

observing it; and ~~the~~ while it advised them that there was at least one band of freebooters that they were not likely to meet, it served also apparently to make them a little more nervous than they had been before on the general subject of Indians, and to intensify their excitement at disturbances among their horses, that occurred on the two succeeding nights. 9 The alarm which occurred on the night of the 26th was the occasion of the party's starting ~~in the morning~~ ^{forward} on the morning of the 27th at an earlier hour than usual. Their experience with the buffalo this day, is thus related:

"We rode on through the same uninteresting and dreary country as before, but were constantly amused at observing ~~the~~ the motions of the countless thousands of bisons, by which we were all the time surrounded. The wind happening to blow fresh from the south, the scent of our party was borne directly across the Platte, and we could distinctly note every step of its progress through a distance of eight or ten miles, by the consternation and terror it excited among the buffaloes. The moment the tainted gale infected their atmosphere, they ran with as much violence as if pursued by a party of mounted hunters, and instead of running from the danger, turned their heads toward the wind; eager to escape from the terrifying scent, they pushed forward in an oblique direction towards our party, and plunging into the river they swam and waded, and ran with the utmost violence, in several instances breaking through our line of march, which was immediately along the left 10 [left in ascending, really the right] bank of the Platte. One of the party, perceiving from the direction taken by the bull that preceded ~~the~~ the extended column of his companions, that he intended to emerge from the low river bottom at a particular point where the precipitous bank was worn, by much travelling, into a deep notch, urged his horse rapidly forward to gain this station, that he might have a near view of these interesting animals; he had no sooner arrived at this point, than the formidable leader, bounding up the steep, gained the summit of the bank, with his fore feet, and in this position abruptly halted from his full career, and glared fiercely at the horse, which now occupied his path. The horse, trembling violently from fear of this sudden apparition, would have wheeled and exerted his utmost speed, had he not been restrained by the greatest strength of his rider; he recoiled however a few feet, and sunk down upon his hams. The bull halted but a moment, then being urged forward by the irresistible impulse of the moving column behind, rushed onward by the half sitting horse. The multitude came swiftly on, crowding up the narrow defile. The party had now arrived, and ex-

6.

tending along a considerable distance, the bisons ran in a confused manner in various directions to gain the distant bluffs; numbers were compelled to pass through our line of march, between the horses. This scene, added to the plunging and roaring in the river of those that were crossing, produced a grand effect, which was still heightened by the fire opened upon them by our hunters. As they ascended ~~xx~~ the bank, innumerable opportunities offered of selecting and killing the fattest; and it was with difficulty we restrained our hunters from slaughtering many more than we needed.

"It is remarked by hunters, and appears to be an established fact, that the odour of a white man is more terrifying to wild animals, particularly the bison, than that of an Indian.....

"It is well known to those in the least degree conversant with the Indians, that the odour which their bodies exhale, though very strong and peculiar, is by no means unpleasant, at least to most persons. A negro in the employment of the Missouri fur company, and living at fort Lisa, was often heard to complain of the intolerable scent of the squaws; in like manner the Indians find the odour of a white man extremely offensive.".....

West of the range of hills, or bluffs, mentioned under date of 26th, Long's party found the country relatively smooth again, with increasing inclination, and the river narrower, swifter, and precipitously bordered, as it gradually rose through the rock formations that formed the ~~substrata~~ substrata of the bluffs. Several extensive and curious salt-licks, nearly barren of vegetation, were passed. "The surface of these consisted of coarse sand and gravel, with here [and] there an insulated mass of clay, highly impregnated with salt, and gnawed and licked into various singular shapes, exhibiting the forms of massive insulated columns, huge buttresses, prominent angles and profound excavations, fortuitously mingled, and which are now gradually diminishing under the action of the cause which produced them. The present surface upon which they repose, seems to be a stratum of a different earth, which does not afford the condiment so attractive to the animals; the consequence is that the licking and chewing, principally heretofore affecting the surface on which the animal stood, is now directed against the upright portions of this singular grand excavation and most remarkable of all known salt links.

"Some extensive portions of the immediate bottom land along the river, were white with an effloresced salt; but this, being impure and but imperfectly soluble, did not appear to have been licked."

Two springs of clear but impure and brackish water, passed on the evening of the 27th, were the first the party had met with on the

Continued on
6a

Platte. The white-stalked evening primrose, Oenothera albicaulis, a small white-flowered Talinum, and a number of other plants which Dr. James supposed to be undescribed, were observed or collected during the day.

"We observed in repeated instances several individuals of a singular genus of reptiles (Chirotres, Cuv.) which, in form, resemble short serpents, but are more closely allied to the lizards, by being furnished with two feet. They were so active that it was not without some

afterward the mountains were carried off by descenders.

difficulty that we succeeded in obtaining a specimen." ^{This specimen was lost, and the description of it, made on the spot, formed part of the notes which, on the return journey from} On the 28th, several herds of wild horses were seen, and three small

Insert
XX
Insert
XX

"At night we were again alarmed by a disturbance among our horses, of which we were not able to ascertain the cause. Some of the party had, on the preceding day, reported that they had seen Indians at a distance, that they were on horse back, &c.; but of this there could be no certainty, the imagination often representing a herd of antelopes or other animals, seen at a distance and perhaps distorted by the looming of the prairie, as so many mounted Indians. We had often found ourselves more grossly abused by our eye-sight than is supposed in this instance, having mistaken turkeys for bisons, wolves for horses, &c."

the word of Crow origin. In the related Minitari language, we took the place of and we have noticed it being there, and another chronic disease (Halliburton, 1870) and a kind of the Haidara (Indian) - 1870.

~~At night~~ ^{so long a stream as} ~~the~~ ^{course of} the Lodgepole, in the mountains, and the lower reaches of Pawnee creek, he assumed that the latter, coming from the general direction of the former, was the continuation of it. Had he known the true lower ^{night} ~~course~~ of the Lodgepole, the party he was guiding would hardly have passed and, on the ~~morning~~ ^{night} of the 28th, camped near the mouth of that stream without taking some notice of which would appear in the expedition ^{either} ~~the~~ ^{the} narrative ~~and map~~ ^{on the} Atlas.

Of the wild horses, ~~Dr. James wrote~~ Dr. James wrote, "Their activity and fleetness surpassed what we had expected from this noble animal in his savage state..... The country south of the Platte contains, as we are informed, vast numbers of horses. They are of the domesticated stock introduced by the Spaniards, but they multiply rapidly in their present state of regained freedom, and are apparently wilder than any of the native occupants of this country.* They are

Footnote

*It is a well known historical fact that, although ~~remains attest~~ ^{Tertiary and Quaternary} the former abundance of horses in America, these had become extinct, and there were no horses in the new world at the time of its discovery by Europeans, nor until the latter, ~~re-introduced~~ ^{it was reintroduced} them from across the water. — P. W. Q.

of various ~~various~~ colours, and of all sizes, there being many colts, and some mules, among them. Their playfulness seemed to be excited, rather than their fears, by our appearance, and we often saw them more than a mile distant, leaping and curvetting, involved ~~by~~ ^{by} a cloud of dust, which they seemed to delight in raising."

it was reintroduced by

continued on 6b.

On the same day, Mr. Peale killed a doe antelope, without leaving the party's line of travel. "The animal had not been able to satisfy its curiosity, and stood at a little distance gazing at us, until it was shot down."

It seems strange that no mention is made of the occurrence of the common plains rattlesnake ^(Crotalus confluentus) along ~~the river~~ the Platte; and one is tempted to surmise that the ~~same species~~ species seen on this river on this and previous days, and mentioned in the following paragraph as "military rattle snakes" ^(Sistrurus catenatus) ~~(Crotalus lateralis)~~, were called so by some oversight and were in fact the C. confluentus: "About some sandy ridges which we passed in the middle of the day, several military rattle snakes were seen, two of which were killed."

"In the afternoon hunters were sent forward, but it was not without some difficulty that a single bison was killed, these animals having become much less frequent."

To the narrative of the 28th, is appended a footnote by Say, which is in part as follows:

"A small fox was killed, which appears to be the animal mentioned by Lewis and Clark, in the account of their travels, under the name of the burrowing fox (Vol. 2. p. 351). It is very much to be regretted that, although two or three specimens of it were killed by our party, whilst we were within about two hundred miles of the Mountains, yet from the dominion of peculiar circumstances, we were unable to preserve a single entire skin; and as the description of the animal taken on the spot was lost, we shall endeavour to make the species known to naturalists, with the aid only of a head and a small portion of the neck of one individual, and a cranium of another, which are now before us."

"In magnitude the animal is hardly more than half the size of the American red fox (Canis Virginianus, ^{the} of recent authors,) to which it has ^a considerable resemblance. But, that it is an adult, and not the young of that species, the presence of the large carnivorous tooth and the two posterior molar teeth of the lower jaw, on each side, sufficiently attest; these teeth, as well as all the others, being very much worn down, prove that the milk teeth have been long since shed."

After a somewhat lengthy technical description (which we here omit) of the material in hand, on which he is to base a new species, he adds:

"The body is slender, and the tail rather long, cylindrical, and black."

"It runs with extraordinary swiftness, so much so that, when at full speed, its course has been, by the hunters, compared to the flight of a bird skimming the surface of the earth. We had opportunities of

(Continued on 69)

seeing it run with the antelope, and appearances sanctioned the belief that in fleetness it even exceeded that extraordinary animal, famed for ~~its~~ swiftness and for the singularity of its horns. Like the corsac of Asia, it burrows in the earth, in a country totally destitute of trees or bushes, and is not known to dwell in forest districts.

"If Buffon's figure of the corsac is to be implicitly relied upon, our burrowing fox must be considered as perfectly distinct, and anonymous; we would, therefore, propose for it the name of velox."

Say's Canis velox (Vulpes velox, of later authors) is now generally known as the Kit Fox, or Swift.

Returning to Dr. James' narrative of the 28th:

"Our small stock of bread was by this time so nearly exhausted, that it was thought prudent to reserve the remainder as a last resort, in case of the failure of a supply of game, or other accident. A quantity of parched maize, equal to a gill ~~per~~ ^{per} day to each man, was ~~day~~ daily distributed to each of the three messes into which the party was divided. This was thrown into the kettle where the bison meat was boiled, and supplied the place of barley in the soup, always the first and most important dish. Whenever game was plenty, we had a variety of excellent dishes, consisting of the choice parts of the bison, the tongue, the hump ribs, the marrow bones, &c., dressed in different ways. The hump ribs of the bison, which many epicures prefer to any other part of the animal, are the spinous processes of the back bone, and are from eighteen to twenty-four inches in length. They are taken out with a small portion of the flesh adhering ~~on~~ ^{to} each side, and whether roasted, boiled or stewed, are certainly very far superior to any part of the flesh of the domestic ox."

On the 29th, after travelling a few miles from camp, Mr. Say found his horse unable to keep up with ^{the} others; driving it before him, soon proved too laborious; and as several other horses were in danger of giving out, "it was determined to halt, which we did at 10 o'clock, ~~at~~ and remained in camp during the day.

"The country, for several miles to the west of the range of hills mentioned above, is as uniformly plain as that on any part of the Platte. It differs from that further to the east only in being of a coarser sand, and in an aspect of more unvaried sterility. The cactus ferox reigns ~~sole~~ ^{sole} monarch and sole possessor of thousands of acres of this dreary plain. It forms patches which neither a horse nor any other animal will attempt to pass over. The rabbit's foot plantations and a few brown and withered grasses are sparingly scattered over the intervening spaces. In depressed and moist situations, where the soil is not so entirely unproductive, the variegated spurge

(Continued on 7.)

Our com. sp. = *Plantago pensilvanica*,
Clarkson

7,
(Euphorbia variegata), with its painted involucre and parti-coloured

Footnote
leaves, is a conspicuous and beautiful ornament. The Lepidium virginicum, distributed over every part of northern and equinoctial

~~The Peppergrass observed on the Platte by Dr. James was probably a small form of L. intermedium.~~

America, from Hudson's Bay to the summit of the Silla of Caraccas*,

Footnote
*See Humb. Pers. Nar. Vol. 3. page 500."

is here of such diminutive size that we were induced to search, though we sought in vain, for some character to distinguish it as a separate species.*

Footnote
*The Peppergrass observed here by Dr. James, was probably a small form of L. intermedium.

"At three o'clock P.M. the planet Venus was distinctly visible. Its distance from the sun at 3h. 45m. was east $36^{\circ} 15'$. There were a few broken cumulo-stratose clouds from the southwest; otherwise the sky was clear, and near the zenith, where the star was seen, of a deep and beautiful azure. Our actual elevation, at this time, must have been considerable, and might be supposed to effect in some degree the transparency of our atmosphere.

"Several magpies were seen about the islands in the river, where it is probable they rear their young."

On the 30th, the travellers, "at eight o'clock, were cheered by a distant view of the Rocky Mountains," and of these the doctor ^{wrote} ~~wrote~~ "For some time we were unable to decide whether what we saw were

~~we saw were~~ mountains or banks of cumulous clouds skirting the horizon and glittering in the reflected rays of the sun. It was only by watching the bright parts, and observing that their form and position remained unaltered, that we were able to satisfy ourselves, they were indeed mountains. They were visible from the lowest parts of the plain, and their summits were, when first discovered, several degrees above ^{our} ~~the~~ horizon. They became visible by detaching themselves from the sky beyond, and not by emerging from beneath the sensible horizon. Our first views of the mountains were indistinct, on account of some smokiness of the atmosphere, ~~but~~ but from our encampment at noon we had a very distinct and satisfactory prospect of them. A small part only of the intervening plain was visible, the convexity of the surface intercepting the view from ^{our} ~~the~~ base of the mountains and that portion of the plains adjacent to it.

"Snow could be seen on every part of them which was visible ^{above our horizon} ~~above our~~ horizon."