

1819-1820

Account of an Expedition from Pittsburgh to the Rocky Mountains

Performed in the Years 1819, 1820. By order of
the Hon. J. C. Calhoun, Secretary of War, under
the command of Maj. S. H. Long, of
the U. S. Top. Engineers

Compiled from the notes of Major Long, Mr. T. Say,
and other gentlemen of the Party
By Edwin James
Botanist and geologist to the Expedition

Edited with Notes, Introductions, Index, etc., by
Reuben Gold Thwaites, LL.D.

Editor of "The Jesuit Relations and Allied Documents," "Original
Journals of the Lewis and Clark Expedition," etc.

(Separate publication from "Early Western Travels: 1748-1846,"
in which series this reprint appeared as Volumes XIV,
XV, XVI, and XVII)

Volume I

Mutton collector

Cleveland, Ohio
The Arthur H. Clark Company
1905

*See Bib. of John Douglady -
mt. man to wish for trade v. 8
(a to class, Glenn, 1971)*

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COMPILED
FROM THE NOTES OF MAJOR LONG, MR. T. SAY,
AND OTHER GENTLEMEN OF THE PARTY,
By EDWIN JAMES,
BOTANIST AND GEOLOGIST TO THE EXPEDITION.

IN THREE VOLUMES.

VOL. I.

LONDON:
PRINTED FOR
LONGMAN, HURST, REES, ORME, AND BROWN,
PATERNOSTER-ROW.
1823.

souri. This name was given it by the boatmen and the earliest settlers, on account of several narrow beds of coal, which appear a few feet from the water's edge, at the base of a high cliff of soft sandstone. The smell of sulphur is very perceptible along the bank of the river, occasioned doubtless by the decomposition of pyrites, in the exposed parts of the coal beds. Some small masses of sulphate of lime also occur, and have probably derived their origin from the same source.

At St. Charles we were joined by Maj. O'Fallon, agent for Indian affairs in Missouri, and his interpreter, Mr. John Dougherty, who had travelled by land from St. Louis.⁹² When Lewis and Clark ascended the Missouri, the town of St. Charles was said to contain one hundred houses, the inhabitants deriving their support principally from the Indian trade. This source having in a great measure failed, on account of the disappearance of the aborigines, before the rapid advances of the white population, the town remained in a somewhat declining condition for several years; but as the surrounding country was soon occupied by an agricultural population, a more permanent though less lucrative exchange is taking the place of the Indian trade. Accordingly within two or three years, many substantial brick buildings had been added, and several were now in progress: we could enumerate, how-

⁹²This was Benjamin O'Fallon, whose mother was the youngest sister of George Rogers and William Clark; his father, Dr. James O'Fallon, was a Revolutionary character and prominent Kentucky pioneer. A brother, John O'Fallon, was in the middle of the century, one of the most prominent citizens of St. Louis.

John Dougherty was later for many years agent for the Oto, Pawnee, and Omaha tribes.—ED.

ever, only about one hundred houses. There are two brick kilns, a tanyard, and several stores.⁹³

A mile or two below St. Charles, are many trunks of trees projecting from the bank, like those mentioned at Bellefontain. In the face of the banks are usually great numbers of the holes made by the bank-swallow for its nest, and the birds themselves are frequently seen.

At St. Charles, arrangements were made for the purpose of transporting baggage for such of the gentlemen [65] of the party as should choose to ascend the Missouri by land, that they might have the better opportunities for investigating the natural history of the country. Messrs. Say, Jessup, Peale, and Seymour, having provided themselves with a horse and pack-saddle, on which they fastened their blankets, a tent, and some provisions, accompanied by one man, left St. Charles at 7 o'clock on the morning of the 26th, intending to keep nearly an equal pace with the steam-boat, in order to rejoin it as occasion might require. Dr. Baldwin, still confined by debility and lameness, was compelled to forego the pleasure of accompanying them.

The Western Engineer proceeded on her voyage, soon after the departure of Mr. Say and his detachment. Having grounded several times in the course of the day, and contending all the way against a heavy current, she proceeded but a few miles. We passed some rocky cliffs; but in general the immediate banks of the river presented the same appearance as below, consisting of a recent alluvium. After we had anchored at evening, Dr. Baldwin

⁹³ For St. Charles, see Bradbury's *Travels*, in our volume v, note 9.—ED.

Messrs. Say, Jessup, Seymour, and Dougherty, accompanied by Major Biddle, left Franklin on the 19th of July, intending to traverse the country by land, to Fort Osage, where they proposed to await the arrival of the steam-boat. A pack-horse was purchased [89] for the transportation of their baggage, and a tent, blankets, and provisions, furnished for their accommodation.

The party now remaining on board the steam-boat, consisted of Major Long, Major O'Fallon, Mr. Peale, and Lieutenants Graham and Swift. Having completed some repairs of machinery, and other necessary operations, which had occasioned a delay of six days at Franklin, we left that place on the same day, at four o'clock in the afternoon. The inhabitants of the village were assembled on the banks of the river to witness our departure, and signified their good wishes by repeated cheers and acclamations. The fuel we had taken on board, being of an indifferent quality, we were able to make small progress against the rapid current of the Missouri. We anchored, for the night, three miles above Franklin. Finding the valves, and other parts of the steam-engine, so much worn by the fine sand, suspended in the water of the river, as to become leaky, we were compelled to lie by, and were occupied for a day in making repairs. In the meantime the boat's crew were employed in taking on board a supply of dry mulberry wood, which is the best that the forests along the Missouri afford. The water in the river was now subsiding, and the rapidity of the current consequently diminishing; we did not, therefore, so much regret the necessary delays, as we might otherwise have done. Some of the party went out on the south-west side of the river, to search for game. Most of the deer, and larger animals, as well as

We followed the old channel, which is much obstructed by trunks of trees and sand-bars, and after a few hours succeeded in ascending this dangerous pass. Compact limestone, and argillaceous sandstone, occur frequently along the Missouri, above the mouth of Grand river, and indications of coal are often met with. In a country affording but an insufficient supply of timber for the consumption of a dense population, these extensive beds of fossil coal will be considered of great value, and the necessities of the inhabitants will lead to their early exploration. Whenever the dominion of man is sufficiently established in these vast plains to prevent the annual ravages of fires, trees will spring up; but we may expect that before forests originating in this manner can arrive at maturity, the population along the banks of the Missouri will become so dense, as to require the greater part of the soil for the purposes of culture.

The beds of coal in this district lie horizontally, varying much in thickness, and occurring often at an elevation of a few feet above the surface of the water in the Missouri.¹²⁶

On the first of August we arrived at Fort Osage, one hundred and five miles above the mouth of Grand river. Here Mr. Say and his party had been some days encamped, having arrived on the 24th of July from their equestrian journey across the country from Franklin. After leaving that place on the 19th, they passed through a fine bottom on the left side of the river, closely covered with forests of oaks, elms, hackberry, walnut, the mulberry, the *gle-ditschia*, the *guilandina*, and the other trees common on

¹²⁶ The coal-fields of Missouri have an area of about twenty-six thousand square miles; a line drawn southwest from the mouth of the Des Moines River to Vernon County roughly bounds the district. Northwest of this line every county contains coal, and there are outlying patches on the southeast.— Ed.

the Missouri, for twelve miles, when they arrived at Arrow rock, where is a ferry by which they crossed [93] the Missouri. In this walk they passed a field of corn, containing seven hundred acres. The ferry boat used at Arrow rock is one peculiarly adapted to the navigation of a rapid stream. It consists of two canoes, on which rests a platform, with a slight railing to prevent cattle from falling off.

Arrow rock is so called from its having been formerly resorted to, by the neighbouring Indians, for the stone used to point their arrows. It is a beautiful situation, and rises to considerable elevation above the water.¹²⁷ From its summit is a pleasing view of the river, and near the base is a remarkable eddy, which, as they were crossing, whirled their ferry-boat entirely round. On the second day they left their encampment at an early hour, and travelled forward through plains where very few trees were to be seen. They turned off from the Osage trace, in which they had been travelling, and went eight miles to visit the salt-works, and some remarkable diggings, on the saline fork of the Le Mine. Here, at one establishment, one hundred bushels of salt are manufactured per week; eight men are employed, and one hundred and eighty gallons of water are evaporated to produce a bushel of salt.¹²⁸

¹²⁷ Arrow Rock (the *Pierre à flèche* of early French explorers) stands on the west side of the river, in Saline County. The first settlements in the county were made in the neighboring bottoms, and the earliest ferry west of Franklin crossed the river at this point. The rock gave its name to a town founded in 1829, which for a time was the county seat and an important shipping point.—Ed.

¹²⁸ Le Mine (Lamine, or La Mine) River empties into the Missouri seven miles above Booneville, Cooper County. Renaudière named the stream *Rivière à la Mine*, in 1723. It is about a hundred and thirty miles long. Salt Fork, here called "saline fork," the principal tributary, crosses Saline county roughly parallel with the Missouri.—Ed.

Two miles from the confluence of the Camp Fork with the Saline, are the salt-works, and the residence of Mr. Lockhart, who received the detachment with much hospitality.

His works were not then in operation, but were sufficiently extensive for the manufacture of five hundred bushels of salt per week. Near his house are the *diggings* so often mentioned in this region as objects of curiosity. These are irregular, but very numerous excavations of little depth, but evidently the result of the united labours of many persons who were possessed of instruments of iron and steel, as no others could have penetrated, and removed the compact rocky soil, of which the points and brows of the hills are composed. These excavations occur frequently [94] in an extent of two or three miles; and from the amount of labour which appears to have been expended on them, it has been thought by some, that several hundred men must have been occupied two or three years in digging them; but this is, doubtless, much overrated. Whoever were the labourers, it is probable their search was for the precious metals, though at present no indications of any metallic ores, except of a little iron, are perceptible about the diggings. Mr. Lockhart had sunk a shaft to the depth of twenty-two feet, but the appearances continued the same as at the surface.¹²⁹

After travelling forty miles from Arrow rock, for great part of the way through open plains, where the high grass

¹²⁹ In 1720 Philip Renault, director-general of mines of the French colonies in America, sent prospecting parties from Fort Chartres, into Missouri and Arkansas, to seek gold and silver. These curious "diggings" are by some supposed to have been made by his men. Charles Lockhart, mentioned in the text, employed a number of men in 1819 in digging over some of these old pits, but without making any important discoveries.—ED.

and weeds rendered their progress difficult and laborious, they pitched their tent, on the evening of July 21st, on a branch of the Le Mine. Here they saw four Mississippi kites. The forks of the tail of this bird are so much elongated as to resemble some fortuitous appendage, for which, at first sight, they are often mistaken. Sandhill cranes, and flocks of prairie hens were also seen, but were so shy as not to be taken without much difficulty.

The country about the Le Mine is beautiful and fertile. The unaccustomed eye, in roving over those extensive undulating prairies, is beguiled by the alternation of forests and meadows, arranged with an appearance of order, as if by the labour of men, and seeks in vain to repose upon some cottage or mansion embosomed in the little copses of trees, or in the edge of the forest, which margins the small streams and ravines in the distance.

Their provisions being nearly exhausted, the detachment delayed a short time at their encampment on the Le Mine, to replenish their stock by hunting. This camp was near a place called the Grand Pass, a narrow neck of prairie between the timber of the Saline, and that of a small creek discharging directly [95] into the Missouri. Here the Osage trace passes, and a little beyond falls into a waggon-road leading to the Tabeau settlement.¹³⁰

On the 22nd Major Biddle experienced a severe attack of cramp in the stomach, but soon found some relief from

¹³⁰ Grand Pass received its name from the fact that the Osage trace, connecting farther west with the Santa Fé trail, here followed the narrow divide between Salt Fork and the Missouri bottom. This "pass" is about a mile and a half long, and in one place so narrow that a stone can be thrown across. A hotel was built here in 1835, and a small village now occupies the spot. For a short time during a flood in 1875, part of the water of Salt Fork flowed across the divide.— Ed.

swallowing a quantity of ginger, the only medicine with which they were provided. On the following day they entered the forests of the Missouri bottom, and soon after crossed the Tabeau, where a town of the same name, at that time containing two houses, had been established. Tabeau is the name of a Canadian hunter, who formerly frequented this region.¹³¹ The creek is navigable to the site of the projected town, about one mile from the Missouri, having for this distance about six feet of water. Four miles from this place they crossed the Little Tabeau, and at evening pitched their tent on a stream called the Little Chenal au Barre, about a mile and a half from the Missouri. Here is a good mill seat. The Great and Little Chenal au Barre, are two creeks entering the Missouri about a mile and a half from each other. Before the mouths of these two creeks is a large island, the slough or *Chenal* dividing this island from the shore, received the additional name of Au Barre from a hunter known by that appellation, who was lost here for some time, successively ascending the two creeks, which he mistook for the Missouri; hence the name of Chenal au Barre island, Great and Little Chenal au Barre Creek, &c.¹³²

In the afternoon they halted to rest at the cabin of a hunter on Fire Prairie Creek, so called from the circumstance of three or four Indians having been burned to death by the sudden conflagration of the dry grass in the

¹³¹ The entire courses of both the Tabeau and Little Tabeau are within Lafayette County. The mouth of the larger is near the boundary between Ray and Carroll counties. The name is sometimes erroneously spelled Tabo and Tebo.—ED.

¹³² For derivation of this name, see Brackenridge's *Journal*, in our volume vi, note 14.—ED.

meadows at its source.¹³³ Here Mr. Say had an opportunity to examine a young black wolf, which was confined by a chain at the door of the hut. These animals are common in this part of the country. This individual was one of five that had been taken from the same den. It had become [96] familiar with the hunter and his family, but was shy towards strangers. When fed on meat the ferocity of his disposition manifested itself in attempts to bite the children. It was ordinarily fed on bread and milk.

This man had been settled here two years, but had not "made a crop," having subsisted himself and his family by hunting, wherein he had been very successful. In the preceding autumn he had killed seventy deer and fifty bears. He took great pleasure in relating his hunting adventures, particularly his engagements with bears. One bear which he had killed, he said, weighed seven hundred pounds; but in this instance he was probably mistaken. He had seen in the winter of 1818, a large herd of bisons near the Grand Pass; but they had been driven down by the severity of the weather, and were not ordinarily to be found within the limits of his hunting excursions. During the severe wintry weather, he affirmed that bears make for themselves a shelter of brushwood, into which they creep to secure themselves from the cold.

From May until July the female of the common deer conceals her young whilst she goes to feed. It is at this time that the hunters take advantage of the maternal feel-

¹³³ This stream debouches at the boundary between Jackson and Lafayette counties, south of the Missouri. Its name is usually shortened to Fire Creek. Lewis and Clark applied the name Fire Prairie Creek to a stream which entered from the north. No stream nearer than Clear Creek, or Fishing Creek, five miles above Fire Creek, answers their description.—ED.

ings of the animal to secure their prey. They conceal themselves and imitate the cry of the fawn. The solicitude of the parent animal for her young overcomes her usual care for her own safety; and believing she hears the cries of her offspring in distress, she hurries toward the spot where the hunter lies concealed, and falls an easy prey.¹³⁴

¹³⁴ A variety of this species, the *Cervus Virginianus*, three specimens of which occurred at Engineer cantonment, had all the feet white near the hoofs, and extending to them on the hind part from a little above the spurious hoofs. This white extremity was divided upon the sides of the foot by the general colour of the leg, which extended down near to the hoof, leaving a white triangle in front, of which the point was elevated rather higher than the spurious hoofs. The black mark upon the lower lip, rather behind the middle of the sides, was strongly noted —

Total length, exclusive of hair, at tip of tail -	-	-	5 ft. 4½ in.
Ear, from the upper part of the head -	-	-	o 6½
Tail, from lateral base, exclusive of the hair -	-	-	o 9½
Hind foot, from tip of os calcus to tip of toe -	-	-	1 6½
Fore arm -	-	-	1 11½

Weight, in February, 115 lbs.

This species, common as it is, was never figured, nor indeed very well described, until the year 1819, when it appeared in the valuable work of Messrs. Geoffroy and F. Cuvier (*Hist. Nat. des Mammiferes*, 2d liv.) Its highest northern range is Canada, in North America; and it is found as far south as the river Orinoco, in South America.

This species is leanest in February and March, and in best condition in October and November. The rutting season commences in November, and continues about one month, ceasing generally about the middle of December. During this season the neck of the male becomes much dilated.

The fawn, towards autumn, loses its spots; and the hair becomes grayish, and lengthens in the winter. In this state the deer is said by the hunters to be *in the gray*. This coat is shed in the latter part of May and beginning of June, and is then substituted by the reddish coat. In this state the animal is said to be *in the red*. Towards the last of August the old bucks begin to change to the dark bluish colour; the doe commences this change a week or two later. In this state they are said to be *in the blue*. This coat gradually lengthens until it comes again to the *gray*. The skin is said to be toughest in the *red*, thickest in the *blue*, and thinnest in the *gray*. The blue skin is most valuable.

The horns are cast in January. They lose the velvet the last of September and beginning of October. About the middle of March, Mr. Peale shot a large doe, in the matrix of which were three perfectly formed young, of the size of a rabbit.— JAMES.

Mr. Say and his companions were very politely received by Col. Chambers, then at Fort Osage. The rifle regiment was encamped here, waiting the arrival of the contractor's boats.¹⁸⁵

Fort Osage was established in 1808, by Gov. Lewis. It stands on an elevated bluff, commanding a beautiful view of the river, both above and below. The [97] works are a stockade, of an irregular pentagonal form, with strong log pickets perforated with loop-holes; two block houses are placed at opposite angles; one of them, however, flanks one of its curtains too obliquely to be of much service in defending it. There is also a small bastion at a third angle. Within are two series of buildings for quarters, store-houses, &c. The position of the fort is not a secure one, on account of numerous ravines and declivities that would cover an enemy within a short distance; but is such, that boats ascending or descending the river must be exposed to its fire. The stream in the middle of the river, and on the opposite side, is so remarkably rapid, that it is in vain to contend against it with the oar or paddle; it is, therefore, usually necessary for ascending boats to enter the eddy, which brings them within musket-shot of the fort.¹⁸⁶

At the time of our journey, Fort Osage, which, according

¹⁸⁵ This rifle regiment, under Colonel Talbot Chambers, was a contingent of the troops assigned to the Yellowstone expedition. See preface.—ED.

¹⁸⁶ Fort Osage was surrounded by a tract six miles square. It was the only government trading factory west of the Mississippi. The post was occupied at intervals until 1827, when it was superseded by Fort Leavenworth and permanently abandoned. The site was near that of the present town of Sibley, Jackson County, which was named in honor of George C. Sibley (see volume v of our series, note 36), who was (1818-25) government agent at Fort Osage. The distance above Chariton River, by the government survey of the Missouri, is a hundred and twenty miles. See our volume v, note 31.—ED.

to our estimate, is one hundred and forty-two miles, by the course of the river, above Charaton, was the extreme frontier of the settlements. For a great distance below, the establishments of the white settlers were confined to the immediate banks of the Missouri. The inhabitants of this frontier are mostly emigrants from Tennessee, and are hospitable to strangers. Many of them are possessed of considerable wealth. In the inhabitants of the new States and Territories there is a manifest propensity, particularly in the males, to remove westward, for which it is not easy to account. The women, having their attention directed almost exclusively to domestic pursuits, form local attachments, and establish habits, which are not interrupted without occasioning some disquietude. They are at first discontented in their new abode; in a few weeks they become reconciled, but less attached than to their former home; and, at length, by the habit of frequent migration, they [98] acquire the same fondness for an adventurous unsettled life, as characterises the men.

Daniel Boon, whose history is connected with that of all the new settlements from Kentucky westward, answered to an inquiry concerning the cause of his frequent change of residence, "I think it time to remove when I can no longer fall a tree for fuel, so that its top will lie within a few yards of the door of my cabin."¹³⁷ The charms of that mode of life, wherein the artificial wants and the uneasy restraints inseparable from a crowded population are not known, wherein we feel ourselves dependent immediately and solely on the bounty of nature, and the strength of our own arm, will not be appreciated by those to whom they

¹³⁷ A sketch of Boone as a Missouri pioneer will be found in Bradbury's *Travels*, in our volume v, note 16.—ED.

are known only from description, though they never fail to make an impression upon such as have acquired a knowledge of them from experience. A settler on the Missouri observed to us, that the land he at present occupied was not better than that he had left in Tennessee; but he did not wish to spend all his life in one place, and he had learned from experience, that a man might live in greater ease and freedom where his neighbours were not very numerous.

A person upwards of sixty years old, who had recently arrived at one of the highest settlements of the Missouri, inquired of us very particularly of the river Platte, and of the quality of the lands about its source. We discovered that he had the most serious intention of removing with his family to that river. On the last day of July and the first of August, about two inches of rain fell: the prevailing winds were from the north-east; but the superior strata of the atmosphere carried clouds of different descriptions in different, and sometimes opposite directions. The moon soon after rising, passed behind a long dense body of cirrus clouds, that floated over the eastern horizon. Long and distinct radii were soon after seen converging to a point fifteen or twenty of [99] the moon's diameters to the eastward of its disk. Such is the refracting power of the aqueous vapors sometimes suspended in the atmosphere.

Horizontal strata of sandstone and compact lime stone, are disclosed in the cliffs on both sides the valley of the Missouri. These rocks contain numerous remains of *caryophylla*, *productus*, and *terebratulæ*.¹³⁸

¹³⁸ From Fort Osage.

Productus spinosus, SAY.— Longitudinally and transversely subequally striated, the transverse striæ somewhat larger than the others; a few remote short spines, or acute tubercles, on the surface, arising from the longitudinal striæ.

Breadth an inch and a half; the striæ are somewhat indistinct — as in No. 5.

Some days passed after our arrival at Fort Osage, before the weather admitted our making the astronomical observations necessary to ascertain its position. The mean of the results of several observations of the meridian altitude of the sun's lower limb gave $39^{\circ} 9' 33\frac{1}{2}''$ north, for the latitude of the place.

[100] CHAPTER VI

Mouth of the Konzas — Arrival at Wolf River — Journey by land from Fort Osage to the village of the Konzas.

WISHING to extend our examinations between Fort Osage and the Konzas river, also between that river and the Platte, a party was detached from the steam-boat, with

Productus incurvus, SAY.— Shell much compressed; hinge margin nearly rectilinear; surface of the valves longitudinally striated; convex valve longitudinally indented in the middle; the beak prominent and incurved at tip; opposite valve with a longitudinal prominence in the middle; the beak incurved into the hinge beneath the other beak, and distant from it.

Width more than 2% inches. A few univalves also occurred, but they were so extremely imperfect that their genera could not be made out.

A dark-coloured carbonate of lime, containing small *Terebratulæ* like the *T. ovata* of Sowerby, but less than half as long.

No. 1. a mass of carbonate of lime, containing segments of encrinites in small ossicula.

6. A *Caryophylla* of a single star, about four inches long, of an irregularly transversely undulated surface, imperfect at each end, but seems to have been attached at base. Near the base it is bent at an angle of about 45 degrees.

Some small and young specimens of the *Terebratula*, like *T. subundata* of Sowerby.

Miliolites centralis. SAY.

12. *Astrea*. A species of very minute alveoles. From the state of the petrifaction no radii are perceptible, so that the genus is not determinable.

Saltworks near Arrow Rock. Columnar segments of the *Encrinus*.

Inferior portion of the head of *A. Pentramea*. SAY.

Segments of the column of an oval encrinus, much narrower in the middle than the oval vertebra of an encrinite represented by Parkinson, Vol. 2. pl. 13. f. 40.—resembling those of the genus *Platycrinites* of Miller.—JAMES.

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Volume II

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Volume XV

ing one of them to assist her, but she laughed significantly, as if she would say — you are ironical.

The Indians are very fickle in bargaining. An Indian, some time since, exchanged his rifle for Mr. Dougherty's shot gun; yesterday he reversed the bargain, giving a pair of mockasins in return; and this morning he requested to exchange again, in which he was gratified.

A squaw offered to exchange mockasins for a couple of our military stocks. We could not conceive to what use she would apply them, but, upon inquiry, we learned that she wished to ornament the crupper of her horse with them.

The stone quarry, which supplied limestone for building chimnies at camp Missouri, was situate at the distance of an hundred yards below our cantonment. The labourers that were employed in this quarry opened upon many large fissures, in which were found a number of serpents that had entered there for the purpose of hybernating. Of these, three species appear to be new.¹⁰⁴

¹⁰⁴ *Coluber flaviventris*.— Olivaceous, beneath yellow; inferior jaw beneath white; scales destitute of carina.

Description. *Body* above, olivaceous; tinged with brown on the vertebræ; *scales* impunctured at tip, posterior edges and basal edge black; *skin* black, beneath yellow, rather paler behind; *inferior jaw* beneath white to the origin of the plates; *head* with nine plates above, two longitudinal series, of about four large scales each, intervening on each side between the two posterior plates and the three posterior supermaxillary plates; intermaxillary plate somewhat heptagonal, dilated, emarginate at the mouth, superior angle obtusely pointed; *eye* black-brown, pupil deep black, surrounded by a whitish line, posterior canthus with two plates.

Plates 176, scales 84

	174	
Total length	- - - - -	3 ft. 4½ in.
Tail	- - - - -	8¾
Head, to the tip of the maxillary bones	- - - - -	1¾

Another specimen, plates 130, scales 91.

Total length	- - - - -	3 ft. 11¾ in.
Tail	- - - - -	11½

Three specimens were found. The inferior surface of one was immacu-

We hear the barking of the prairie wolves every night about us; they venture close to our huts; last night they ran down and killed a doe, within a short distance of our huts; this morning the remains of the carcass were found, consisting only of bones and skin.

Mr. Fontenelle,¹⁰⁶ in the employ of the Missouri Fur Company, who has been absent for some time trading with one of the bands of the Omawhaws, called to-day on his return; this band had been much necessitated for food, subsisting for some time upon the fruit of the red haws, which the squaws sought for beneath the proper trees, under the snow. He met with some of the nation of Sioux, called Gens de Feuille¹⁰⁷ by the French. They have been much thinned in numbers by a disorder, which, from the description given of it, may be the quinsy. This same band is said to have suffered much from the small-pox last autumn. They were also now nearly starved for want of food; but they said if they could hold out until they arrived at Min-da-wa-cong, or Medicine lake, (on the maps, Spirit lake,)¹⁰⁸ they would do very well, as they had there a considerable quantity of wild oats buried, or *caché*, as the French say.

13th. Ietan,¹⁰⁹ an Oto, of whom we have before spoken,

¹⁰⁶ Lucien Fontenelle, born in New Orleans of French parents, fled from his home when fifteen years of age, and engaged in the fur-trade at St. Louis. Later he became a leader in the mountain explorations of the American Fur Company. His wife was an Omaha woman, and some of his descendants were prominent in the history of Nebraska; a son, Logan Fontenelle, became a chief of the Omaha tribe. Fontenelle is supposed by some to have committed suicide at Fort Laramie, about 1836, but the manner of his death is uncertain.— ED.

¹⁰⁷ The Gens des Feuilles (People of the Leaves) were the Assiniboin tribe of the Siouan family. Lewis and Clark reported their numbers at two hundred and fifty men. At that time they lived on White River, in South Dakota.— ED.

¹⁰⁸ In Dickinson County, Iowa.— ED.

¹⁰⁹ Sha-mon-e-kus-se.— JAMES.

visited us to-day for the purpose of getting two gun-locks mended. He left his people at the Republican fork of the Konza river, and intends as soon as he returns, to lead a party in pursuit of bisons, which he says are in plenty on the Loup fork of the Platte, about sixty miles distant from us.²⁰⁰

14th. Ietan called this morning, and as some of our party were going to visit at Camp Missouri, he accompanied them in order to obtain Major O'Fallon's permission for his nation to go to war with the [170] Konzas. He informed the agent that individuals of that nation had sometime since stolen horses from them. That one of the losers, Big Soldier, had gone to the Konza village to demand the horses; but seeing a number of horses belonging to that nation when he arrived near the village, he could not resist the temptation of immediately retaliating by seizing several, and appropriating them to his own use. But, Ietan said, he thought the honour of his nation still called for war, and he solicited the acquiescence of the agent in that measure. The Major replied, that his opinion ought to have been asked previously to the retaliatory measure which had already been prematurely taken, as they were not certain that the Konzas were the offenders, and that this ought to have been ascertained before any depredation on the Konzas had been committed. But the course which he would now advise them to pursue was, to send a deputation to the Konzas, for the purpose of ascertaining the fact, to return the Konzas' horses, and to demand their

²⁰⁰ Loup (Wolf) River is a large northern tributary of the Platte, which empties into the latter a few miles below Columbus, Platte County. It rises in the arid sand hills of northwestern Nebraska, and flows southeast for three hundred miles to the confluence. It is sometimes called the Pawnee Loup River, from the dominant Indian tribe on its waters.—ED.

own. This course seemed satisfactory to the warrior; who, however, stated that if the Konzas attempted to steal horses from them in future, he would certainly lead a war party himself against them.

15th. Mr. Woods, of the Missouri Fur Company, has returned from a trading excursion. He reports that he saw several of the Pawnee *caches*, which had been broken open and robbed of their corn by the Omawhaws. This is by no means a rare occurrence with the Indians, but it does not appear that it has ever led to hostilities between nations; they say that when a person is in want of food, he has a right to take any he can find.

Corporal Norman, who went out this morning to kill rabbits, returned about noon with twenty-seven, which he had killed with single balls.

February 9th. Several Oto Indians have visited us within this day or two, and one of them, Ca-he-ga-in-ya, [171] remained with us last night; he was finely dressed, had on a chief's coat laced with silver, and a profusion of wampum about his neck, and suspended to his ears; he departed this morning on his way to the Omawhaws, to trade for horses.

The ice on the Missouri is sixteen inches in thickness, that of the Boyer creek fifteen and three-fourths.

12th. Messrs. Dougherty, Peel [Peale], and myself, with an assistant, encamped at a pond near the Boyer to obtain fish; we cut several holes in the ice of the pond, and obtained one otter and a number of small fishes, amongst which three species appeared to be new; several specimens were of the genus *gasterosteus*.

15th. Mr. Zenoni, of the Fur Company, who departed the twenty-seventh ultimo on a trading expedition, re-

turned and remained with us last night. He and two men had ascended the Elk Horn about twenty-five miles higher than Mr. Swift had been, but were not successful in finding any Indians. And although they saw a few bisons and antelopes, and elks, they were not so fortunate as to kill any game for subsistence, excepting three turkeys; so that they returned in a state of considerable exhaustion, having been for some time on an allowance of a little maize per day. He found that the upper part of the Elk Horn had not frozen during the severe weather, but still remained open. This circumstance seems to indicate the flow of a great quantity of spring water, or water of a medium temperature, in that part of the stream, requiring time to cool in its passage, before it can congeal.

19th. The sand is blown by the violence of the wind from the sand-bars of the river, so as to resemble a dense fog. We have been hitherto very well supplied with fresh meat, from game killed principally by Mr. Peale, who, on one occasion, killed two deer at a single shot and with one ball, but we are now reduced again to salt pork of a very inferior quality. [172] The party, with the exception of myself, continue to enjoy good health.

22d. Messrs. Dougherty and Peale returned from a hunt, having killed twelve bisons out of a herd of several hundreds they met with near Sioux river, and brought us a seasonable supply of meat. They saw several herds of elk, and yesterday they saw swans, geese, and ducks, flying up the river. A dinner and ball were given at Camp Missouri, in honour of the day, to which our party were invited.

24th. Mr. Graham and I endeavoured to ascertain the rapidity of the current of this part of the Missouri, at the present low water. We availed ourselves of a long va-

cancy in the ice to float a porter bottle, to which the proper specific gravity was given, by partially filling it with water, it was attached to a cord of one hundred and twenty-two feet in length; it floated this distance in six successive experiments in the following several times 1' 07"—1' 04"—1' 07½"—1' 05"—1' 07"—1' 07", the mean of which is 1' 06½" nearly, giving a velocity of 1 mile 441 yards 1½ feet per hour.

By these experiments, however, the superficial current or stratum only was indicated, and as we had reason to suppose that this stratum was more impeded by friction against the inferior surface of the ice than it would be by the atmosphere, it became an object to ascertain the average velocity of the different depths. With this view a staff ten feet long was made to float vertically, by means of a weight attached to its inferior extremity; a line of one hundred and seventy-eight feet in length was run out by this arrangement, during the following intervals of time, in four experiments, viz. 1' 21"—1' 21"—1' 19"—1' 21", of which the mean is 1' 20½", which would seem to indicate a current of the velocity of 1 mile 893 yards 1 foot per hour. Thus the average velocity of ten feet in depth of the current of the Missouri, is greater by almost 452 yards in a single hour, than [173] that of a superficial stratum of about six inches depth, during the ice-bound state of the river. During these experiments the atmosphere was nearly calm.

25th. Cooked for dinner the entire hump of a bison, after the manner of the Indians; this favourite part of the animal was dissected from the vertebræ, after which the spinous processes were taken out, and the denuded part was covered with skin, which was firmly sewed to that of

the back and sides of the hump; the hair was burned and pulled off, and the whole mass exhibiting something of a fusiform shape, was last evening placed in a hole dug in the earth for its reception, which had been previously heated by means of a strong fire in and upon it. It was now covered with cinders and earth, to the depth of about one foot, and a strong fire was made over it. In this situation it remained until it was taken up for the table to-day, when it was found to be excellent food. Mr. Lisa and family dined with us by invitation. That we have sometimes food in great sufficiency, the provision upon our table this day will sufficiently attest. It consisted of the entire bison hump, above mentioned; the rump of a bison roasted, boiled bison meat, two boiled bison tongues, the spinous processes roasted in the manner of spare-ribs, sausages made of minced tender loin and fat, &c. It is true that we have no vegetables whatever, but having been so long estranged from them, we scarcely regret their absence. Their place is supplied by excellent wheat flour, of which our cook prepares us bread fully equal, in point of excellence, to any that we have ever eaten. The above repast was prepared for eleven persons, of whom two were ladies.²⁰¹ The collation was succeeded by coffee as a desert.

February 28th. I ascertained the temperature of spring water, which, however, was somewhat exposed to the atmosphere, but in a shaded situation, and in a ravine, to be 47°; that of the atmosphere being at [174] the same time 56°, and that of the river 32°, of Fahrenheit's scale.

Wednesday, March 8th. The Big Elk, Big Eyes, and

²⁰¹ One of the ladies was Madam Lisa; the name of the other is not known. They are supposed to have been the first white women to ascend the Missouri to this point.—ED.

Wash-co-mo-ne-a visited us to-day on their way, with their attendants, to the traders with jerked bison meat. They presented us with five large pieces. The Big Elk, principal Omawhaw chief, is much pitted with the small-pox, and is of commanding presence. He speaks with great emphasis, and remarkably distinct. He observed that we must think them strange people to be thus constantly wandering about during the cold of winter, instead of remaining comfortably housed in their village; "But," said he, "our poverty and necessities compel us to do so in pursuit of game; yet we sometimes venture forth for our pleasure, as in the present instance, to visit the white people, whom we are always delighted to see." Big Eyes is a large and remarkably muscular man. His nose is that of the European, the opposite to the Roman curve; he is second chief of the Omawhaws.

The Omawhaw chiefs remained with us the greater part of the following day, and presented us with eight more pieces of jerked meat. We presented them in return with some tobacco, &c. The Big Elk made us a considerable harangue, with all the remarkable vivacity, fluency, and nerve of Indian eloquence, in which he said that he would address me by the title of father; "And you," said he, to Mr. Dougherty, "whom I know so well, I will call brother. The Indians around," said he, "who tell the white people that they love them, speak falsely, as is proved by their killing the white people; but my nation truly love you, they have never stained their hands with the blood of a white man, and this much cannot be said by any nation of this land." He added a strong expression, that such was his attachment to us, that he believed that he should, at a future day, be a white man himself.

[175] When they took their leave, we advised them not to visit Camp Missouri, telling them what, in fact, they had already been informed of, that many of the soldiers were sick; (we did not wish them to observe the extent of the malady, with which that camp was afflicted,) but Big Elk remarked, that it had been his intention to go there, and it was not fear that could prevent him; his life was at the disposal of the great Wahconda only, and he could not die before his time; "But," said he, "agreeably to your request I certainly will not go."

Of all the objects which we exhibited to the view of the chiefs, quicksilver (mercury) seemed to excite the most surprise; they weighed the vessel, in which it was contained, in their hands, dipped their fingers into it, and were surprised at the resistance which it offered to the immersion, and what appeared most singular was, that they should be withdrawn without any appearance of moisture upon them; that they might not be deceived they repeated the experiment again and again. A couple of iron nails were then thrown upon the mercury, and as these did not sink to the bottom, they pressed them down with their fingers; but finding that the nails constantly arose again to the surface, the Big Elk returned the vessel to me, saying, with a smile of pleasure strongly impressed on his strongly marked countenance, that the fluid was the Omawhaw's Wahconda.

The last load of stone, which was taken from the quarry early in December last, was prevented from reaching Camp Missouri by the floating ice; the boat was driven ashore and abandoned. It was now observed floating down the river, with a large quantity of drift ice; and, when opposite our cantonment, was readily secured by Major Ketchum, without having received any injury

whatever.²⁰² Major Ketchum, with a detachment of men, has been engaged for two or three days past in cutting out of the ice, three of the boats from our harbour. These, together with [176] one, which is at Camp Missouri, are intended to convey the sick from that camp down the river to Fort Osage. Camp Missouri has been sickly, from the commencement of winter; but its situation is at this time truly deplorable. More than three hundred soldiers are, or have been sick, and nearly one hundred have died. This fatality is occasioned by the scurvy (*scorbutus*). Individuals who are seized rarely recover, as they cannot be furnished with the proper aliments; they have no vegetables, fresh meat, nor antiscorbutics, so that the patients grow daily worse, and entering the hospital is considered by them as a certain passport to the grave. Yet it is some consolation to reflect that all the science, care, and attention of the healing art have been exerted for the relief of the sufferers by Doctors Gale and Moore, as far as their present insulated situation will admit. The causes which have been productive of all this disease, are not distinctly known, although there are many supposed ones to which it has been imputed. But it was generally remarked, that the hunters, who were much employed in their avocation, and almost constantly absent from Camp Missouri, escaped the malady.

On the 19th, Mr. Immel,²⁰³ of the Missouri Fur Com-

²⁰² Daniel Ketchum owed his title of major to a brevet awarded for distinguished services at the battle of Niagara Falls. He entered the army early in the war as second lieutenant in the 25th Infantry, and rose through a first lieutenancy to a captaincy in 1813. He died in 1828.—ED.

²⁰³ Little is recorded concerning this individual. His name was probably Michael, and he had been a United States army officer. The circumstances of his death are better known than the incidents of his life, he having been killed by the Indians (1823) on the Yellowstone.—ED.

pany, returned from an expedition to the Sioux. During his stay in the vicinity of the pseudo volcanoes, which occur on the banks of the Missouri, a tremendous subterranean explosion occurred, which much alarmed the Indians as well as the whites; the concussion was succeeded by a large volume of dense smoke from the aperture of the volcano, by the sinking in of a portion of the hill in the rear, and by the cracking of the ice in the river. Messrs. Peale, Swift, and Dougherty departed in a periogue yesterday, on their way to the Bowyer Creek to hunt.

An igneous meteor, or jack-o'-lantern, was seen on the evening of the 20th, near our cantonment; it was described to me as of the size of a double fist, [177] with a caudate appendage, or tail, of the length of about two feet; it emitted a light of the colour of the flame of burning sulphur; it passed along the river shore nearly over the observer's head, at but a very small elevation, nearly in a right line, with an equable motion, about as rapid as the flight of a bird, and with an audible sound like the blowing of a moderate stream of air through a thicket; it was visible about one half a minute, when it crossed the river, became paler, and disappeared.

The waters of the Missouri have been as clear during the winter as ordinary rivers; the earthy matter, which they hold in suspension during the temperate and warm weather, and which every person who views the river remarks as characteristic of its waters, subsides as soon as the wintry temperature occurs, but is again renewed in the spring. They have been gradually more and more turbid, these two or three days past. The ice in the river broke up on the 29th ult., and entirely disappeared on the 19th instant.

caped from them with the loss of one man killed and several wounded; the loss of the Sauks is not known. The party speak highly of one of their number, a boy of twelve years, who, at a critical juncture of the engagement, ran up to several of the enemy and flashed his gun three times at them; he escaped unhurt.

[181] CHAPTER X²⁰⁵

Account of the Omawhaws—Their manners and customs, and religious rites—Historical notices of Black Bird, late principal chief.

A GREAT portion of the information contained in the following pages, respecting the Missouri Indians, and particularly the Omawhaws, was obtained from Mr. John Dougherty, deputy Indian agent for the Missouri, who had an excellent opportunity of making himself acquainted with the natives, by residing for a time in the Omawhaw village, and by visiting all the different nations of this river.

This gentleman with great patience, and in the most obliging manner, answered all the questions which I proposed to him, relating to such points in their manners, habits, opinions, and history, as we had no opportunity of observing ourselves. And we have much to regret that it is not in our power to present the reader with a biographical sketch of this amiable and intrepid traveller.

The permanent Omawhaw village is situate on Omaw-

²⁰⁵ The succeeding chapters [the last in this volume, and the first five in the next], which relate to the manners and customs of the Indians, chiefly the Omawhaws, are from the notes of Mr. Say.—JAMES.

Comment by Ed. With the account of the Omaha here given, compare Dorsey, "Omaha Sociology," in *Bureau of Ethnology Report*, 1881-82, p. 205.

amounting to more than sixty. On the way several bisons were killed, and three calves were taken alive in the chase, by throwing nooses over their heads.

On the 6th we arrived at the Missouri, after an absence of sixteen days. Much of the information we acquired, respecting the manners, &c. of the Pawnees, is incorporated in the account of the Indians of the Missouri, in some of the preceding chapters of this work.

[93] CHAPTER VII [V]

Journey by Land from St. Louis to Council Bluff — Grand River — Plains at the Sources of the Little Platte, the Nishnebottona, &c.— Departure of the Expedition from Engineer Cantonment.

WHILE the transactions above detailed were passing, Major Long had returned from the seat of government.

On the 24th of April 1820, he arrived at St. Louis, on his way from Philadelphia to Council Bluff, to rejoin the party. He was accompanied by Captain John R. Bell, attached to the exploring Expedition by order from the War Department, and by Dr. E. James, who had been appointed to serve as botanist and geologist, in consequence of recommendations from the Honourable Secretary of the Navy, from Dr. Torrey and Captain Le Conte.⁴⁹

⁴⁹ John R. Bell was a New Yorker, who was graduated from West Point in 1812, and served in the light artillery through the War of 1812-15. For a short time prior to his departure for the Missouri, he was commandant of cadets and instructor in infantry tactics at West Point. Afterwards he was in garrison at Savannah and Fort Moultrie; breveted major in 1824, he died the succeeding year.

For sketch of Edwin James, the compiler of this account of the expedition, see preface of volume xiv.

The secretary of the navy at this time was Smith Thompson, of New York (1768-1843). He succeeded George Crowinshield, of Massachusetts, in this office (1818), and held the post until 1823. Previous to his appointment he

Having procured horses, and equipped ourselves for a journey in the wilderness, we left St. Louis on the 4th of May, intending to proceed by the most direct route across the country to Council Bluff.

The lands immediately in the rear of St. Louis, between the Mississippi and the Missouri, below their junction, have an undulated surface, and a deep alluvial soil. Since their occupation by permanent inhabitants, the yearly ravages of fire have been prevented, and a dense growth of oaks and elms has sprung up.

In this fact we have a satisfactory explanation of the cause of the present want of forest trees in extensive tracts on the Missouri, which appear, in every respect, adapted to the growth of timber. If these lands, called prairies, were at any former period covered with forests, it may easily be supposed, the [94] yearly devastations of fires breaking out in dry seasons would destroy many of the

had been on the supreme bench of New York (since 1802), and had become chief justice (1814). In 1823 he was made associate justice on the federal bench.

John Torrey (1796-1873), one of America's greatest botanists, was the son of a New York Revolutionary officer. Entering the army as a surgeon in 1824, he taught the sciences at West Point until 1828; from that time until 1855 he was connected, as professor of chemistry and botany, with Princeton College, the University of the City of New York, and the College of Physicians and Surgeons in New York City. He was one of the founders (1817) of the New York Lyceum of Natural History, which became the New York Academy of Sciences, and was the preceptor and lifelong associate of Asa Gray, with whom he also collaborated. Of especial interest to readers of the present volumes is the fact that Dr. Torrey undertook the examination of the botanical collections made on Long's expedition. He also examined the collections made by several later exploring parties, notably those of Frémont to the Rocky Mountains (1845) and California (1853).

John Eatton Le Conte (1784-1860) was descended from a Huguenot family which settled at New Rochelle, New York, about the close of the seventeenth century. He served in the corps of topographical engineers from 1818 to 1831, gaining the brevet rank of major. Known as the author of special botanical and zoological studies, he was also a member of the New York Lyceum of Natural History, and vice-president of the Philadelphia Academy of Natural Sciences.—ED.

ascending the Missouri, the Arkansa, or any great river, every remove of forty or fifty miles brings the traveller to the locality of some plants, not to be seen below. This is perhaps less the case with rivers running from east to west, or from west to east, than with those whose course in a different direction, traverses several parallels of latitude.

On the 27th, we swam across Mosquito Creek;⁸⁷ and after a ride of near thirty miles along the Missouri bottoms, encamped near the mouth of the Boyer,⁸⁸ about six miles from the wintering place of the party. Early on the following morning we left our encampment, and were soon after cheered by the report of guns discharging at the Cantonment. The sight of the trading establishment, called Fort Lisa, gave us [111] more pleasure than can easily be imagined, except by those who have made journeys similar to ours, and have felt the deprivation of all those enjoyments which belongs to the habitations of men. At ten A. M. we arrived at the Boyer, which Major Long immediately crossed on a small raft, leaving Captain Bell and Dr. James, with the horses and baggage, to wait until some soldiers could be sent out to assist in crossing. These arrived in a few hours; and before three o'clock we had crossed the Boyer and the Missouri, and found ourselves surrounded by our friends at Engineer Cantonment.

In the early part of June, 1820, arrangements were completed for the departure of the Exploring Expedition from their winter cantonment near Council Bluff. By an order of the Honourable Secretary of War, dated 28th February, Major Long had been instructed to explore

⁸⁷For Mosquito Creek, see preceding volume, note 173.—ED.

⁸⁸See preceding volume, note 174.—ED.

the country from the Missouri westward to the Rocky Mountains; and thence, proceeding southward along the base of these mountains to the Arkansa, to despatch a division of his party down that river. The following orders were issued by Major Long, briefly sketching the proposed route, and assigning appropriate duties to each individual of the party.

“Engineer Cantonment, Council Bluff,

“Orders. June 1st, 1820.

“Agreeably to the instructions of the Honourable Secretary of War, the further progress of the Exploring Expedition up the Missouri is arrested during the present season. By the same authority, an excursion, by land, to the source of the river Platte, and thence by way of the Arkansa and Red rivers to the Mississippi, is ordered. The expedition will accordingly proceed on this duty as soon as practicable, and be governed by the order of the 31st March, 1819, issued at the United States’ arsenal, near Pittsburgh, so far as it may be applicable. The duties therein assigned to Major Biddle will be performed [112] by Captain J. R. Bell, attached to the expedition by order of the war department, with the exception of those parts which relate to the manners, customs, and traditions of the various savage tribes which we may pass. The duties thus excepted will be performed by Mr. Say. The duties assigned to Dr. Baldwin and Mr. Jessup, by the order alluded to, will be performed by Dr. E. James, employed for these purposes, by the sanction of the secretary of war. In these duties are excepted those parts which relate to comparative anatomy, and the diseases, remedies, &c. known amongst the Indians; which will also be performed by Mr. Say.

“Lieutenant Graham will take charge of the United States’ steam-boat, *Western Engineer*, and proceed down the Missouri to the Mississippi, with the remaining part of the crew originally attached to the boat, on the performance of duties assigned him by special order.

“The detachment from the rifle regiment, attached to the expedition, by order from the commanding officer of the 9th military department, will accompany the expedition in their route from this place to Belle Point, on the Arkansa, under the immediate command of Lieutenant Swift, who will inspect daily their arms and accoutrements, and report their condition to the commanding officer. He will receive such instructions from the commanding officer as occasion may require, in relation to the discharge of his duties.

“Guides, interpreters, hunters, and others attached to the expedition, will perform such duties as may be assigned, from time to time, by the commanding officer.

“The duties of the expedition being arduous, and the objects in view difficult of attainment, the hardships and exposures to be encountered requiring zealous and obstinate perseverance, it is confidently expected, that all embarked in the enterprize will [113] contribute every aid in their power, tending to a successful and speedy termination of the contemplated tour.

“S. H. LONG, *Maj. Engrs.*
Commanding Exploring Expedition.”

The party, as now arranged, consisted of the following persons:

S. H. Long, Major, U. S. Topographical Engineers, commanding the expedition.

J. R. Bell, Captain Lt. Artillery, to act as Journalist.⁶⁰

W. H. Swift, assistant Topographer, commanding guard.

Thos. Say, Zoologist, &c.

E. James, Botanist, Geologist, and Surgeon.

T. R. Peale, assistant Naturalist.

Saml. Seymour, Landscape Painter.

Stephen Julien, Interpreter, French and Indian.

H. Dougherty, Hunter.

D. Adams, Spanish Interpreter.

Z. Wilson, Baggage Master.

Oakley and Duncan, Engagees.

Corporal Parish, and six privates of the U. S. army.

To these we expected an addition, on our arrival at the Pawnee villages, of two Frenchmen, to serve as guides and interpreters, one of them having already been engaged.

Twenty-eight horses and mules had been provided; one for each individual of the party, and eight for carrying packs. Of these, six were the property of the United States, being furnished by the commanding officer at Camp Missouri; the remaining sixteen were supplied by Major Long, and others of the party. [114] Our saddles and other articles of equipage, were of the rudest kind, being, with a few exceptions, such as we had purchased from the Indians, or constructed ourselves.

Our outfit comprised the following articles of provisions, Indian goods, &c. viz. 150lb. of pork, 500lb. of biscuit, 3 bushels of parched corn meal, 5 gallons of whiskey,

⁶⁰ It will be perceived, that in the following narrative no reference has been made to the notes or journal of Captain Bell, the reason of which is, that his journal, in the form of a report, was submitted to the Secretary of War, and consequently the compiler has had no opportunity of consulting it.— JAMES.

Comment by Ed. Bell's report was never published.

25lb. of coffee, 30lb. of sugar, and a small quantity of salt, 5lb. of vermilion, 2lb. of beads, 2 gross of knives, 1 gross of combs, 1 dozen of fire steels, 300 flints, 1 dozen of gun worms, 2 gross of hawk's bells, 2 dozen of mockasin awls, 1 dozen of scissors, 6 dozen of looking glasses, 30lb. of tobacco, and a few trinkets, 2 axes, several hatchets, forage-bags, canteens, bullet-pouches, powder-horns, tin cannisters, skin canoes, packing-skins, pack cords, and some small packing-boxes for insects, &c.

The gentlemen of the party were supplied with such instruments as were deemed indispensably requisite in their several pursuits. The instruments for topographical purposes were, three travelling, and several pocket compasses; one sextant, with radius of five inches; one snuff-box sextant; one portable horizon with glass frame and mercurial trough; one and a half pounds of mercury, in a case of box-wood; two small thermometers; several blank books, portfolios, &c.

The hunters, interpreters, and attendants, were furnished with rifles or muskets; the soldiers were armed exclusively with rifles, and suitably equipped. Our stock of ammunition amounted in all to about 30 pounds of powder, 20 pounds of balls, and 40 pounds of lead, with a plentiful supply of flints, and some small shot.

Several of the Indians about Council Bluff, to whom our proposed route had been explained, and who had witnessed our preparations, affected to laugh at our temerity, in attempting what they said we should never be able to accomplish. They represented some [115] part of the country, through which we intended to travel, as so entirely destitute of water and grass, that neither ourselves nor our horses could be subsisted while passing it.

Baron Vasquez,⁷⁰ who accompanied Captain Pike, in his expedition to the sources of the Arkansa, assured us there was no probability we could avoid the attacks of hostile Indians, who infested every part of the country. The assault which had been recently made by a party of the Sauks and Foxes, upon a trading boat belonging to Messrs. Pratte⁷¹ and Vasquez, on the Missouri, above Council Bluff, in which one man was killed, and several wounded, had at this time spread considerable terror among those in any degree exposed to the hostilities of the Indians.

With these prospects, and with the very inadequate outfit above described, which was the utmost our united means enabled us to furnish, we departed from Engineer Cantonment, at 11 o'clock, on the 6th of June.⁷²

The path leading to the Pawnee villages runs in a direction a little south of west from the cantonment, and lies across a tract of high and barren prairie for the first ten miles. At this distance it crosses the Papillon, or

⁷⁰ A. F. Baronet Vasquez accompanied Pike as interpreter. He was the fifth child of Benito Vasquez, a Spaniard, who came to St. Louis in 1770, at the age of twenty, in the capacity of a subordinate military officer. His mother, Julia Papin, was a French Canadian, daughter of Pierre Papin. Baronet Vasquez, born in 1783, was in 1808 appointed ensign in the United States army; he left the service in 1814, at which time he was a first lieutenant of infantry. Pike usually calls Vasquez "Baroney," and his name is so given in the army registers.—ED.

⁷¹ Bernard Pratte was engaged in the fur-trade for many years, yet available information concerning him is scanty. When Astor retired from the American Fur Company (1834), the business of its Western Department was sold to the St. Louis firm of Pratte, Chouteau and Co. Pratte withdrew in 1838, but in 1842 reappeared as the head of the rival firm of Pratte, Cabanne and Co. In 1819, Pratte and Vasquez had a post above Council Bluffs, perhaps nearly opposite the site of the present town of Onawa, Iowa. See Chittenden, *American Fur Trade*, pp. 364, 366, 367, 951. The Vasquez associated with Pratte was a brother of "Baroney," probably Benito, Jr.—ED.

⁷² The route followed by the expedition, from Missouri River to the site of Denver, became later the well-known route of the overland stage, and is now essentially the line of the Union Pacific Railroad.—ED.

Butterfly creek, a small stream discharging into the Missouri three miles above the confluence of the Platte. Lieutenant Graham and Mr. J. Dougherty accompanied us about five miles on our way; we were also met by Lieutenant Talcott from Camp Missouri, who crossed the bluffs on foot, to take leave of us. Much delay was occasioned, as we passed along, by the derangement of the packs, the obstinacy of the mules, and the want of dexterity and experience in our engagees; we however arrived early in the afternoon at the Papillon, where we encamped.

The Papillon, although it traverses a considerable extent of country, was at this time but a trifling stream. Its channel is narrow, the banks steep, and [116] like many other streams which have their whole course in these arid plains, it is nearly destitute of water, except in rainy seasons.⁷³

During the night some rain fell, but as we were furnished with three tents, sufficiently large to shelter all our party, we experienced little inconvenience from the storm. Our baggage was also effectually protected, being laid in heaps, and covered with bear-skins; which were also spread over it when placed upon the pack-horses, during our march by day.

We had each two small blankets, which were carried upon our horses, one being placed under the saddle, and the other upon it. These, with the addition, in some instances, of a great coat, or a blanket-capot, and a valise or a pair of holsters, to supply the place of a pillow, were our only articles of bedding.

On morning of the 7th, a new disposition was made, in relation to the pack-horses, a man being appointed to

⁷³ For Papillon Creek, see Bradbury's *Travels*, in our volume v, note 40.—Ed.

instructions to cross the Konzas at the Konza village, thence to traverse the country by the nearest route to the Platte, and to descend that river to the Missouri. The party consisted of Mr. Say, to whom the command was entrusted, Messrs. Jessup, Peale, and Seymour, Cadet Swift, Mr. J. Dougherty, and five soldiers. They were furnished with three pack-horses, and a supply of provisions for ten days. Thus organized and equipped, they commenced their march on the afternoon of August 6th, accompanied by Major Biddle and his servant.

After their departure, the steam-boat was delayed a few days at Fort Osage. On the ninth, a part of the troops destined for the Missouri service arrived in keel-boats. Colonel Chambers, with the principal part of his regiment, were still at Fort Osage, awaiting the arrival of supplies of provisions now daily expected.

On the following day we resumed our journey, and were accompanied about ten miles by Mr. Sibley, agent of Indian affairs, and his lady, to whom the gentlemen of the party were indebted for numerous hospitable attentions during their stay at Fort Osage; also by Captain Bissel, and Lieutenant Pentland,¹³⁹ of the rifle regiment, who returned in a skiff. Our progress was much impeded by shoals and rapids in the [101] river, but we succeeded in passing these without warping, and anchored at sunset, having ascended eighteen miles.

Between Fort Osage and the mouth of the Konzas river, a distance of about fifty-two miles, are many rapid places

¹³⁹ For Bissel, see Cuming's *Tour*, in our volume iv, note 182.

Charles Pentland, of Pennsylvania, served during the War of 1812-15 as ensign and third lieutenant in the 4th Rifles. Retained in 1815, he was in 1821 transferred to the 6th Infantry, in which, two years later, he became captain. He was dismissed in 1826.—ED.

to time, either exposed to, or sheltered from, the action of the stream.

About eighty-seven miles above Cow Island is the mouth of the Nodowa, a river of some importance, being about seventy yards wide, and navigable to some distance. It is not usually seen in passing, being [107] concealed by the island called the Great Nodowa, which is about five miles long, and covered with heavy forests. The lands on the Nodowa are of an excellent quality.¹⁴⁰

On the 1st of September, we were under the necessity of remaining encamped near the mouth of Wolf river,¹⁵⁰ that some repairs might be made to the steam engine. Here we sent out some persons to hunt, who after a short time returned, having taken a deer, a turkey, and three swarms of bees, which afforded us about half a barrel of honey. On the trees which margin the river, we frequently observed a fine species of squirrel, which possesses all the graceful activity of the common gray squirrel, as it leaps from bough to bough.¹⁵¹ After our machinery was ad-

¹⁴⁰ For data relative to the Nodaway River, see Bradbury's *Travels*, in our volume v, note 5.—ED.

¹⁵⁰ The name of Wolf River or Creek (*Rivière du Loup* of early French maps), is a translation of the Indian name. The stream debouches four miles below the town of Iowa Point, in Doniphan County, Kansas.—ED.

¹⁵¹ *Sciurus macrurus*. SAY.—*Body* above each side, mixed gray and black; fur plumbeous, black at base, then pale cinnamon, then black, then cinereous, with a long black tip; *ears* bright ferruginous behind, the colour extending to the base of the fur, which, in its winter dress, is prominent beyond the edge; within dull ferruginous, the fur slightly tipped with black; *side of the head and orbits* pale ferruginous, check under the eye and ear dusky; *whiskers* black, in about five series, of which the four inferior ones are more distinct, hairs a little flattened; *mouth* margined with black; *teeth* reddish yellow; *head* beneath, *neck* and *feet* above pale ferruginous; *belly* paler; fur pale plumbeous at base; *palms* black; *toes*, anterior ones four, the thumb tubercle not longer than its lobe in the palm, and furnished with a broad flat nail; posterior toes five; *tail* beneath bright ferruginous, the colour extending to the base of the fur, with a submar-

justed, we resumed our ascent, and had proceeded a short distance, when we were hailed from shore by Mr. Dougherty, who had accompanied Mr. Say's party across the country. We were not a little surprised at this unexpected meeting, and were apprehensive some disaster had befallen the detachment.

Mr. Dougherty being received on board, informed us that Mr. Peale, Mr. Swift, Mr. Seymour, Chaboneau the Indian interpreter,¹⁵² and one of the soldiers, were at a little distance in the rear, having accompanied him across the country, from Cow Island, where they had arrived five days after our departure. Mr. Say and Mr. Jessup had been left sick at Cow Island. We encamped immediately, to give those who were near an opportunity of joining us. It will now be necessary to return to the time of Mr. Say's

ginal black line; above mixed ferruginous and black; fur within pale cinnamon, with the base and three bands black; tip ferruginous.

From nose to tip of tail (exclusive of the hair) -	-	-	1 ft. 7¼ in.
Tail, from base to tip	ditto	-	9¼
Ear, from head to tip	-	-	5¼

The most common species of squirrel on the banks of the Missouri river. It is allied to *S. cinereus*, but cannot be considered as a variety of that species; neither does it approach any of the numerous varieties of the very variable *S. capistratus* of Bosc.

The fur of the back in the summer dress is from $\frac{5}{8}$ to $\frac{7}{10}$ of an inch long; but in the winter dress the longest hairs of the middle of the back are one inch and $\frac{3}{4}$ in length. This difference in the length of the hairs, combined with a greater portion of fat, gives to the whole animal a thicker and shorter appearance; but the colours continue the same, and it is only in this latter season that the ears are fringed, which is the necessary consequence of the elongation of the hair. This species was not an unfrequent article of food at our frugal yet social meals at Engineer Cantonment, and we could always immediately distinguish the bones from those of other animals, by their remarkably red colour.

The tail is even more voluminous than that of the *S. cinereus*.

It seems to approach the *Sc. rufiventer*. Geoff. v. Dict. D. Hist. Nat. article Ecu. p. 104.—JAMES.

¹⁵² See sketch of Charbonneau in Brackenridge's *Journal*, volume vi of our series, note 3.—ED.

departure from Fort Osage, and briefly to trace the progress of his detachment to the place where a rencontre with a war-party of Pawnees frustrated their design, and made it necessary for them to rejoin the steam-boat.

Mr. Say's detachment, consisting of twelve men and a boy, furnished with three pack-horses for the [108] transportation of baggage, departed from Fort Osage on the evening of August 6th. Their route lay westward across the woodless plains about the sources of the Hay Cabin, Blue Water, and Warreruza Creek. The cliffs along the Blue Water are naked perpendicular rocks. In the valleys numerous Indian encampments occurred, which appeared not long since to have been occupied. These were most frequently seen at the points, where the streams making almost a complete circuit, and nearly enclosing a small tract of ground, afforded an important protection against the approach of an enemy. The prairies about the head waters of the Warreruza abound in game. Here ravens were first seen by the party, and numbers of large banded rattlesnakes were killed. The blowing flies swarmed in inconceivable numbers, attacking not only the provision of the party, but depositing their eggs upon the blankets, clothing, and even on the furniture of the horses. On the 11th of August they arrived at some elevated ridges, from which they overlooked an extensive country, and could trace the whole course of the Wahrengeho, or Full Creek, diverging slightly from the Konzas, and could readily perceive timber upon several of its head branches. The lands between the head waters of Full Creek and the Konzas are not so good as those about the sources of the Warreruza, and produce less timber. The settlement of this region will be much re-

tarded on account of the want of trees, these being confined to the margins of the watercourses, while tracts of valuable soil, of many miles in extent, have not a single tree or bush upon them. The soil is, however, well adapted to the culture of some of our most valuable forest trees. The sugar-maple, and several of the most important species of carya, the oaks, the tulip-tree, and the linden, would unquestionably succeed.¹⁵⁸

In consequence of the excessive heat of the weather, the great fatigues of the party, and their constant [109] exposure in the open plains, the health of several of them began to be impaired. The high and coarse grasses, which now covered the plains, greatly impeded their progress, and very rapidly destroyed their clothing and mockasins. Their journey was, therefore, slow and laborious. On the night of the 13th they encamped on the bank of the Konzas, having travelled some distance parallel to the course of

¹⁵⁸ Hay Cabin Creek and Blue Water are now known respectively as the Little Blue River and Big Blue River (or Creek; not to be confounded with the Big Blue of Kansas). Both debouche in Jackson County, Missouri. The Warreruza is the modern Wakarusa (the meaning of which is variously given as "thigh deep" and "river of big weeds"), which flows across Shawnee and Douglas counties, Kansas, to the northeast corner of the latter. Full Creek (or River) is the present Upper Mill Creek, another southern tributary of the Kansas, the mouth of which is in northeastern Wabaunsee County, by a direct line about fifty miles above the confluence of the Wakarusa. Pike's chart of 1806, which Say's party possessed, shows Hay Cabin Creek, Blue Water, Warreruza, and Full River successively, south of the Missouri and Kansas. There are several other creeks, however, between the Blue Water and Warreruza which Pike does not show, and the Warreruza is a larger stream than his chart indicates. Say's party apparently mistook one of the small streams for the Warreruza, and, upon reaching the latter, mistook it in turn for Full Creek. They could hardly have traced the course of Full Creek from the lower Warreruza, where they must have been on August eleventh. This error explains their doubt, while encamped on the Kansas on August sixteenth, whether they were above or below the Indian village, which is plainly shown on Pike's chart as situated at the mouth of Blue Earth (Big Blue) River.—ED.

that river. The next day several of the party, already much debilitated, began to be afflicted with dysentery; some accidents also occurred to retard their progress, and on that and the following day they advanced only two miles. On the 16th they marched about fifteen miles, and encamped on the bank of the Konzas. Being now in doubt as to the situation of the Konza village, and the illness of some of the party continuing, they determined to remain encamped, while some persons should be sent out to reconnoitre the country, and discover, if possible, whether that part of the river at which they had arrived, was above or below the village they designed to visit.¹⁵⁴ The Konzas river, in this part, bears the closest resemblance to the Missouri, both in the turbulence and rapidity of its current, and the aspect of the country along its banks; it is, however, so shoal as at almost any point to admit of being forded without difficulty.

Willow islands, moving sand-bars, and *falling-in* banks, are as frequent as in the Missouri. The line of forest which skirts the banks, including the bed of the river, is about half a mile wide, but not entirely uninterrupted.

¹⁵⁴ When Say's party reached the Kansas, they had crossed Johnson and Douglas counties, following the high prairie country which lies from six to fifteen miles south of the river. The camp on the thirteenth was probably not far from Lecompton; by the sixteenth, they must have been near Topeka.

Big Blue River (Blue Earth on the map), at the mouth of which the Kansa village stood, rises in Nebraska, flows through Marshall County, Kansas, and forms the boundary between Riley and Pottawatomie counties. Near the confluence, a westward bend of the Big Blue forms a peninsula about two miles long and half a mile wide, which was the site of the village. A few years ago the exact locations of the lodges were still indicated by circular ridges and depressions, from which a map of the village was prepared (see Kansas Historical Society *Transactions*, 1881, p. 288). The site was partially abandoned in 1830, and three villages constructed near Topeka; these in turn were abandoned when the territory which contained them was ceded to the United States in 1846.—ED.

The course of the river is remarkably serpentine, forming woodland points alternately on both sides.

After crossing and recrossing the river, and extending their search in every direction, they had the satisfaction at last to fall in with a beaten path leading up the river, and which their guide and interpreter was confident would conduct them to the Konza village.

[110] On the morning of the 19th, they passed across a wide and fertile prairie to the Vermillion, a stream which enters the Konzas from the north-west. It is four feet deep, and about twenty yards wide.¹⁵⁵ Here they halted in the middle of the day, and dined on the flesh of a black wolf, the only game they were able to procure.

About Vermillion Creek are some open forests of oak, not extending far on either side. The trees are from fifteen to twenty-five feet high, and from one foot to eighteen inches in diameter, standing at a considerable distance from each other.

On the day following, the Konza village was descried at a distance. The detachment immediately halted to arrange their dress, and inspect their firearms. This was thought the more necessary, as no party of whites had visited the village since a number of the Konzas had received a whipping at Isle au Vache, and it was a matter of doubt, whether the party would meet a friendly reception.

As they approached the village, they perceived the tops of the lodges red with the crowds of natives; the chiefs and warriors came rushing out on horseback, painted and decorated, and followed by great numbers on foot. Mr.

¹⁵⁵ The Vermillion is a Pottawatomic County stream about twenty miles east of the Big Blue.—ED.

Say and his party were received with the utmost cordiality, and conducted into the village by the chiefs, who went before and on each side, to protect them from the encroachments of the crowd. On entering the village the crowd readily gave way before the party, but followed them into the lodge assigned to them, and completely and most densely filled the spacious apartment, with the exception only of a small space opposite to the entrance, where the party seated themselves on the beds, still protected from the pressure of the crowd by the chiefs, who took their seats on the ground immediately before them. After the ceremony of smoking with the latter, the object which the party had in view in passing through their territories was explained to them, and [111] seemed to be perfectly satisfactory. At the lodge of the principal chief they were regaled with jerked bison meat and boiled corn, and were afterwards invited to six feasts in immediate succession. Chaboneau and the old Frenchman, who had been despatched from Fort Osage, to summon the Konzas to meet the agent at Isle au Vache, had arrived some days previous; but the nation being at that time absent on a hunting excursion, the interpreters, after reaching the village, had proceeded immediately into the plains in pursuit of them. At the time of the arrival of our detachment, the village was in confusion, the hunters having lately returned, and being then engaged in preparations for the journey to Isle au Vache. Two runners were despatched to give notice to Major O'Fallon, that his summons had been received; and at the same time the chiefs and principal warriors departed for the place appointed. Before his departure, the principal chief was careful to appoint a fit person to attend Mr. Say's party, and arrangements were made to promote

their comfort and convenience, while they should remain at the village.

Many reports had been circulated among the Konzas respecting the invitation to council their chiefs had received. They were conscious of having recently offended, by firing on Major O'Fallon, and by insulting and plundering several soldiers of Captain Martin's command. For these offences they had been in some measure punished at the time, Major O'Fallon having returned their fire from his boat, and not entirely without effect, as was supposed; several also had been flogged by the orders of Captain Martin; yet they did not consider themselves secure from the vengeance of the whites. Many believed that at the time of the anticipated council, barrels of gunpowder were to be placed in the earth to destroy them at once. The two runners, who had been despatched, quarrelled before they had gone far; one saying, all [112] the things that had been told them by the interpreters were lies, for which assertion he was struck to the ground by his companion. In this situation they were found by the advancing chiefs. Finally, a dispute happened between the chiefs themselves respecting rank, in consequence of which ten or twelve of them returned to the village.

Mr. Say, who spent some time among the Konzas, gives, in his notes, the following account of that nation:

"The approach to the village is over a fine level prairie of considerable extent; passing which, you ascend an abrupt bank of the height of ten feet to a second level, on which the village is situate in the distance, within about one-fourth of a mile of the river. It consists of about a hundred and twenty lodges, placed as closely together as convenient, and destitute of any regularity of arrangement. The ground

[122] CHAPTER VII

Further Account of the Konza Nation — Robbery of Mr. Say's Detachment by a War-Party of Pawnees — Arrival at the Platte.

THE Konza warriors, like those of some others of the Missouri tribes on their departure on a war excursion, sometimes make vows, binding themselves never to return until they have performed some feat which they mention, such as killing an enemy, striking an enemy's dead body, or stealing a horse. An instance lately occurred of a warrior who had been long absent under a vow of this sort, and finding it impossible to meet an enemy, and being in a starving condition, he returned to his own village by night, with the determination of accomplishing his vow, by killing and scalping the first person he should meet. This person happened to be the warrior's own mother, but the darkness of the night prevented the discovery until he had accomplished his bloody purpose.

On the 23d of August, Mr. Say's party began to prepare for leaving the Konza village, where they had been treated with much hospitality. They purchased a number of articles for their use on the journey they proposed to take, such as jerked bison meat, pounded maize, bison fat put up like sausages, mockasins, leggings, spoons made of the horn of the bison, two large wooden dishes, &c. They received also an addition to their cavalcade of two horses, one belonging to Major O'Fallon, and another which they procured from a Frenchman residing in the village.

A Pawnee prisoner, an interesting young man, [123] was brought to them, who said he was desirous to accompany them to his nation, but at the same time was afraid

his people would not recognize him, and would kill him for a Konza. He was promised protection, but at the same time it was remarked to him, that if he should attempt to steal the horses of the party on the way, they would certainly pursue him and take his scalp.

On the 24th, says Mr. Say, having been detained until afternoon in searching for our horses, we departed, accompanied by several Indians, who intended to pass the night with us and to return to the village the following morning.

Our path led along the margin of Blue Earth Creek, a stream of the width of twenty-five yards, and greatest depth of three feet, which discharges into the river a mile or two above the Konza village. The soil supports but a thin growth of grass, and the timber is far from abundant, consisting principally of different sorts of oak, confined to the margin of the creek, its ravines and tributaries. One of our Indian followers, who, although a chief of the extinct Missouri nation,¹⁵⁷ has yet much influence with the Konzas, wished to exchange a horse he had with him for one of ours, which was evidently a less valuable animal. The reason he assigned in explanation of his desire of such an apparently disadvantageous exchange was, that his horse had been presented to him by a person, who, he feared, intended to reclaim him, but that if he should exchange him for another horse, he would be secure in the possession of the individual so obtained, as an Indian will not reclaim a present which is not identically the same he had given. At the distance of seven miles from the village, our party encamped by the side of the creek, in a

¹⁵⁷ For sketch of the Missouri Indians, see Bradbury's *Travels*, in our volume v, note 26.—ED.



narrow, but beautiful and level prairie bottom, which was bounded by an abrupt, though verdant range of bluffs.

Mr. Dougherty and one of the Indians went in [124] quest of game; and having supplied the two remaining Indians with a pipe and tobacco, we were partaking of some refreshment, when one of the party suddenly drew our attention to an extensive cloud of dust, which arose from the plain, and which we soon perceived but partially concealed a body of Indians, who had already approached within a quarter of a mile, and were now running with great swiftness. Our Indian followers now displayed all their activity; the chief seized his gun, and ran towards the advancing multitude to obtain his horse, which he mounted and rode off at full speed, whilst his companion disappeared in the bushes in an instant. This was a sufficient intimation that a hostile party was before us, and a timely admonition of the approach of danger. Our men were therefore drawn up in a line, and all prepared themselves for defence in case of extremity.

The advancing party were armed, decorated, and painted, for battle, but they manifested, as they rushed up to us, the most pacific deportment, shaking us by the hand, putting their arms about our necks, and raising their hands with the palm towards us, in token of peace. We were not, however, disposed to rely upon these assurances of friendship, being fully aware of the difficulties which their partizans would have to surmount in checking the inconsiderate prowess of the younger warriors. We now observed some of them seizing our horses, which were staked at some distance: they mounted them and rode swiftly in the direction that the chief had taken, but they soon returned. It soon became necessary to protect our

baggage by arranging ourselves around it; still, however, in despite of our vigilance, many of our small articles were stolen. They begged for whiskey and tobacco; and a small portion of the latter was given them. Amidst the confusion arising from the incessant and rapid movements of the Indians, we observed an individual bearing off a small [125] package of very fine pounded meat; I immediately pointed out the circumstance to the partizan, and directed him to recover it and punish the thief; he complied by wresting the meat from the grasp of the latter, and from that of several others who had been contending for portions of it, placed it beneath his feet, and defended it with his lance; but Chabonneau, to whom the meat belonged, declaring that he had given it to them, they were permitted to retain it. A tent which had been pitched for me in consideration of my illness, and in which my blanket, pistols, together with some small articles, had been deposited, was plundered of its contents; it was finally cut down, and would have been taken away, had we not made an effort to preserve it. During the whole transaction those warriors, who stood at a short distance, intently watched our movements, as if they were led to believe, from the attitude we assumed, that we would attempt to repel them, even with our inadequate force. No sudden action or motion of any one of the party escaped them; and individuals were frequently observed to draw their arrows to test the elasticity of the bows. At a critical juncture, a tall and graceful Indian cocked his gun fiercely, and put his war whistle to his mouth, but the signal was not blown. Amongst numerous incidents that occurred during the half hour that we were surrounded by them, an individual attempted to seize a knapsack belonging to one of the

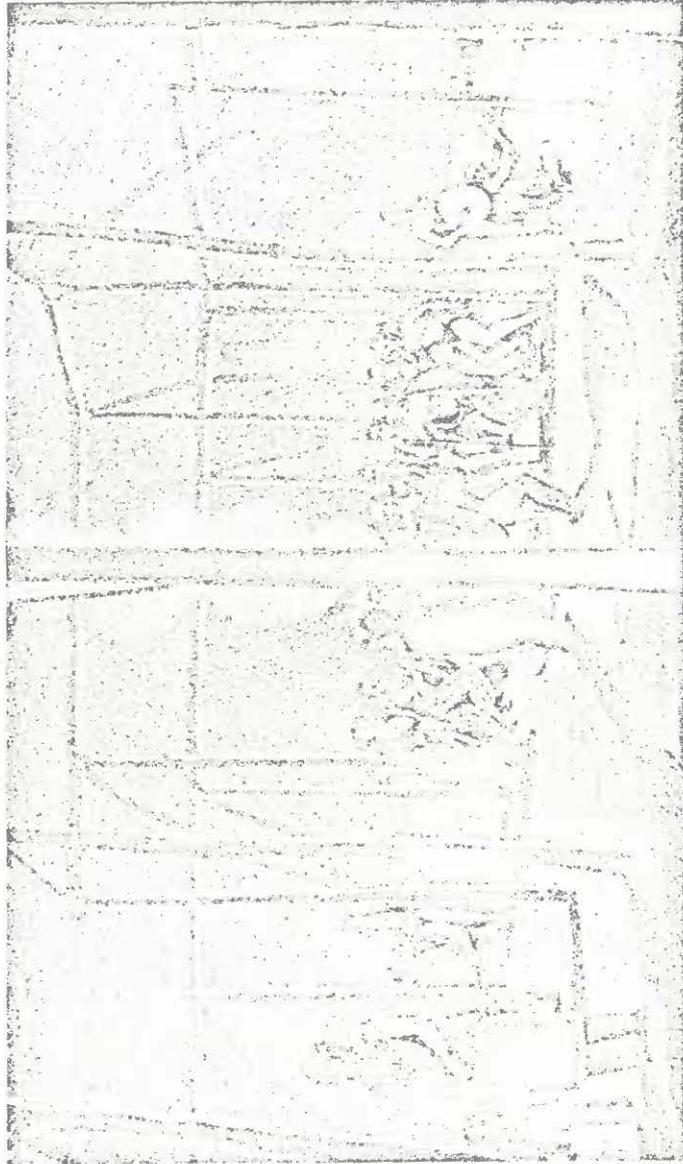
soldiers, and immediately under his observation; the latter placed his foot upon the knapsack to detain it, and at the same time prepared his gun as if to shoot the offender, who leaped backward with great agility, and with an ejaculation of pleasure, drew his arrow to the head. The whole party precipitately retreated just as Mr. Dougherty returned from hunting; being briefly informed of the nature of their visit, he called aloud to the fugitives in their own language, but they passed on without heeding him, taking our [126] horses with them. I had by a rough estimate fixed their number at one hundred and forty; they were chiefly armed with the bow and arrow, and lance, with the usual accompaniments of tomahawks, war-clubs, and knives, together with a few guns. Fortunately no personal indignity was offered us; yet we could not repress a sensation of much mortification at the prospect of a frustration of our enterprise, which now seemed inevitable, and of extreme vexation at the irreparable loss of our horses, which no exertions of ours could have saved: an appeal to arms, except in the last extremity, would have been the height of imprudence, conquest being hopeless, and escape almost impossible.

Soon after their departure Mr. Jessup and Chabonneau set out for the village to procure assistance, for the purpose of removing our camp to that place from which we recommenced our journey at a moment so unpropitious; whilst we busied ourselves in removing the baggage to a situation amongst the neighbouring bushes, which appeared favourable for concealment, and for defence, in case of a night attack, which was confidently anticipated. Several alarms occurred during the night, and on the return of day we observed thirty mounted Indians riding

swiftly towards us. The chief, who left us so precipitately the preceding evening, on his arrival at the village, hastily assembled a little band of warriors for the purpose of returning immediately to our assistance, and it was he and his party, that we had now the pleasure to greet. They expressed great satisfaction, when they learned that we were all uninjured. After saluting us cordially, they pursued the trail of the Pawnees for some distance, and from the footsteps in the grass, and other appearances, to be duly appreciated only by the eye of an Indian, they estimated the number of the Pawnees at one hundred and thirty. On their return they restored to us some bacon and other articles, which had been [127] carried off by the fugitives, and rejected as not at all to their taste. We were now supplied with a conveyance for ourselves and our baggage, and were conducted back to the village.

The Indians who committed this robbery, were a war-party of the republican Pawnees, and were about one hundred and forty in number. Their nation was at war with the Konzas.

Mr. Say's party were kindly received at the village they had left on the preceding day. In the evening they had retired to rest in the lodge set apart for their accommodation, when they were alarmed by a party of savages rushing in, armed with bows, arrows, and lances, shouting and yelling in a most frightful manner. The gentlemen of the party had immediate recourse to their arms; but observing that some squaws, who were in the lodge, appeared unmoved, they began to suspect that no molestation to them was intended. The Indians collected around the fire in the centre of the lodge, yelling incessantly; at length their howlings assumed something of a measured tone, and they



War Dance in the interior of a Konza Lodge

began to accompany their voices with a sort of drum and rattles. After singing for some time, one who appeared to be their leader, struck the post over the fire with his lance, and they all began to dance, keeping very exact time with the music. Each warrior had, besides his arms, and rattles made of strings of deer's hoofs, some part of the intestines of an animal inflated, and enclosing a few small stones, which produced a sound like pebbles in a gourd shell. After dancing round the fire for some time, without appearing to notice the strangers, they departed, raising the same wolfish howl, with which they had entered; but their music and their yelling continued to be heard about the village during the night.

This ceremony, called the *dog-dance*, was performed by the Konzas for the entertainment of their guests. Mr. Seymour took an opportunity to sketch [128] the attitudes and dresses of the principal figures.¹⁵⁸

Finding it impracticable to obtain horses by purchase, out of their almost exhausted stock of merchandize, to enable them to prosecute their march to Council Bluff, after due deliberation, they saw no alternative, but to endeavour to hire horses on credit, and to make the best of their way for Cow Island, in hopes of meeting the steamboat there. A Frenchman, Mr. Gunville, resident with this nation, agreed to furnish two pack horses, and a saddle horse for Mr. Say, whose state of health would not admit of his continuing the journey on foot. Thus furnished they prepared to depart, and in the meantime two runners were despatched to inform Major Long of their situation by letter.

¹⁵⁸ For a description of the dog dance of the Sioux, see Smithsonian Institution *Report*, 1885, part ii, pp. 307, 308.—ED.

On the 25th of August, Mr. Say and his party again left the Konza village, accompanied by the French trader, who had furnished them two horses, and by a Missouri Indian; but this last had followed them only a few miles, when he repented of his undertaking and returned.

In pursuing the most direct route from the Konza village to the Missouri, they crossed at the distance of seventeen miles, the Vermilion, a small stream bordered with handsome forests. Nineteen miles beyond this they arrived at the sources of Grasshopper Creek, where they encamped on the evening of the 27th.¹⁵⁹ Here the soil changes somewhat abruptly. The high prairies about the Vermilion and Blue Earth creeks are barren, almost naked, and inhabited by some orbicular lizards. About Grasshopper Creek the soil is fertile, the grass dense and luxuriant.

On the 29th they arrived at Isle au Vache, and were hospitably received by Colonel Morgan and the officers of his command, but had the mortification to learn that Major Long, after waiting a sufficient time to enable the Indian agent to complete his negotiations [129] with the Konzas, had departed with the steam-boat before the arrival of the messengers, that had been sent to notify him of their disaster. These runners had been despatched immediately after their arrival, with instructions to overtake the steam-boat, and to deliver Mr. Say's letter, but

¹⁵⁹ Grasshopper Creek rises near the northern line of the state, its mouth being in Jefferson County, opposite Lecompton. The name was changed to Delaware River when the tribe of that name was removed to its lower course.

The route of the party on its return may have been across Pottawatomie and Jackson counties, and through southern Atchison; or, more probably, northern Jefferson and Leavenworth counties.— ED.

The banks of the Missouri, above the Platte, have long been frequented by the Indians, either as places [136] of permanent or occasional residence. Deserted encampments are often seen. On the north-east side, near the mouth of Mosquito river, are the remains of an old Ioway village. Four miles above, and on the opposite side, was formerly a village of the Otoes. On the 17th of September we arrived at the trading establishment of the Missouri Fur Company, known as Fort Lisa, and occupied by Mr. Manuel Lisa, one of the most active persons engaged in the Missouri fur trade. We were received by a salute from this establishment, and encamped a little above, on the same side of the river.¹⁷³

[137] CHAPTER VIII

Winter cantonment near Council Bluff—Councils with the Otoes, Missouries, Ioways, Pawnees, &c.

THE position selected for the establishment of winter quarters for the exploring party, was on the west bank of the Missouri, about half a mile above Fort Lisa, five miles below Council Bluff, and three miles above the mouth of Boyer's river.¹⁷⁴ At this place we anchored on the 19th

¹⁷³ The Mosquito is on the Iowa side, in Pottawatomie County, its mouth being a few miles below Council Bluffs.

For the Oto Indians, Missouri Fur Company, and Manuel Lisa, see Bradbury's *Travels*, in our volume v, notes 42, 149, 64 respectively. Lisa established the post named for him, in 1812, and for a decade it was the most important trading station on the Missouri. It stood about twenty miles above the present town of Council Bluffs (Iowa), on the opposite side of the river.—ED.

¹⁷⁴ The camp was in the southeast corner of Washington County, Nebraska. Boyer River rises in Sac County, Iowa, flows southwest through Crawford and Harrison counties, and debouches in Pottawatomie County, nearly opposite the boundary between Washington and Douglas counties, Nebraska.—ED.

The interpreter returned on the 20th, having accomplished the object of his mission. Soon afterwards, Mr. Dougherty arrived from the Oto village, whither he had been sent with a deputation to Konzas, to aid in effecting a reconciliation between those nations. This proposition, which originated with the Konzas, was favourably received by the Otoes. Mr. D. was soon afterwards despatched to the Pawnees, with instructions to demand of them the property plundered from Mr. Say's party, also to require that the persons who had committed that outrage should be given up. He was accompanied by two Frenchmen acquainted with the Pawnees and their language.

A party of Otoes arrived at Fort Lisa on the 26th of September, with pack-horses laden with peltries, and bringing with them a soldier, who, having been accidentally separated from a small detachment that were driving some beeves from Martin's Cantonments, towards Council Bluff, had wandered about in the prairie for five days, without tasting food, [139] when he at last had the good fortune to fall in with the Otoes, who hospitably fed and conducted him to the trading house.

In the same mass were some segments of the encrinus, and a terebratula with five or six obtuse longitudinal waves.

30. Another petrification, abundant in some fragments of compact carbonate of lime, also found on the shores of the Missouri, possesses all the generic characters which we have attributed to the preceding species, excepting that in the transverse fracture the cells distinctly revolve from the centre itself, and of course the shell was destitute of the solid nucleus as in *melonis*, *Lamarck*. It has about four volutions. We have named this species, which is, notwithstanding the difference of the central portion of the same genus with the preceding *miliolites centralis*, *Say*. As in the preceding, it is entirely filled solidly with carbonate of lime, and this substance being of a greater purity in the filled-up cavities of the fossil than in the mass, its interior divisions are very obvious.

The latter species we observed about one hundred miles up the Konzas river, where it forms the chief body of the rocks in extensive ranges. It seems to be a carbonate of lime containing iron.—JAMES.

✓ The Council Bluff, so called by Lewis and Clarke, from a council with the Otoes and Missouries held there on the 3d of August 1804, is a remarkable bank rising abruptly from the brink of the river, to an elevation of about one hundred and fifty feet. This is a most beautiful position, having two important military features, security, and a complete command of the river. Its defects are a want of wood within a convenient distance, there being little within a mile above, and much farther below, also a want of stone and of water, except that of the river. From the summits of the hills, about one mile in the rear of the bluff, is presented the view of a most extensive and beautiful landscape. The bluffs on the east side of the river exhibit a chain of peaks stretching as far as the eye can reach. The river is here and there seen meandering in serpentine folds, along its broad valley, chequered with woodlands and prairies, while at a nearer view you look down on an extensive plain interspersed with a few scattered copses or bushes, and terminated at a distance by the Council Bluff.

✓ This position is about five miles above that selected for the wintering post of the exploring party. At the last mentioned place, a very narrow plain or beach, closely covered with trees, intervenes between the immediate bank of the river and the bluffs, which rise near two hundred feet, but are so gradually sloped as to be ascended without great difficulty, and are also covered with trees. This spot presented numerous advantages for the cantonment of a small party like ours. Here were abundant supplies of wood and stone, immediately on the spot where we wished to erect our cabins, and the situation was sheltered by the high bluffs from the north-west winds. The place was called Engineer Cantonment. [140] On the

26th of September, Mr. Say and Mr. Jessup arrived in the flotilla from Cow Island, in company with Col. Morgan, Dr. Gale, and Captain Magee.¹⁷⁷ They had both nearly recovered their health, and entertained the liveliest sense of the eminent politeness and hospitality which had been conferred on them by the above named gentlemen, as well as the other officers of the military expedition.

About one hundred Otoes, together with a deputation of the Ioway nation, who had been summoned to a council by Major O'Fallon, presented themselves at our camp on the 3d of October. The principal chiefs advanced before their people, and upon invitation seated themselves. After a short interval of silence Shonga-tonga, the Big Horse, a large portly Indian of a commanding presence, arose and said, "My father, your children have come to dance before your tent, agreeably to our custom of honouring brave or distinguished persons."

After a suitable reply, by Major O'Fallon, the amusement of dancing was commenced by the striking up of their rude instrumental and vocal music; the former consisting of a gong made of a large keg, over one of the ends of which a skin was stretched, which was struck by a small stick; and another instrument, consisting of a stick of firm wood, notched like a saw, over the teeth of which a smaller

¹⁷⁷ John Gale, of New Hampshire, was surgeon in the rifles. He entered the army in 1812, as surgeon's mate in the 23d Infantry. After an honorable discharge in 1815, he was the same year reinstated as surgeon's mate in the 3d Infantry, and in 1818 made surgeon in the rifles. Three years later he became major-surgeon. He died in 1830.

Matthew J. Magee was captain of a Pennsylvania company of volunteers during the first two years of the War of 1812-15. In 1814 he was made captain in the 4th Rifles. After being discharged at the close of the war, he was reinstated (1816) as first lieutenant of ordnance with brevet rank as captain. A little later he was made captain, and in 1818 was transferred to the rifles. In 1821 he was transferred to the infantry. His death occurred in 1824.—ED.

Early in October the cabins for winter-quarters were completed. Having made arrangements for the subsistence of the party, and being about to return to Washington, Major Long issued orders to the officers and gentlemen of the expedition, for their government during his absence. The following extract will show to what objects they were instructed to direct their attention.

“Mr. Say will have every facility afforded him that circumstances will admit to examine the country, [151] visit the neighbouring Indians, procure animals, &c. for the attainment of which he will call on Lt. Graham, who is authorized to make any expenditures in behalf of the expedition that may be deemed reasonable and necessary, and afford any aid in his power, consistent with the performance of other duties. Mr. Seymour or Mr. Peale will accompany him, whenever their services are deemed requisite.

✓ “Major O’Fallon has given permission to Mr. Dougherty to aid the gentlemen of the party, in acquiring information; *nose* livid brown, emarginate; *mouih* margined with whitish and with sparse short hairs; *teeth* piceous-black at tip; *feet*, white, the second, third, and fourth toes subequal, the first and fifth shorter, the former rather shortest, anterior with but very few hairs, nearly naked; *nails* nearly as long as the toes; *tail* with rather sparse hairs, nearly of equal diameter, but slightly thickest in the middle, depressed, and nearly as long as the posterior feet.

This specimen, which is a male, closely resembles *S. parvus*, but it is much larger; the head is proportionably much larger and more elongated; the tail more robust, and the inferior anterior pair of incisores are similar to those of *S. constrictus*, fig. 7. pl. 15. of the Mem. du Mus. by Mr. Geoffroy St. Hilaire. The incisors of the superior jaw are twelve in number, in a cranium belonging to this species, five on each side in addition the two larger anterior ones; the posterior tooth of the lateral ones is smallest.

May not this be the animal mentioned by the late professor Barton in his Medical and Physical Journal, for March, 1816, which, he says, “may be called the black shrew?” I do not know that the black shrew has ever received any further notice, unless it is the same species to which Mr. Ord has applied the name of *Sorex niger*.—JAMES.

mation concerning the Indians, &c.; this gentleman will, therefore, be consulted in relation to visits, and all kinds of intercourse with the Indians, that may be necessary in the prosecution of the duties of the expedition.

"In regard to these duties, the gentlemen of the expedition will consult my orders of March last. The documents transmitted from the Philosophical Society of Philadelphia, by the Secretary of War; and the instructions of Mr. Jefferson to Capt. Lewis, to be found in vol. 1st of Lewis and Clarke's expedition,¹⁸⁸ and regulate their observations and inquiries accordingly.

"Lt. Graham will embrace every opportunity for celestial and barometric observations, and calculate the latitude, longitude, magnetic dip and variation, with the utmost attainable precision; also the heights of the neighbouring hills, and the adjacent high table lands. . He will also continue the meteorologic observations as usual, noticing the changes of weather, and all celestial and atmospheric phenomena. To aid him in these duties, he will call on Lieut. Swift, or any other gentleman of the expedition, who may not be particularly engaged at the time in other important duties.

"It is believed, that the field for observation and inquiry is here so extensive, that all the gentlemen of the expedition will find ample range for the exercise of their talents in their respective pursuits; and it is [152] hoped, that through their unremitting exertions and perseverance, a rich harvest of useful intelligence will be acquired."

✓ On the 11th of October, Major Long and Mr. Jessup took leave of their friends at Engineer Cantonment, and

¹⁸⁸ See Thwaites, *Original Journals of the Lewis and Clark Expedition*, Appendix, vol. vii, doc. xviii.—ED.

accompanied by several other persons, began to descend the Missouri in a canoe, on their way towards Washington and Philadelphia.

[153] CHAPTER IX

Animals — Sioux and Omawhaw Indians — Winter Residence at Engineer Cantonment

THE subsequent account of the transactions at and near Council Bluff, and of the observations made there, we copy from the journal of Mr. Say.

Descriptions of some of the animals which occurred, are given in the notes below.¹⁸⁹

¹⁸⁹ 1. *Vespertilio pruinosus*.—Ears large, short, not so long as the head, hairy on the exterior side more than half their length; *tragus* very obtuse at tip, arcuated; *canine teeth* large, prominent; *incisors*, only one distinct one on each side, placed very near the canine, conic, almost on a line with it, and furnished with a small tubercle on its exterior base; *nostrils* distant; *fur* of the back, long, black brown at base, then pale brownish-yellow, then blackish, then white; towards the rump dark ferruginous takes the place of the brownish-yellow on the fur; *beneath* the colours are similar to those of the back; but on the anterior portion of the breast the fur is not tipped with white, and on the throat it is dull yellowish-white dusky at base; the brachial membrane is densely hairy on the anterior margin beneath; interfemoral membrane covered with fur: length nearly 4½ inches.

This bat is common in this region, and was observed by Mr. Thomas Nuttall at Council Bluffs. It is a fine large species, and remarkable for its many-coloured fur. It has much affinity with the New York bat, (*V. novaboracensis*), but is more than double its size, and is distinguished from it by many minor characters.

The late professor Barton, presented a specimen of this bat to the Philadelphia museum, that had been captured in Philadelphia.

2. *Vespertilio arquatus*.—Head large, ears rather shorter than the head, wide, and at tip, rounded, hairy at base, posterior edge with two slight and very obtuse emarginations; the anterior base distant from the eye; *tragus* arcuated, obtuse at tip; interfemoral membrane naked, including the tail to one half of the penultimate joint.

Total length 5 inches: tail 1½ inches.

Expansion more than 13 inches.

This bat might be readily mistaken for the Carolina bat, (*V. carolinensis*, Geoff.) which it resembles in colour, but differs from it in being of a larger size,

ties of which still retain much of the habit and manners of this species.

On the 14th of October, four hundred Omawhaw Indians assembled at Camp Missouri. Major O'Fallon addressed them in an appropriate speech, stating the reasons for their being called to council; upon which Ong-pa-ton-ga, the Big Elk,¹⁸¹ arose, and after shaking by the hand each of the whites present, placed his robe of otter skins, and his mockasins under the feet of the agent, whom he addressed to the following effect, as his language was interpreted by Mr. Dougherty.

‘He had heard that his father wished to see him, and he had wished to see and to hear the words of his father, ever since he learned that he was ascending [156] the river. He was informed last fall of his being at the river Platte, and as he could not then go to see him, he had now come to visit him; and here I am, my father. All these young people you see around here are yours; although they are poor and trifling, yet they are your children. I have always loved the whites since I first remember to have seen them, and this affection increases with my age. All my nation loves the whites, and always have loved them. Amongst all the good things of this world I place the whites first. But it appears that there are many nations that live nearer to you than I, that do not love you, though you have done more for them, than you have done for me. When they meet with you, they flatter you, in order to get presents from you, notwithstanding which, they would not hesitate to kill some of your people on their way home. Some of them shake hands with you in a friendly manner,

¹⁸¹ A sketch of Big Elk is given in Bradbury's *Travels*, volume v of our series, note 52.—ED.

after some days they returned, without having been able to effect any thing.

It was now determined that Mr. Say and Mr. Jessup, who on account of ill health, were unable to travel farther on foot, should for the present remain at Isle au Vache, while the other gentlemen of the detachment should continue their journey. Mr. Dougherty, from his intimate acquaintance with the country, was of opinion that by crossing in the nearest direction from Isle au Vache to the mouth of Wolf river, they might yet overtake the steam-boat. They accordingly placed themselves under his guidance, and, by great exertion, fortunately arrived at the mouth of Wolf river, on the evening of the 1st of September, as the steam-boat was passing.

The country south-west of the Missouri, between the Konzas and the Platte, is drained principally by Wolf river and the Great Nemahaw. These rivers, like the Nodowa and Nishnebottona, which enter the Missouri nearly opposite them from the north-east, rise in the prairies at an elevation probably of forty or fifty feet above the level of the Missouri. As they descend, their vallies becoming gradually wider, embosom a few trees, and at length, near their entrance into the Missouri valley, are forests of considerable extent. The surface of these prairies presents a constant succession of small rounded hills, becoming larger and more abrupt as you approach the beds of the rivers. The soil is deep, reposing usually on horizontal beds of argillaceous sandstone, and secondary limestone. In all the limestones along the Missouri, we observe a tendency to crystalline structure, and they have often a reddish or yellowish white [130] colour. There is,