months old, which last colour it always retains. The mixed breeds are of various colours; I have had them striped with black, on a gray ground like the zebra, some of them brindled red, some pure red with white faces, and others red without any markings of white. The mixed bloods have not only produced in my stock from the tame and the Buffalo bull, but I have seen the half bloods reproducing; viz.: those that were the product of the common cow and wild Buffalo bull. I was informed that at the first settlement of the country, cows that were considered the best for milking, were from the half blood, down to the quarter, and even eighth of the Buffalo blood. But my experiments have not satisfied me that the half Buffalo bull will produce again. That the half breed heifer will be productive from either race, as I have before stated, I have tested beyond the possibility of a doubt.

"The domesticated Buffalo retains the same haughty bearing that distinguishes him in his natural state. He will, however, feed or fatten on whatever suits the tame cow, and requires about the same amount of food. I have never milked either the full blood or mixed breed, but have no doubt they might be made good milkers, although their bags or udders are less than those of the common cow; yet from the strength of the calf, the dam must yield as much or even more milk than the common cow."

Since reading the above letter, we recollect that the Buffalo calves that were kept at Fort Union, though well fed every day, were in the habit of sucking each other's ears for hours together.

There exists a singular variety of the Bison, which is however very scarce, and the skin of which is called by both the hunters and fur traders a "beaver robe." These are valued so highly that some have sold for more than three hundred dollars. Of this variety Mr. CULBERTSON had the goodness to present us with a superb specimen, which we had lined with cloth, and find a most excellent defence against the cold, whilst driving in our wagon during the severity of our northern winters.

GEOGRAPHICAL DISTRIBUTION.

The range of the Bison is still very extensive; but although it was once met with on the Atlantic coast, it has, like many others, receded and gone west and south, driven onward by the march of civilization and the advance of the axe and plough. His habits, as we have seen, are migratory, and the extreme northern and southern limits of the wandering herds not exactly defined. Authors state, that at the time of the first settlement of Canada it was not known in that country, and SAGARD THEODAT mentions having heard that bulls existed in the far west, but saw none himself. According to Dr. RICHARDSON, Great Slave Lake, latitude 60°, was at one time the northern boundary of their range; but of late years, according to the testimony of the natives, they have taken possession of the flat limestone district of Slave Point on the north side of that lake, and have wandered to the vicinity of Great Marten Lake, in latitude 63° or 64°. The Bison was not known formerly to the north of the Columbia river on the Pacific coast, and LEWIS and CLARK found Buffalo robes were an important article of traffic between the inhabitants of the east side and those west of the Rocky mountains.

The Bison is spoken of by HERNANDEZ as being found in New Spain or Mexico, and it probably extended farther south. LAWSON speaks of

two Buffaloes that were killed in one season on Cape Fear river, in North Carolina. The Bison formerly existed in South Carolina on the seaboard, and we were informed that from the last herd seen in that State, two were killed in the vicinity of Columbia. It thus appears that at one period this animal ranged over nearly the whole of North America.

At the present time, the Buffalo is found in vast herds in some of the great prairies, and scattered more sparsely nearly over the whole length and breadth of the valleys east and west that adjoin the Rocky Mountain chain.



Audubon, John James and Bachman, John. 1851. "Bison americanus, American Bison, or Buffalo [Pl. LVII, female, male and young]." *The quadrupeds of North America* 2, 32–55. <https://doi.org/10.5962/p.322378>.

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