



TRAVELS
IN THE
INTERIOR PARTS OF AMERICA;
COMMUNICATING
DISCOVERIES
MADE IN EXPLORING
THE MISSOURI, RED RIVER AND WASHITA,
BY
CAPTAINS LEWIS AND CLARK, DOCTOR SIBLEY,
AND
MR. DUNBAR;
WITH
A STATISTICAL ACCOUNT
OF THE
COUNTRIES ADJACENT.

AS LAID BEFORE THE SENATE,

BY THE
PRESIDENT OF THE UNITED STATES.

IN FEBRUARY, 1806,
AND NEVER BEFORE PUBLISHED IN GREAT BRITAIN.

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1807.

TRAVELS

IN THE

INTERIOR PARTS OF AMERICA.

MESSAGE

TO THE SENATE AND HOUSE OF REPRESENTATIVES OF
THE UNITED STATES.

IN pursuance of a measure proposed to congress by a message of January 18th, one thousand eight hundred and three, and sanctioned by their appropriation for carrying it into execution, captain Meriwether Lewis, of the first regiment of infantry, was appointed, with a party of men, to explore the river Missouri, from its mouth to its source, and, crossing the highlands by the shortest portage, to seek the best water communication thence to the Pacific ocean; and lieutenant Clarke was appointed second in command. They were to enter into conference with the Indian nations on their route, with a view to the establishment of commerce with them. They entered the Missouri May fourteenth, one thousand eight hundred and four, and on the first of November took up their winter quarters near the Mandan towns, 1609 miles above the mouth of the river, in latitude $47^{\circ} 21' 47''$ north, and longitude $99^{\circ} 24' 45''$ west from Greenwich. On the eighth of April, one thousand eight hundred and five, they proceeded up the river in pursuance of the objects prescribed to them. A letter of the preceeding day, April seventh, from captain Lewis, is herewith communicated. During his stay among the Mandans, he had been able to lay down the Missouri, according to courses and distances taken on his passage up it, corrected by frequent observations of longitude and latitude; and to add to the actual survey of this portion of the river, a general map of the country between the Mississippi and Pacific, from the thirty-fourth to the fifty-fourth degrees of latitude. These additions are from information collected from Indians with whom he had opportunities of communicating, during his journey and residence with them. Copies of this map are now presented to both houses of congress. With these I communicate also a statistical view, procured and forwarded by him, of the Indian nations inhabiting the territories of Louisiana, and the countries adjacent to its northern and western borders; of their commerce, and of other interesting circumstances respecting them.

In order to render the statement as complete as may be, of the Indians inhabiting the country west of the Mississippi, I add doctor Sibley's account of those residing in and adjacent to the territory of Orleans.

I communicate also, from the same person, an account of the Red river, according to the best information he had been able to collect.

Having been disappointed, after considerable preparation, in the purpose of sending an exploring party up that river, in the summer of one thousand eight hundred and four, it was thought best to employ the autumn of that year in procuring a knowledge of an interesting branch of the river called the Washita. This was undertaken under the direction of Mr. Dunbar, of Natchez, a citizen of distinguished science, who had aided, and continues to aid us, with his disinterested and valuable services in the prosecution of these enterprizes. He ascended the river to the remarkable hot springs near it, in latitude $34^{\circ} 31' 4''$. 86, longitude $92^{\circ} 50' 45''$ west from Greenwich, taking its courses and distances, and correcting them by frequent celestial observations. Extracts from his observations, and copies of his map of the river, from its mouth to the hot springs, make part of the present communications. The examination of the Red river itself, is but now commencing.

TH. JEFFERSON.

February 19, 1806.

EXTRACT OF A LETTER FROM CAPTAIN MERIWETHER LEWIS, TO THE PRESIDENT OF THE UNITED STATES, DATED

Fort Mandan, April 17th, 1805.

DEAR SIR,

HEREWITH inclosed you will receive an invoice of certain articles, which I have forwarded to you from this place. Among other articles you will observe, by reference to the invoice, 67 specimens of earths, salts and minerals, and 60 specimens of plants: these are accompanied by their respective labels, expressing the days on which obtained, places where found, and also their virtues and properties, when known. By means of these labels, reference may be made to the chart of the Missouri, forwarded to the secretary of war, on which the encampment of each day has been carefully marked: thus the places at which these specimens have been obtained, may be easily pointed out, or again found should any of them prove valuable to the community on further investigation.

You will also receive herewith inclosed, a part of capt. Clarke's private journal; the other part you will find inclosed in a separate tin box. This journal will serve to give you the daily details of our progress and transactions.

I shall dispatch a canoe with three, perhaps four persons from the extreme navigable point of the Missouri, or the portage between this river and the Columbia river, as either may first happen. By the return of this canoe, I shall send you my journal, and some one or two of the best of those kept by my men. I have sent a journal kept by one of the sergeants, to captain Stoddard, my agent at St. Louis, in order as much as possible to multiply the chances of saving something. We have encouraged our men to keep journals, and seven of them do, to whom in this respect we give every assistance in our power.

I have transmitted to the secretary at war, every information relative to the geography of the country which we possess, together with a view of the Indian nations, containing information relative to them, on those points with which I conceived it important that the government should be informed.

By reference to the muster rolls forwarded to the war department, you will see the state of the party; in addition to which we have two interpreters; one negro man, servant to capt. Clarke; one Indian woman, wife to one of the interpreters, and a Mandan man, whom we take with a view to restore peace between the Snake Indians, and those in this neighbourhood, amounting in total with ourselves to 33 persons. By means of the interpreters and Indians, we shall be enabled to converse with all the Indians that we shall probably meet with on the Missouri.

I have forwarded to the secretary at war my public accounts, rendered up to the present day. They have been much longer delayed than I had any idea they would have been, when we departed from the Illinois; but this delay, under the circumstances which I was compelled to act, has been unavoidable. The provision peroque and her crew, could not have been dismissed in time to have returned to St. Louis last fall, without evidently, in my opinion, hazarding the fate of the enterprize in which I am engaged; and I therefore did not hesitate to prefer the censure that I may have incurred by the detention of these papers, to that of risking in any degree the success of the expedition. To me the detention of these papers has formed a serious source of disquiet and anxiety; and the recollection of your particular charge to me on this subject, has made it still more poignant. I am fully aware of the inconvenience which must have arisen to the war department, from the want of these vouchers, previous to the last session of congress, but how to avert it was out of my power to devise

From this place we shall send the barge and crew early to-morrow morning, with orders to proceed as expeditiously as possible to St. Louis; by her we send our dispatches, which I trust will get safe to hand. Her crew consists of ten able bodied men, well armed and provided with a sufficient stock of provision to last them to St. Louis. I have but little doubt but they will be fired on by the Siouxs; but they have pledged themselves to us that they will not yield while there is a man of them living. Our baggage is all embarked on board six small canoes, and two pirogues; we shall set out at the same moment that we dispatch the barge. One, or perhaps both of these pirogues, we shall leave at the falls of the Missouri, from whence we intend continuing our voyage in the canoes, and a pirogue of skins, the frame of which was prepared at Harper's ferry. This pirogue is now in a situation which will enable us to prepare it in the course of a few hours. As our vessels are now small, and the current of the river much more moderate, we calculate upon travelling at the rate of 20 or 25 miles per day, as far as the falls of the Missouri. Beyond this point, on the first range of rocky mountains, situated about 100 miles further, any calculation with respect to our daily progress, can be little more than bare conjecture. The circumstances of the Snake Indians possessing large quantities of horses, is much in our favour, as by means of horses the transportation of our baggage will be rendered easy and expeditious over land, from the Missouri to the Columbia river. Should this river not prove navigable where we first meet with it, our present intention is, to continue our march by land down the river, until it becomes so, or to the Pacific ocean. The map, which has been forwarded to the secretary of war, will give you the idea we entertain of the connection of these rivers, which has been formed from the corresponding testimony of a number of Indians, who have visited that country, and who have been separately and carefully examined on that subject, and we therefore think it entitled to some degree of confidence. Since our arrival at this place, we have subsisted principally on meat, with which our guns have supplied us amply, and have thus been enabled to reserve the parched meal, portable soup, and a considerable proportion of pork and flour, which we had intended for the more difficult parts of our voyage. If Indian information can be credited, the vast quantity of game with which the country abounds through which we are to pass, leaves us but little to apprehend from the want of food.

We do not calculate on completing our voyage within the present year, but expect to reach the Pacific ocean, and return as far as the head of the Missouri, or perhaps to this place,

before winter. You may therefore expect me to meet you at Montachello in September, 1806. On our return we shall probably pass down the Yellow Stone river, which, from Indian information, waters one of the fairest portions of this continent.

I can see no material or probable obstruction to our progress, and entertain, therefore, the most sanguine hopes of complete success. As to myself, individually, I never enjoyed a more perfect state of good health than I have since we commenced our voyage. My inestimable friend and companion, captain Clarke, has also enjoyed good health generally. At this moment every individual of the party is in good health and excellent spirits, zealously attached to the enterprize, and anxious to proceed: not a whisper of discontent or murmur is to be heard among them; but all in unison act with the most perfect harmony. With such men I have every thing to hope, and but little to fear.

Be so good as to present my most affectionate regard to all my friends, and be assured of the sincere and unalterable attachment of

Your most obedient servant,

MERIWETHER LEWIS,

Captain of 1st U. S. regiment of infantry.

TH. JEFFERSON,

President of the United States.

A STATISTICAL VIEW

OF THE

INDIAN NATIONS

INHABITING

THE TERRITORY OF LOUISIANA

AND THE

COUNTRIES ADJACENT TO ITS NORTHERN AND
WESTERN BOUNDARIES.

EXPLANATORY REFERENCES.

- A. The names of the Indian nations as usually spelt and pronounced in the English language.
- B. Primitive Indian names of nations and tribes, English orthography, the syllables producing the sounds by which

- the Indians themselves express the name of their respective nations.
- C. Nick-names, or those which have generally obtained among the Canadian traders
 - D. The language they speak, if primitive, marked with a * otherwise derived from, and approximating to the
 - E. Number of villages.
 - F. Number of tents or lodges of the roving lands.
 - G. Numbers of warriors.
 - H. The probable number of souls.
 - I. The rivers on which they rove, or on which their villages are situated.
 - J. The names of the nations or companies with whom they maintain their principal commerce or traffic.
 - K. The place on which their traffic is usually carried on.
 - L. The amount of merchandise necessary for their annual consumption, estimated in dollars at the St. Louis prices.
 - M. The estimated amount in dollars, of their annual returns at the St. Louis prices.
 - N. The species of peltries, furs and other articles which they annually supply or furnish.
 - O. The species of peltries, furs and other articles which the natural productions of their country would enable them to furnish, provided proper encouragement was given them.
 - P. The places at which it would be mutually advantageous to form the principal establishments, in order to supply the several Indian nations with merchandise.
 - Q. The names of the Indian nations with whom they are at war.
 - R. The names of the Indian nations with whom they maintain a friendly alliance, or with whom they are united by intercourse or marriage,
 - S. Miscellaneous remarks,

NOTATIONS.

- over *a*, denotes that *a* sounds as in caught, taught, &c.
- ^ over *a*, denotes that it sounds as in dart, part, &c.
- a* without notation has its primitive sound as in ray, hay, &c. except only when it is followed by *r* or *w*, in which case it sounds as *d*.
- , set underneath denotes a small pause, the word being divided by it into two parts.

THE INDIAN TRADE. The sums stated under and opposite "L" are the amounts of merchandise annually furnished the several nations of Indians, including all incidental ex-

penses of transportation, &c. incurred by the merchants which generally averages about one third of the whole amount. The merchandise is estimated at an advance of 125 per cent. on the sterling cost. It appears to me that the amount of merchandise which the Indians have been in the habit of receiving annually, is the best standard by which to regulate the quantities necessary for them in the first instance; they will always consume as much merchandise as they can pay for, and those with whom a regular trade has been carried on have generally received that quantity.

The amount of their returns stated under and opposite "M" are estimated by the peltry standard of St. Louis, which is 40 cents per pound for deer skins; (i. e.) all furs and peltries are first reduced by their comparative value to lbs. of merchantable deer skins, which are then estimated at 40 cents per lb.

These establishments are not mentioned as being thought important at present in a governmental point of view.

A. Grand Osage.

B. Bâr-har-châ.

C. Grand Zo.

D. *

E. Two.

F.

G. 1.200.

H. 5.000.

I. At the three forks of the Arkansas river, and eighty leagues up the Osage river, on the south side.

J. Merchants of St. Louis.

K. At their villages.

L. 15.000.

M. 20.000

N. Principally skins of the small deer, black bear, some beaver, and a few otters and rackoons.

O. Small deer skins, black bear, and a much larger proportion of beaver, otter, rackoon, and muskrats.

P. About the three forks of the Arkansas river, 600 miles from its junction with the Mississippi.

Q. With all their Indian neighbors, except the Little Osage, until the United States took possession of Louisiana.

R. With the Little Osage only.

S. Claim the country within the following limits, viz. commencing at the mouth of a south branch of the Osage river, called *Neangua*, and with the same to its source, thence south.

LEWIS AND CLARKE.]

B

wardly to intersect the Arkansas about one hundred miles below the three forks of that river; thence up the principal branch of the same, to the confluence of a large northwardly branch of the same, lying a considerable distance west of the Great Saline, and with that stream nearly to its source: thence northwardly, towards the Kansas river, embracing the waters of the upper portion of the Osage river, and thence obliquely approaching the same to the beginning. The climate is delightful, and the soil fertile in the extreme. The face of the country is generally level, and well watered; the eastern part of the country is covered with a variety of excellent timber; the western and middle country high prairies. It embraces within its limits four salines, which are, in point of magnitude and excellence, unequalled by any known in North America; there are also many others of less note. The principal part of the Great Osage have always resided at their villages, on the Osage river, since they have been known to the inhabitants of Louisiana. About three years since, nearly one half of this nation, headed by their chief the *Big-track*, emigrated to the three forks of the Arkansas, near which, and on its north side, they established a village, where they now reside. The Little Osage formerly resided on the S. W. side of the Missouri, near the mouth of Grand river; but being reduced by continual warfare with their neighbors, were compelled to seek the protection of the Great Osage, near whom they now reside. There is no doubt but their trade will increase; they could furnish a much larger quantity of beaver than they do. I think two villages, on the Osage river, might be prevailed on to remove to the Arkansas, and the Kansas, higher up the Missouri, and thus leave a sufficient scope of country for the Shawnees, Dillewars, Miames, and Kickapoos. The Osages cultivate corn, beans, &c.

-
- A. Little Osage.
 - B. Ood'-zâ-tâu.
 - C. Petit Zo.
 - D. Osage.
 - E. One.
 - F.
 - G. 300.
 - H. 1.300.
 - I. Near the great Osages.
 - J. Merchants of St. Louis.

- K. At their village.
- L. 5.000.
- M. 8.000.
- N. The same as the Great Osages.
- O. The same as the Great Osages.
- P. The same as the Great Osages.
- Q. With all their Indian neighbors, except the Great Osage.
- R. With the Great Osage only.
- S. See page 11, S.

-
- A. Kansas.
 - B. Kar'-sa:
 - C. Käh.
 - D. Osage.
 - E. One.
 - F.
 - G. 300.
 - H. 1.300.
 - I. Eighty leagues up the Kansas river, or the north side.
 - J. Merchants of St. Louis.
 - K. On the Missouri above the mouth of the Kansas river, not stationary, and at their village.
 - L. 5.000.
 - M. 8000.
 - N. The same as the Osage, with buffaloe grease and robes.
 - O. The same as the Osage.
 - P. On the north side of the Kansas river, at a bluff one and a half miles from its confluence with the Missouri.
 - Q. With all nations within their reach.
 - R. They are sometimes at peace with the Ottos and Missouris, with whom they are partially intermarried.
 - S. The limits of the country they claim is not known. The country in which they reside, and from thence to the Missouri, is a delightful one, and generally well watered and covered with excellent timber; they hunt on the upper part of Kansas and Arkansas rivers; their trade may be expected to increase with proper management. At present they are a dissolute, lawless banditti; frequently plunder their traders, and commit depredations on persons ascending and descending the Missouri river: population rather increasing. These people, as well as the Great and Little Osages, are stationary, at their villages, from about the 15th of March to the 15th of May, and again from the 15th of August to the 15th of October: the balance of the year is appropriated to hunting. They cultivate corn, &c.

- A. Ottoes.
- B. Wâ-l-dokè-tâh-tâh.
- C. La Zôto.
- D. Missouri.
- E. Ottoes and Missouris, one.
- F.
- G. 120.
- H. 500.
- I. South side of the river Platte, fifteen leagues from its mouth.
- J. Merchants of St. Louis.
- K. On the Missouri, below the river Platte; not stationary, and at their villages.
- L. 4.000, including the Missouris.
- M. 8.000, including the Missouris.
- N. Principally deer skins, black bear, a greater proportion of beaver than the Osage, some otter and rackoons.
- O. Skins of the deer, black bear, beaver, otter, rackoon, muskrats and wolves, buffaloe robes, tallow and grease, bear's oil, deer and elk tallow, elk skins dressed and in parchment, all in much larger quantites than they do at present.
- P. The Council Bluff, on the S. W. side of the Missouri, fifty miles above the mouth of the river Platte.
- Q. With the Mahas, Pon'cârs, Sioux, the Great and Little Osage, Kansas and Loups.
- R. With the Panis proper, Saukees and Renars.
- S. They have no idea of an exclusive possession of any country, nor do they assign themselves any limits. I do not believe that they would object to the introduction of any well disposed Indians: they treat the traders with respect and hospitality, generally. In their occupations of hunting and cultivation, they are the same with the Kansas and Osage. They hunt on the Saline, Nimmehaw rivers, and west of them in the plains. The country in which they hunt lies well; it is extremely fertile and well watered; that part of it which borders on the Nimmehaw and Missouri possesses a good portion of timber: population rather increasing. They have always resided near the place their village is situated, and are the descendants of the Missouris.



- A. Missouris.
- B. New'-dar-cha.
- C. Missouri.

- D. *
- E. See page 14, E.
- F.
- G. 80.
- H. 300.
- I. With the Ottoes.
- J. Merchants of St. Louis.
- K. Same as Ottoes, see page 15, K.
- L. See page 15, L.
- M. See page 15, M.
- N. Same as the Ottoes, page 15, N.
- O. Same as the Ottoes, do. O.
- P. The Council Bluff, on the S.W. side of the Missouri, fifty miles above the mouth of the river Platte.
- Q. With the Mahas, Poncars, Sioux, the Great and Little Osage, Kansas and Loups.
- R. With the Panis proper, Saukees and Renars.
- S. These are the remnant of the most numerous nation inhabiting the Missouri, when first known to the French. Their ancient and most principal village was situated in an extensive and fertile plain on the north bank of the Missouri, just below the entrance of the Grand river. Repeated attacks of the small pox, together with their war with the Saukees and Renars, has reduced them to their present state of dependence on the Ottoes, with whom they reside, as well in their village as on their hunting excursions. The Ottoes view them as their inferiors, and sometimes treat them amiss. These people are the real proprietors of an extensive and fertile country lying on the Missouri, above their ancient village for a considerable distance, and as low as the mouth of the Osage river, and thence the Mississippi.



- A. Panias proper.
- B. Pâ-nee.
- C. Grand Par.
- D. *
- E. One.
- F.
- G. 400.
- H. 1600.
- I. South side of the river Platte, thirty leagues from its mouth.
- J. Merchants of St. Louis.
- K. On the Missouri, below the river Platte, not stationary, and at their village.

- L. 6.400, including the Panias Republican.
- M. 10.000, including the Panias Republican.
- N. Fine beaver principally, a considerable proportion of beaver, some robes and a few rackoons.
- O. Skins of the beaver, otter, rackoon, muskrats and wolves, buffaloe robes, tallow and grease, elk skins and grease, also a number of horses.
- P. The Council Bluff, on the S.W. side of the Missouri, fifty miles above the mouth of the river Platte.
- Q. With the Pania-pique, Great and Little Osage, Kanzas, La Play, Sioux, Ricaras and Paducas.
- R. With the Loups, Mahas, Poncars, Ottoes, Missouris and Avauwais.
- S. With respect to their idea of the possession of soil, it is similar to that of the Ottoes; they hunt on the south side of the river Platte, higher up and on the head of the Kanzas. A great proportion of this country is open plains, interspersed, however, with groves of timber, which are most generally found in the vicinity of the water courses. It is generally fertile and well watered; lies level, and free of stone. They have resided in the country which they now inhabit, since they were known to the whites. Their trade is a valuable one, from the large proportion of beaver and otter which they furnish, and it may be expected yet to increase, as those animals are still abundant in their country. The periods of their residence at their village and hunting, are similar to the Kanzas and Osages. Their population is increasing. They are friendly and hospitable to all white persons; pay great respect and deference to their traders, with whom they are punctual in the payment of their debts. They are, in all respects, a friendly, well disposed people. They cultivate corn, beans, melons, &c.

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- A. Panis Republican,
 - B. Ar-râh-pâ-hoo',
 - C. Republic.
 - D. Pania.
 - E. Panias proper and Panias Republican live in the same village.
 - F.
 - G. 300.
 - H. 1.400.
 - I. With the Panias proper,
 - J. Merchants of St. Louis,
 - K. See page 17 K.
 - L. See page 17 K.

- M. See page 17 M.
 N. See page 17 N.
 O. See page 17 O.
 P. See page 17 P.
 Q. See page 17 Q.
 R. See page 17 R.
 S. Are a branch of the Pania proper; or, as they are frequently termed, the *Big Pauch*. About ten years since they withdrew themselves from the mother nation, and established a village on a large northwardly branch of the Kanzas, to which they have given name; they afterwards subdivided and lived in different parts of the country on the waters of Kanzas river; but being harassed by their turbulent neighbors, the Kanzas, they rejoined the Panias proper last spring. What has been said with respect to the Panias proper is applicable to these people, except that they hunt principally on the Republican river, which is better stocked with timber than that hunted by the Panias.
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- A. Panias Loups (or Wolves.)
 B. Skec'-e-ree.
 C. La Loup.
 D. Pania.
 E. One.
 F.
 G. 280.
 H. 1,000.
 I. On the N. E. side of the Wolf river, branch of the river Platte, 36 leagues from its mouth.
 J. Merchants of St. Louis.
 K. At the village of the Panias.
 L. 2,400.
 M. 3,500.
 N. See page 17 N.
 O. See page 17 O.
 P. See page 17 P.
 Q. With Pania-picque, Great and Little Osage, Kanzas, Le Plays, Sioux, Ricaras, Mahas, Poncars, Ottoes and Missouris.
 R. Panias proper, and Panias Republican.
 S. These are also a branch of the Panias proper, who separated themselves from that nation many years since, and established themselves on a north branch of the river Platte, to which their name was also given: these people have likewise no idea of an exclusive right to any portion of the

country. They hunt on the Wolf river above their village, and on the river Platte above the mouth of that river. This country is very similar to that of the Panias proper; though there is an extensive body of fertile well timbered land between the Wolf river below their village and the river Corn de Cerf, or Elkhorn river. They cultivate corn, beans, &c. The particulars related of the other Panias is also applicable to them. They are seldom visited by any trader, and therefore usually bring their furs and peltry to the village of the Panias proper, where they traffic with the whites.

- A. Mahâs.
- B. O'-mâ'-hâ.
- C. La Mar.
- D. Osage, with different accent; some words peculiar to themselves.
- E.
- F. 60.
- G. 150.
- H. 600.
- I. The river Quicurre and the head of the Wolf river,
- J. Merchants of St. Louis.
- K. At their old village, though no trade latterly.
- L. 4.000, including the Pon'cârs.
- M. 7.000 including the Pon'cârs.
- N. See page 17, N.
- O. The same as the Ottoes' and Missouris', with the addition of skins of the Missouri antelope, (called cabri', by the inhabitants of the Illinois.)
- P. See page 17, P.
- Q. Great and Little Osage, Kanzas, Loups, Ottoes, Missouris, and all the Sioux, except the Yankton Ahnâ.
- R. With the Panias proper, Panias Republicans, Yanktons Ahna, Saukees, Renars, and Ayouwais.
- S. They have no idea of exclusive possession of soil. About ten years since, they boasted 700 warriors. They have lived in a village, on the west bank of the Missouri, 236 miles above the mouth of the river Platte, where they cultivated corn, beans, and melons: they were warlike, and the terror of their neighbours. In the summer and autumn of 1802, they were visited by the small-pox, which reduced their numbers to something less than 300; they

S. WAHPATONE. Claim the country in which they rove on the N. W. side of the river St. Peters, from their village to the mouth of the Chippeway river, and thence north eastwardly towards the head of the Mississippi, including the Crow-wing river. Their lands are fertile, and generally well timbered. They are only stationary while the traders are with them, which is from the beginning of October to the last of March. Their trade is supposed to be at its greatest extent. They treat their traders with respect, and seldom attempt to rob them. This, as well as the other Sioux bands, act, in all respects, as independently of each other as if they were a distinct nation.

S. MINDAWARCARTON. 'Tis the only band of Sioux that cultivates corn, beans, &c. and these even cannot properly be termed a stationary people. They live in tents of dressed leather, which they transport by means of horses and dogs, and ramble from place to place during the greater part of the year. They are friendly to their own traders; but the inveterate enemies to such as supply their enemies, the Chippeways, with merchandise. They also claim the country in which they hunt, commencing at the entrance of the river St. Peters, and extending upwards, on both sides of the Mississippi river, to the mouth of the Crow-wing river. The land is fertile, and well watered; lies level, and sufficiently timbered. Their trade cannot be expected to increase much.

S. WAHPACOOTA. They rove in the country south west of the river St. Peters, from a place called the *Hardwood* to the mouth of the Yellow Medicine river; never stationary but when their traders are with them, and this does not happen at any regular or fixed point. At present they treat their traders tolerably well. Their trade cannot be expected to increase much. A great proportion of their country is open plains, lies level, and is tolerably fertile. They maintain a partial traffic with the Yanktons and Tetons to the west of them; to these they barter the articles which they obtain from the traders on the river St. Peters, and receive in return horses, some robes and leather lodges.

S. SISSATONE. They claim the country in which they rove, embracing the upper portions of the Red river, of lake Winnipie, and St. Peters: it is a level country, intersected with many small lakes; the land is fertile and free of stone; the majority of it open plains. This country abounds more in the valuable fur animals, the beaver, otter and marten, than any portion of Louisiana yet known. This circumstance furnishes the Sissatonnes with the means of purchasing more merchandise, in proportion to their number, than any nation in this quarter.

LEWIS AND CLARKE.]

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A great proportion of this merchandise is reserved by them for their trade with the Tetons, whom they annually meet at some point previously agreed on, upon the waters of James river, in the month of May. This Indian fair is frequently attended by the Yanktons of the North and Ahnah. The Sissatones and Yanktons of the North here supply the others with considerable quantities of arms, ammunition, axes, knives, kettles, cloth, and a variety of other articles; and receive in return principally horses, which the others have stolen or purchased from the nations on the Missouri and west of it. They are devoted to the interests of their traders.

S. YANKTONS of the NORTH. This band, although they purchase a much smaller quantity of merchandise than the Sissatones, still appropriate a considerable proportion of what they do obtain in a similar manner with that mentioned of the Sissatones. This trade, as small as it may appear, has been sufficient to render the Tetons independent of the trade of the Missouri, in a great measure, and has furnished them with the means not only of distressing and plundering the traders of the Missouri, but also, of plundering and massacring the defenceless savages of the Missouri, from the mouth of the river Platte to the Minetares, and west to the Rocky mountains. The country these people inhabit is almost one entire plain, uncovered with timber; it is extremely level; the soil fertile, and generally well watered.

S. YANKTONS AHNAH. These are the best disposed Sioux who rove on the banks of the Missouri, and these even will not suffer any trader to ascend the river, if they can possibly avoid it: they have heretofore, invariably, arrested the progress of all those they have met with, and generally compelled them to trade at the prices, nearly, which they themselves think proper to fix on their merchandise: they seldom commit any further acts of violence on the whites. They sometimes visit the river Demoin, where a partial trade has been carried on with them, for a few years past, by a Mr. Crawford. Their trade, if well regulated, might be rendered extremely valuable. Their country is a very fertile one; it consists of a mixture of wood-lands and prairies. The land bordering on the Missouri is principally plains with but little timber.

S. TETONS BOIS BRULE.

TETONS OKANDANDAS.

TETONS MINNAKINEAZZO.

TETONS SAHONE.

} These are the vilest
miscreants of the
savage race, and
must ever remain

the pirates of the Missouri, until such measures are pursued, by our government, as will make them feel a dependance on its will for their supply of merchandise. Unless these people are reduced to order, by coercive measures, I am ready to pronounce

that the citizens of the United States can never enjoy but partially the advantages which the Missouri presents. Relying on a regular supply of merchandise, through the channel of the river St. Peters, they view with contempt the merchants of the Missouri, whom they never fail to plunder, when in their power. Persuasion, or advice, with them, is viewed as supplication, and only tends to inspire them with contempt for those who offer either. The tameness with which the traders of the Missouri have heretofore submitted to their rapacity, has tended not a little to inspire them with contempt for the white persons who visit them, through that channel. A prevalent idea among them, and one which they make the rule of their conduct, is, that the more illy they treat the traders the greater quantity of merchandise they will bring them, and that they will thus obtain the articles they wish on better terms; they have endeavoured to inspire the Ricaras with similar sentiments, but, happily, without any considerable effect. The country in which these four bands rove is one continued plain, with scarcely a tree to be seen, except on the water-courses, or the steep declivities of hills, which last are but rare: the land is fertile, and lies extremely well for cultivation; many parts of it are but badly watered. It is from this country that the Missouri derives most of its colouring matter; the earth is strongly impregnated with glauber salts, alum, copperas and sulphur, and when saturated with water, immense bodies of the hills precipitate themselves into the Missouri, and mingle with its waters. The waters of this river have a purgative effect on those unaccustomed to use it. I doubt whether these people can ever be induced to become stationary; their trade might be made valuable if they were reduced to order. They claim jointly with the other bands of the Sioux, all the country lying within the following limits, viz. beginning of the confluence of the river Demoin and Mississippi, thence up the west side of the Mississippi to the mouth of the St. Peters river, thence on both sides of the Mississippi to the mouth of Crow-wing river, and upwards with that stream, including the waters of the upper part of the same; thence to include the waters of the upper portion of Red river, of lake Winnipie, and down the same nearly to Pembear river, thence a south-westerly course to intersect the Missouri at or near the Mandans, and with that stream downwards to the entrance of the Warrecunne creek, thence passing the Missouri it goes to include the lower portion of the river Chyenne, all the waters of White river and river Teton, includes the lower portion of the river Quicurre, and returns to the Missouri, and with that stream downwards to the mouth of Waddipon river, and thence eastwardly to intersect the Mississippi at the beginning.

- A. Chyennes.
- B. Shâr'-ha.
- C. la Chien.
- D. *
- E.
- F. 110.
- G. 300.
- H. 1200.
- I. About the source of the river Chyenne, in the black hills.
- J. Mr. Loisselle, & Co. of St. Louis.
- K. On the river Chyenne, not stationary, and at the Ricaras village.
- L. 1.500.
- M. 2.000.
- N. Buffaloe robes of best quality.
- O. Buffaloe robes, tallow, grease, and dried meat, skins of the beaver, small and large foxes, small and large wolf, antelope, elk and deer in great abundance; also, elk and deers' tallow, a few grizzly bear, skins of the white bear, and big-horned antelopes.
- P. At, or near the mouth of Chyenne river.
- Q. A defensive war with the Sioux, and at war with no other within my knowledge.
- R. With all their neighbours except the Sioux.
- S. They are the remnant of a nation once respectable in point of number: formerly resided on a branch of the Red river of Lake Winnipie, which still bears their name. Being oppressed by the Sioux, they removed to the west side of the Missouri, about 15 miles below the mouth of Warricunne creek, where they built and fortified a village, but being pursued by their ancient enemies the Sioux, they fled to the Black hills, about the head of the Chyenne river, where they wander in quest of the buffaloe, having no fixed residence. They do not cultivate. They are well disposed towards the whites, and might easily be induced to settle on the Missouri, if they could be assured of being protected from the Sioux. Their number annually diminishes. Their trade may be made valuable,

-
- A. Wetepâhâ'toes.
 - B. We-te-pâ-hâ'-to.
 - C. Wete-pahâ'toes,
 - D. *
 - E.

- F. 70, including the Kiâwâs.
- G. 200, including the Kiawas.
- H. 700, including the Kiawas.
- I. On the Paduca fork of the river Platte.
- J. No trader.
- K. L. M. N.
- O. The same as the Tetons. (see first table) also horses.
- P. At, or near the mouth of Chyenne river.
- Q. A defensive war with the Sioux, and at war with no other within my knowledge.
- R. With all their wandering neighbours to the west, and particularly with Ricaras. Mandans, Minatares, and Ahwahhaways whom they occasionally visit for the purpose of trafficking their horses, mules, &c. for European manufactures.
- S. They are a wandering nation, inhabit an open country, and raise a great number of horses, which they barter to the Ricaras, Mandans, &c. for articles of European manufactory. They are a well disposed people, and might be readily induced to visit the trading establishments on the Missouri. From the animals their country produces, their trade would, no doubt, become valuable. These people again barter a considerable proportion of the articles they obtain from the Menetares, Ahwahhaways, Mandans, and Ricaras, to the Dotames and Castapanas.

-
- A. Kiâwâs.
 - B. Kî-â-wâ.
 - C. Kiâwâs.
 - D. *
 - E.
 - F. See above, F.
 - G. See above, G.
 - H. See above, H.
 - I. On the Paduca, and frequently with the Wetepahatoes.
 - J. No trader.
 - K. L. M. N.
 - O. See page 20, O.
 - P. At, or near the mouth of Chyenne river.
 - Q. See above, Q.
 - R. See above, R.
 - S. What has been said of the Wetepahatoes is in all respects applicable to these people also. Neither these people, the Wetepahatoes, nor the Chyennes have any idea of exclusive right to the soil.

- A. Kanenavish.
- B. Kan-e-nâ'-vish.
- C. Gens-des-Vache.
- D. *
- E.
- F. 150.
- G. 400.
- H. 1.500.
- I. On the heads of the Paducas fork of the river Platte, and S. fork of Chyenue river.
- J. No trader.
- K. L. M. N.
- O. See page 20, O.
- P. At, or near the mouth of Chyenue river.
- Q. See page 21, Q.
- R. See page 21, R.
- S. See bottom of page 21, S.



- A. Staetan.
- B. Sta'-e-tan.
- C. Kites.
- D. *
- E.
- F. 40.
- G. 100.
- H. 400.
- I. On the head of the Chyenue, and frequently with the Kanenavish.
- J. K. L. M. N.
- O. See page 21, O.
- P. At, or near the mouth of Chyenue river.
- Q. See page 21, Q.
- R. See page 21, R.
- S. See bottom of page 21, S.



- A. Cataka.
- B. Cat'-a-kâ.
- C. Cat'akâ.
- D. *
- E.
- F. 25.
- G. 75.
- H. 300.

- I. Between the heads of the north and south forks of the river Chyenne.
 J. K. L. M. N.
 O. See page 20, O.
 P. At, or near the mouth of the Chyenne river
 Q. See page 21, Q.
 R. See page 21, R.
 S. See bottom of page 21, S.

-
- A. Nemousin.
 B. Ne'-mo-sin.
 C. Allebome.
 D. *
 E.
 F. 15.
 G. 50.
 H. 200.
 I. On the head of the north fork of the river Chyenne.
 J. No trader.
 K. L. M. N.
 O. See page 20, O.
 P. At, or near the mouth of the Chyenne river.
 Q. A defensive war with the Ricaras and Sioux.
 R. The same as the Wetepahatoes (see page 21, R.) except the Ricaras.
 S. These differ from the others (viz. Wetepahatoes, Kiawas, Kanenavich, Staetan and Cataka) in as much as they never visit the Ricaras; in all other respects they are the same, see bottom of page 21, S.

-
- A. Dotame.
 B. Do-ta'-me.
 C. Dotame.
 D. *
 E.
 F. 10.
 G. 30.
 H. 120.
 I. On the heads of the river Chyenne.
 J. No trader.
 K. L. M. N.
 O. See page 20, O.
 P. At, or near the mouth of the Chyenne river

Q. See page 21, Q.

R. See page 21, R.

S. The information I possess, with respect to this nation, is derived from Indian information: they are said to be a wandering nation, inhabiting an open country, and who raise a great number of horses and mules. They are a friendly, well disposed people, and might, from the position of their country, be easily induced to visit an establishment on the Missouri, about the mouth of Chyenne river. They have not, as yet, visited the Missouri.

A. Castahana.

B. Cas-ta-ha'-na.

C. Castahana.

D. *

E.

F. 500.

G. 1.300.

H. 5.000.

I. Between the sources of the Padoucas fork, of the rivers Platte and Yellow Stone.

J. No trader

K. L. M. N.

O. The same as the Chyennes (see page 20, O) and the skins of the lynx, or louverin, and martens in addition.

P. At, or near the mouth of the river Yellow Stone, on the Missouri.

Q. A defensive war with the Sioux and Assinniboins.

R. See page 21, R.

S. What has been said of the Dotames is applicable to these people, except that they trade principally with the Crow Indians, and that they would most probably prefer visiting an establishment on the Yellow Stone river, or at its mouth on the Missouri.

A. Crow Indians.

B. Kee'-kât'-sâ.

C. Gens des Corbeau.

D. Minetarre.

E.

F. 350.

G. 900.

H. 3.500.

B.	C.	D.	E.	F.	G.	H.	I.	J.	K.
Wáh'-pa-tone.	La Soo.	* Darcotar or Sioux.	One.	80	200	700	On the north side of the river St. Peters, 18 leagues from its mouth.	Messrs. Campbell, Dickson, and others, who trade to Michilimackinac.	On the Mississippi and St. Peters rivers, at sundry places not stationary.
Min'-da,-wár'-cár-ton.	Gens de Lake.	Do.	Do.	120	300	1,200	On the Mississippi, at the mouth of the river St. Peters.	Ditto.	Ditto.
Wáh'-pa-coo-ta.	La Soo.	Do.		60	150	400	On the south-west side of the river St. Peters, 30 leagues above its mouth, in Arrow Stone Prairies.	Ditto.	Ditto.
Sis-sa-toné.	La Soo.	Do.		80	200	800	On the heads of the river St. Peters, and Red river of Lake Winnipeg.	Mr. Cammaron, a merchant who trades extensively to Michilimackinac.	An establishment at the head of St. Peters river, about 130 leagues from its mouth.
Yank'-ton (of the north or plains).	La Soo.	Do.		200	500	1,600	From the heads of the river St. Peters and Red river to the Missouri, about the <i>great bend</i> .	Ditto.	Ditto.
Yank'-ton-âh-nâh'.	La Soo.	Do.		80	200	700	From the river All Jacques eastwardly, on the lower portion of the river Sioux, and heads of Folds river, Little, Sioux, and Demoin rivers.	Principally with Mr. Crawford, of the river Demoin.	On the river Demoin, at their hunting camps, and sometimes at the Ayauwais village Prairie de Chien.
Té-ton.	Bois brûlé.	Do.		120	300	900	On the east side of the Missouri, from the mouth of White river to Teton river.	Mr. Loisell and Co. of St. Louis.	At the Cedar Island, and near the mouth of the Chyenne river, on the Missouri.
Té-ton,-o-kan-dan-dás.	La Soo.	Do.		50	120	360	On each side of the Missouri, from the mouth of Teton river to the mouth of the Chyenne river.	Ditto.	Ditto, and at the Rickaras.
Té-ton,-min-na-kine-az'-zo.	La Soo.	Do.		100	250	750	From the mouth of the Chyenne river on each side of the Missouri as high as the Ricaras.	Ditto.	Ditto.
Té-ton,-sâh-o-né.	La Soo.	Do.		120	300	900	On each side of the Missouri, from the Ricaras to the mouth of Warreconne river.	Ditto.	Ditto.

CONTINUED.

B.	L.	M.	N.	O.	P.	Q.	R.
Wáh'-pa-tone.	10,000	18,000	Deer skins principally, skins of the black bear, otter, fisher, marten, raccoon, muskrat, and mink; also, elk and deers, muskrats, and minks.	Skins of the small deer, black bear, otter, beaver, fisher, marten, raccoon, grey fox, muskrat, and mink; also, elk and deers, tallow, and bears oil.	On the west side of the Mississippi, about the mouth of St. Peters river, or falls of St. Anthony.	Principally with the Chippeways, La Follovoine, and those of Leach and Sandy lakes; defensive with the Saukees, Renars, and Ayauwais.	With the Sioux bands and all the nations east of the Mississippi, and south of the Chippeways, who never wage war against the nations on the Missouri.
Min'-da,-wár'-cár-ton.	8,700	16,000	Ditto.	Ditto.	Ditto.	Ditto.	Ditto.
Wáh'-pa-coo-ta.	3,800	6,000	Ditto, with a much larger proportion of otter.	Ditto.	Ditto.	With the Chippeways generally, and sometimes an offensive war on the nations most convenient to them on the Missouri.	Ditto.
Sis-sa-toné.	17,000	30,000	Ditto, with a much larger proportion of beaver, otter, and black bear.	Ditto.	About the head of the river St. Peters, at the portage between that river and the Red river, of lake Winnipeg.	With the Chippeways generally, the Assinniboin, Christenois, Mandans, Minetares, Ahwahhaways, and Chyennes.	Ditto, and partially with the Ricaras.
Yank'-ton, (of the north or plains.)	1,800	3,000	Buffaloe robes and wolf skins.	Ditto, and buffaloe robes, tallow, dried meat, and grease in addition.	Ditto, and on the Missouri, near the mouth of Chyenne river.	Ditto.	With the other Sioux bands, and partially with the Ricaras.
Yank'-ton âh-nâh'.	3,600	5,000	Deer and raccoon, principally, some black bear, beaver, and otter.	Buffaloe robes, tallow, dried meat and grease, skins of the small deer, black bear, wolves, elk, raccoon, elk and deers, tallow, and bears oil.	At the Council Bluff, or mouth of river Chyenne.	With the Ricaras and the nations on the lower portion of the Missouri, and west of it within their reach, except the Mahas and Poncars, also with the Chippeways.	Mahas, Poncars, Saukees, Renars, Ayauwais, and the nations east of the Mississippi and south of the Chippeways; also, with the other bands of Sioux.
Té-ton.	5,000	7,000	Buffaloe robes, grease & tallow, dressed buffaloe skins, and some dried meat.	Buffaloe robes, tallow, grease, and dried meat, skins of the beaver, small and large foxes, small and large wolf, antelope, elk, and deer in great abundance; also, elk and deers tallow, and a few grizzly bears.	At or near the mouth of the Chyenne river.	With all the nations on the lower portion of the Missouri, and west of it within their reach; also, the Mandans, Ahwahhaways, the Minetares, Assinniboin, Christenois, and Chippeways.	With all the other bands of Sioux, and with none else except partially with the Ricaras, whom they keep in perpetual dread of them, and plunder without reserve.
Té-ton,-o-kan-dan-dás.	1,500	2,500	Ditto.				
Té-ton,-min-na-kine-az'-zo.	2,000	3,000	Ditto.				

- I. On each side of the river Yellow Stone, about the mouth of the Big-horn river.
- J. No trader.
- K.
- L. M. N.
- O. See page 24, O.
- P. At, or near the mouth of the river Yellow Stone, on the Missouri.
- Q. Defensive with the Sioux and Ricaras.
- R. The same as the Wetepahatoes, (See page 21, R.) except the Ricaras.
- S. These people are divided into four bands, called by themselves Ahâh'-âr-ro'-pir-no-pah, Noo'-ta-, Pa-rees-car, and E-hârt'-sâr. They annually visit the Mandans, Minetares, and Ahwahhaways, to whom they barter horses, mules, leather lodges, and many articles of Indian apparel, for which they receive in return, guns, ammunition, axes, kettles, awls, and other European manufactures. When they return to their country, they are in turn visited by the Paunch and Snake Indians, to whom they barter most of the articles they have obtained from the nations on the Missouri, for horses and mules, of which those nations have a greater abundance than themselves. They also obtain of the Snake Indians, bridle-bits and blankets, and some other articles which those Indians purchase from the Spaniards. The bridle-bits and blankets I have seen in the possession of the Mandans and Minetares. Their country is fertile, and well watered, and in most parts well timbered.



- A. Paunch Indians.
- B. Al-la-kâ'-we-âh.
- C. Gens de Panse.
- D. *
- E.
- F. 300.
- G. 800.
- H. 2300.
- I. On each side of the Yellow Stone river, near the rocky mountains, and heads of the Big-horn river.
- J. No trader
- K. L. M. N.
- O. See page 24, O.
- P. At, or near the mouth of the river Yellow Stone, on the Missouri.

- Q. Defensive with the Sioux and Ricaras.
 R. The same as the Wetepahatoes (see page 21, R.) except the Ricaras.
 S. These are said to be a peaceable, well disposed nation. Their country is a variegated one, consisting of mountains, vallies, plains, and wood-lands, irregularly interspersed. They might be induced to visit the Missouri, at the mouth of the Yellow Stone river; and from the great abundance of valuable furred animals which their country, as well as that of the Crow Indians, produces, their trade must become extremely valuable. They are a roving people, and have no idea of exclusive right to the soil.

A. ASSINNIBOIN.	B.	C.	D.	E.	F.	G.	H.	I.
NACOTA.	Ma-ne-to'-pâ.	Gens des Canoe.	Sioux, with some few words peculiar to themselves.		100	200	750	On the Mouse river, between the Assinniboin and the Missouri.
	O-seé-gâh	Gens des Tec.			100	250	850	From the Misouri, about the mouth of Little Missouri, to the Assinniboin, at the mouth of Capelle river.
	Mâh'-to,-pâ-nâ-to.	Gens des grandDiable.			200	450	1.600	On the Missouri, about the mouth of the White Earth river, and on the head of Assinniboin and Capelle rivers.

CONTINUED.

A. ASSINNIBOIN.	NACOTA.	B.	J.	K.	L.	M.	N.
		Ma-ne-to'-pâ.	and the N. W. and British Hudson's Bay, and the X. Y. Canadian companies,	Establishment on the Assinniboin river.	4.500	7.000	Buffaloe meat dried or pounded, and grease in bladders principally; also, wolves, a few beaver and buffaloe robes.
		O-seé-gâh.		Establishments on the Assinniboin and Capelle rivers.	6.000	6.500	
		Mâh'-to,-pâ-nâ-to.		Ditto, and occasionally at the establishments on the river Saskatchewan.	8.000	8.000	

CONTINUED.

A. ASSINNIBOIN.	NACOTA.	B.	O.	P.	Q.	R.
		Ma-ne-to'-pâ.	Buffaloe robes, tallow, dried and pounded meat and grease, skins of the large and small fox, small and large wolves, antelopes, (or caribri) and eik in great abundance; also some brown, white and grizzly bear, deer and lynx.	Yellow At or near the mouth of the river Missouri, Stone, on the Missouri.	Reciprocally with the Sioux; offensive with the Ricaras, Castahana, Crow, Paunch and Snake Indians, and all those south-west of the Missouri, within their reach.	With all their own tribes; Christenoës (branch of the Knistenaus) and partially with the Chippeways of Pembena, Algonquins, of Portage de Prairie, Mandans, Mine-tares, and Ahwahhawas.
		O-seé-gâh.				
		Mâh'-to,-pâ-nâ-to.				

S. MANETOPA.

OSSEEGAH.

MAHTOPANATO.

Are the descendants of the Sioux, and partake of their turbulent and faithless disposition; they frequently plunder, and sometimes murder, their own traders. The name by which this nation is generally known was borrowed from the Chippeways, who call them *Assinniboan*, which, literally translated, is *Stone Sioux*, hence the name of Stone Indians, by which they are sometimes called. The country in which they rove is almost entirely uncovered with timber; lies extremely level, and is but badly watered in many parts; the land, however, is tolerably fertile and unincumbered with stone. They might be induced to trade at the river Yellow Stone; but I do not think that their trade promises much. Their numbers continue about the same. These bands, like the Sioux, act entirely independent of each other, although they claim a national affinity and never make war on each other. The country inhabited by the Mahtopanato possesses rather more timber than the other parts of the country. They do not cultivate.

A. CHIPPEWAYS.	B.	C.	D.	E.	F.	G.	H.	I.	J.
	O-jib'-â-way.		*	1		400	1.600	On an island in a small lake, called Leach Lake, formed by the Mississippi river.	N. W. Compy.
	Ditto.	La Sauter.	Chippeway.			200	700	About the head of the Mississippi and around Red Lake.	Ditto.
	Ditto.		Ditto.			100	350	On the Red river of Lake Winnipie, and about the mouth of Pembinar river.	N. W. and X. Y. Companies.

A. CHIPPENWAYS.	B.	K.	L.	M.	N.	O.
	Ojibaway.	At their villages and hunting camps on the Mississippi.	12.000	16.000	Beaver, otter, black bear, racoon, fox, marten, mink, fisher, and deer skins.	Beaver, otter, black bear, racoon, grey fox, marten, mink, fisher, & deer skins.
	Ditto.	At an establishment on Red lake, and at their hunting camps.	8.000	10.000	Ditto, and bark canoes.	Ditto, and bark canoes.
	Ditto.	Establishments near the mouth of Pembinar river, and at their hunting camps.	7.000	10.000	Ditto, principally, beaver and otter, but no canoes, some wolverine and lynx.	Ditto, except canoes, with wolverine lynx in addition.

CONTINUED.

A. CHIPPENWAYS.	B.	P.	Q.	R.
	Ojibaway.	On the north side of the Mississippi, at Sandy Lake.	With all the tribes of Sioux, Saukees, Renars, and Ayouwais.	All the tribes of Chippeways, and the nations inhabiting lakes Superior, Michigan, and the country east of the Mississippi.
	Ditto.	On the Red Lake, near the head of the Mississippi.	! The Sioux only.	
	Ditto.	On the Red river of Lake Winnipie, about the mouth of the Assinniboin river.	+ The Sioux, and partially with the Assinniboins.	Ditto, and with the Christenoes and Algonquins.

S. CHIPPEWAYS, of Leach Lake. Claim the country on both sides of the Mississippi, from the mouth of the Crow-wing river to its source, and extending west of the Mississippi to the lands claimed by the Sioux, with whom they still contend for dominion. They claim, also, east of the Mississippi, the country extending as far as lake Superior, including the waters of the river St. Louis. This country is thickly covered with timber generally; lies level, and generally fertile, though a considerable proportion of it is intersected and broken up by small lakes, morasses and swamps, particularly about the heads of the Mississippi and river St. Louis. They do not cultivate, but live principally on the wild rice, which they procure in great abundance on the borders of Leach Lake and the banks of the Mississippi. Their number has been considerably reduced by small pox. Their trade is at its greatest extent.

Of Red Lake. Claim the country about Red lake and Red lake river, as far as the Red river of lake Winnipie, beyond which last river they contend with the Sioux for territory. This is a low level country, and generally thickly covered with timber, interrupted with many swamps and morasses. This, as well as the other bands of Chippeways, are esteemed the best hunters in the north-west country; but from the long residence of this band in the country they now inhabit, game is becoming scarce, therefore their trade is supposed to be at its greatest extent. The Chippeways are a well disposed people, but excessively fond of spirituous liquor.

Of river Pembena. These people formerly resided on the east side of the Mississippi, at Sand lake, but were induced, by the north-west company, to remove, about two years since, to the river Pembena. They do not claim the lands on which they hunt. The country is level and the soil good. The west side of the river is principally prairies or open plains; on the east side there is a greater proportion of timber. Their trade at present is a very valuable one, and will probably increase for some years. They do not cultivate, but live by hunting. They are well disposed towards the whites.

A. ALGONQUINS.	B.	C.	D.	E.	F.	G.	H.	I.	J.
	O-jib-â-way.	Algonquins.	Chippeways.			100	300	On the south side of Rainy Lake, Rainy Lake river, and the Lake of the Wood.	N. W. and X.Y. Companies
Ditto.		Algonquins.	Chippeways.			200	600	About the mouth of the Assiniboine, on Red river.	Ditto

CONTINUED.

A. ALGONQUINS.	B.	K.	L.	M.	N.
	Ojibaway.	Establishments on the rivers Winnipeg and Rainy Lake, and at their hunting camps.	4,000	6,000	Principally birch bark canoes.
Ditto.		Establishments on the Assiniboine at Fort de Prairie.	8,000	11,000	Beaver, otter, raccoon, black bear, large fox, mink, and a few deer.

CONTINUED.

	B.	O.	P.	Q.	R.
A. ALGONQUINS.	Ojibaway.	The same as the Chippeways, but in small quantities, and canoes, (see page 29, O.)	At the Red Lake establishment.	The Siouxs, and partially with the Assiniboins.	All the tribes of the Chippeways, Algonquins, and Christenoes.
	Ditto.	Beaver, otter, raccoon, black bear, large fox, mink, deer, wolves and muskrats.	At the Red river establishment.		

S. ALGONQUINS, of *Rainy Lake, &c.* With the precise limits of the country they claim, I am not informed. They live very much detached, in small parties. The country they inhabit is but an indifferent one; it has been much hunted, and the game, of course, nearly exhausted. They are well disposed towards the whites. Their number is said to decrease. They are extremely addicted to spirituous liquor, of which large quantities are annually furnished them by the north-west traders, in return for their bark canoes. They live wretchedly poor.

Of Portage de Prairie. These people inhabit a low, flat, marshy country, mostly covered with timber, and well stocked with game. They are emigrants from the lake of the Woods and the country east of it, who were introduced, some years since, by the north-west traders, in order to hunt the country on the lower parts of Red river, which then abounded in a variety of animals of the fur kind. They are an orderly, well disposed people, but, like their relations on Rainy lake, extremely addicted to spirituous liquors. Their trade is at its greatest extent.

- A. Christenoes or Knistenaus.
- B. Chris-'te-no.
- C. Cree.
- D. Chippeways, with a different accent, and many words peculiar to themselves.
- E.
- F. 150.
- G. 300.
- H. 1,000.
- I. On the heads of the Assinniboin, and thence towards the Saskashawan.
- J. Hudson's Bay, N. W. and X. Y. companies.
- K. Establishments on the Assinniboin, Swan Lake river and the Saskashawan.
- L. 15,000.
- M. 15,000.
- N. Beaver, otter, lynx, wolverine, marten, mink, wolf, small fox (or kitts) dressed elk and moose deer skins.
- O. The skins of the beaver, otter, lynx, wolf, wolverine, marten, mink, small fox, brown and grizzly bear, dressed elk and moose-deer skins, muskrat skins, and some buffaloe robes, dried meat, tallow and grease.
- P. On the Missouri, at or near the mouth of the Yellow Stone river.
- Q. With the Siouxs, Fall, Blood, and Crow Indians.
- R. With the Assinniboins, Algonquins, Chippeways, Mandans, Minatares and Ahwahhaways.
- S. They are a wandering nation; do not cultivate, nor claim any particular tract of country. They are well disposed towards the whites, and treat their traders with respect. The country in which they rove is generally open plains, but in some parts, particularly about the head of the Assinniboin river, it is marshy, and tolerably well furnished with timber, as are also the Fort Dauphin mountains, to which they sometimes resort. From the quantity of beaver in their country, they ought to furnish more of that article than they do at present. They are not esteemed good beaver hunters. They might probably be induced to visit an establishment on the Missouri, at the Yellow Stone river. Their number has been reduced, by the small pox, since they were first known to the Canadians.

A. Fall Indians.

B. A-lân-s'r.

LEWIS AND CLARKE.]

E

- C. Fall Indians.
 - D. Minetare.
 - E.
 - F. 260.
 - G. 660.
 - H. 2.500.
 - I. On the head of the south fork of the Saskshawan river, and some streams supposed to be branches of the Missouri.
 - J. N. W. company.
 - K. Upper establishment on the Saskashawan ; but little trade.
 - L. 1.000.
 - M. 4.000.
 - N. Beaver and marten.
 - O. Skins of the beavers, brown, white and grizzly bear, large and small foxes, muskrat, marten, mink, lynx, wolverine, wolves, white hares, deer, elk, moose-deer, antelopes of the Missouri, and some buffaloe.
 - P. At or near the falls of the Missouri.
 - Q. Defensive war with the Christenoes.
 - R.
 - S. The country these people rove in is not much known : it is said to be a high, broken, woody country. They might be induced to visit an establishment at the falls of the Missouri : their trade may, no doubt, be made profitable.
-

- A. Cattannahaws.
 - B. Cat-tan-a-hâws.
 - C. Cattannahâws.
 - D. *
 - E. F. G. H.
 - I. Between the Saskashawan and the Missouri, on waters supposed to be of the Missouri.
 - J. No trader.
 - K. L. M. N.
 - O. See above, O.
 - P. At, or near the falls of the Missouri.
 - Q. R.
 - S. What has been said of the Fall Indians is, in all respects, applicable to this nation. They are both wandering nations.
-

- A. Black-foot Indians.
- B.
- C. Blackfoot Indians.
- D. *
- E. F. G. H.

- I. Between the Saskashawan and the Missouri, on water supposed to be of the Missouri.
 - J. No trader.
 - K. L. M. N.
 - O. See page 34, O.
 - P. At, or near the falls of the Missouri.
 - Q. R.
 - S. See page 34, S.
-

- A. Blue Mud and Long Hair Indians.
 - B.
 - C. Blue Mud and Long Hair Indians.
 - D. *
 - E. F. G. H.
 - I. West of the Rocky mountains, and near the same on water courses supposed to be branches of the Columbia river.
 - J. No trader.
 - K. L. M. N.
 - O. Not known, but from the position of their country supposed to abound in animals similar to those mentioned in page 34, O.
 - P. Q. R.
 - S. Still less is known of these people, or their country. The water courses on which they reside, are supposed to be branches of the Columbia river. They are wandering nations.
-

- A. Flatheads.
- B. Tut-see'-wás.
- C. Flathead Indians.
- D. *
- E. F. G. H.
- I. On the west side of a large river, lying west of the Rocky mountains, and running north, supposed to be the south fork of the Columbia river.
- J. No trader.
- K. L. M. N.
- O. See above, O.
- P.
- Q. Defensive war with the Minetares.
- R.
- S. The information I possess with respect to these people has been received from the Minetares, who have extended their war excursions as far westerly as that nation, of whom

they have made several prisoners, and brought them with them to their villages on the Missouri: these prisoners have been seen by the Frenchmen residing in this neighbourhood. The Minetares state, that this nation resides in one village on the west side of a large and rapid river, which runs from south to north, along the foot of the Rocky mountains on their west side; and that this river passes at a small distance from the three forks of the Missouri. That the country between the mountains and the river is broken, but on the opposite side of the river it is an extensive open plain, with a number of barren sandy hills, irregularly distributed over its surface as far as the eye can reach. They are a timid, inoffensive, and defenceless people. They are said to possess an abundance of horses.

A. ALIATANS.		B.	C.	D.	E.	F.	G.	H.	I.
	Snake Indians.	So-so-na'. So-so-bâ, & I'â-kâr.	Gens des Serpent.	* Aliatan.					Among the Rockymountains, on the heads of the Missouri, Yellow Stone, and Platte rivers.
	Of the West.	A-lî-a-tân.	Aliatâ.	Aliatan.					Among the Rockymountains, and in the plains at the heads of the Platte and Arkansas rivers.
	La Plays.		La Plays.	Aliatan.			Very numerous.		The mountains on the borders of New Mexico, and the extensive plains at the heads of the Arkansas and Red rivers.

CONTINUED.

A. ALIATANS.		J.	K.	L.	M.	N.	O.
	Snake Indians.						The same with the Fall, Cattannahaws and Black Foot Indians, except buffaloes; but they have in addition immense quantities of horses, mules and asses.
	Of the West.						Immense quantities of horses, mules, asses, buffalo, deer, elk, black bear, and large hares; and in the northern regions of their country, big horn and Missouri antelopes, with many animals of the fur kind.
	La Plays.	With the Spaniards of New Mexico.	The place at which this trade is carried on is not known.				

CONTINUED.

A. ALIATANS.		P.	Q.	R.
	Snake Indians.	At or near the Falls of the Missouri.	Defensive war with the Ricaras, Sioux, Assinniboin, Christenoes, Minnetares, Ahwahhaways, and all the nations inhabiting the Saskatchewan river.	Mandans, and Crow Indians, and all those who do not attack them.
	Of the West.	On the Arkansas, as high up as possible. It would be best that it should be west of the Kansas, if it should be necessary even to supply it some distance by land.	Defensive war with the Great and Little Osages, Pania, Pique, Kansas, Pania Proper, Pania Republican, Pania Loups, Ricaras, and Sioux.	At peace with all who do not wage war against them.
	La Plays.			

S. ALIATANS, *Snake Indians*. These are a very numerous and well disposed people, inhabiting a woody and mountainous country; they are divided into three large tribes, who wander a considerable distance from each other; and are called by themselves So-so-na, So-so'bu-bar, and I-a-kar; these are again subdivided into smaller though independent bands, the names of which I have not yet learnt; they raise a number of horses and mules which they trade with the Crow Indians, or are stolen by the nations on the east of them. They maintain a partial trade with the Spaniards, from whom they obtain many articles of cloathing and ironmongery, but no warlike implements.

Of the West. These people also inhabit a mountainous country, and sometimes venture in the plains east of the Rocky mountains, about the head of the Arkansas river. They have more intercourse with the Spaniards of New Mexico, than the Snake Indians. They are said to be very numerous and warlike, but are badly armed. The Spaniards fear these people, and therefore take the precaution not to furnish them with any warlike implements. In their present unarmed state, they frequently commit hostilities on the Spaniards. They raise a great many horses.

La Playes. These principally inhabit the rich plains from the head of the Arkansas, embracing the heads of Red river, and extending with the mountains and high lands eastwardly as far as it is known towards the gulph of Mexico. They possess no fire arms, but are warlike and brave. They are, as well as the other Aliatans, a wandering people. Their country abounds in wild horses, besides great numbers which they raise themselves. These people, and the West Aliatans, might be induced to trade with us on the upper part of the Arkansas river. I do not believe that any of the Aliatans claim a country within any particular limits.

A. Pania Piqûe'.

B.

C. La Paunee Piqûe'.

D. Panai Proper.

E.

F.

G.

H.

I.

J.

K.

L.

M.

N.

O.

P.

Q.

R.

S. These people have no intercourse with the inhabitants of the Illinois; the information, therefore, which I have been enabled to obtain, with respect to them, is very imperfect. They were formerly known by the name of the *White Panias*, and are of the same family with the *Panias* of the

river Platte. They are said to be a well disposed people, and inhabit a very fertile country; certain it is that they enjoy a delightful climate.

A. Padacus.

B.

C. La. Paddo.

D. *

E. F. G. H. I. J. K. L.

M. N. O. P. Q. R.

S. This once powerful nation has, apparently, entirely disappeared; every inquiry I have made after them has proved ineffectual. In the year 1794, they resided in several villages on the heads of the Kansas river, and could, at that time, bring upwards of two thousand men into the field (see Mons. Dupratz history of Louisiana, page 71, and the map attached to that work). The information that I have received is, that being oppressed by the nations residing on the Missouri, they removed to the upper part of the river Platte, where they afterwards had but little intercourse with the whites. They seem to have given name to the northern branch of that river, which is still called the Paducas fork. The most probable conjecture is, that being still further reduced, they have divided into small wandering bands, which assumed the names of the subdivisions of the Paducas nation, and are known to us at present under the appellation of Wetepahatoes, Kiawas, Kanenavish, Katteka, Dotame, &c. who still inhabit the country to which the Paducas are said to have removed. The majority of my information led me to believe that those people spoke different languages, but other and subsequent information has induced me to doubt the fact.

HISTORICAL SKETCHES
OF THE SEVERAL
INDIAN TRIBES IN LOUISIANA,
SOUTH OF
THE ARKANSAS RIVER,
AND BETWEEN
THE MISSISSIPPI AND RIVER GRAND.

CADDOQUES, live about 35 miles west of the main branch of Red river, on a bayou or creek, called by them Sodo, which is navigable for perouques only within about six miles of their village, and that only in the rainy season. They are distant from Natchitoches about 120 miles, the nearest route by land, and in nearly a north-west direction. They have lived where they now do only five years. The first year they moved there the small pox got amongst them and destroyed nearly one half of them; it was in the winter season, and they practised plunging into the creek on the first appearance of the eruption, and died in a few hours. Two years ago they had the measles, of which several more of them died. They formerly lived on the south bank of the river, by the course of the river 375 miles higher up, at a beautiful prairie, which has a clear lake of good water in the middle of it, surrounded by a pleasant and fertile country, which had been the residence of their ancestors from time immemorial.

They have a traditionary tale which not only the Caddos, but half a dozen other smaller nations believe in, who claim the honour of being descendants of the same family: they say, when all the world was drowned by a flood that inundated the whole country, the great spirit placed on an eminence, near this lake, one family of Caddoques, who alone were saved; from that family all the Indians originated.

The French, for many years before Louisiana was transferred to Spain, had, at this place, a fort and some soldiers; several French families were likewise settled in the vicinity, where they had erected a good flour mill with burr stones brought from France. These French families continued there till about 25 years ago, when they moved down and settled at Campti, on the Red river, about 20 miles above Natchitoches, where they now

live; and the Indians left it about 14 years ago, on account of a dreadful sickness that visited them. They settled on the river nearly opposite where they now live, on a low place, but were driven thence on account of its overflowing, occasioned by a jam of timber choking the river at a point below them.

The whole number of what they call warriors of the ancient Caddo nation, is now reduced to about 100, who are looked upon somewhat like knights of Malta, or some distinguished military order. They are brave, despise danger or death, and boast that they have never shed white man's blood. Besides these, there are of old men and strangers who live amongst them, nearly the same number, but there are 40 or 50 more women than men. This nation has great influence over the Yattassees, Nandakoes, Nabadaches, Inies or Yachies, Nagogdoches, Keychies, Adaize and Natchitoches, who all speak the Caddo language, look up to them as their fathers, visit and intermarry among them, and join them in all their wars.

The Caddoques complain of the Choctaws incroaching upon their country; call them lazy, thievish, &c. There has been a misunderstanding between them for several years, and small hunting parties kill one another when they meet.

The Caddos raise corn, beans, pumpkins, &c.; but the land on which they now live is prairie, of a white clay soil, very flat: their crops are subject to injury either by too wet or too dry a season. They have horses, but few of any other domestic animal, except dogs: most of them have guns, and some have rifles: they, and all other Indians that we have any knowledge of, are at war with the Osages.

The country, generally, round the Caddos is hilly, not very rich; growth a mixture of oak, hickory, and pine, interspersed with prairies, which are very rich generally, and fit for cultivation. There are creeks and springs of good water frequent.

YATTASSEES, live on Bayau Pierre (or Stony creek), which falls into Red river, western division, about 50 miles above Natchitoches. Their village is in a large prairie, about half way between the Caddoques and Natchitoches, surrounded by a settlement of French families. The Spanish government at present exercise jurisdiction over this settlement, where they keep a guard of a non-commissioned officer and eight soldiers.

A few months ago, the Caddo chief, with a few of his young men, were coming to this place to trade, and came that way which is the usual road. The Spanish officer of the guard threatened to stop them from trading with the Americans, and

told the chief if he returned that way with the goods he should take them from him. The chief and his party were very angry, and threatened to kill the whole guard, and told them that that road had been always theirs, and that if the Spaniards attempted to prevent their using it as their ancestors had always done, he would soon make it a bloody road. He came here, purchased the goods he wanted, and might have returned another way and avoided the Spanish guard, and was advised to do so; but he said he would pass by them, and let them attempt to stop him if they dared. The guard said nothing to him as he returned.

This settlement, till some few years ago, used to belong to the district of Natchitoches, and the rights to their lands given by the government of Louisiana, before it was ceded to Spain. Its now being under the government of Texas, was only an agreement between the commandant of Natchitoches and the commandant of Nacogdoches. The French formerly had a station and factory there, and another on the *Sabine* river, nearly one hundred miles north-west from the Bayau Pierre settlement. The Yattassees now say the French used to be their people, and now the Americans.

But of the ancient Yattassees there are but eight men remaining, and twenty-five women, besides children; but a number of men of other nations have intermarried with them and live together. I paid a visit at their village last summer; there were about forty men of them all together: their original language differs from any other, but now all speak Caddo. They live on rich land, raise plenty of corn, beans, pumpkins, tobacco, &c.; have horses, cattle, hogs and poultry.

NANDAKOES, live on the Sabine river, 60 or 70 miles to the westward of the Yattassees, near where the French formerly had a station and factory. Their language is Caddo, about 40 men only of them remaining. A few years ago they suffered very much by the small pox. They consider themselves the same as Caddos, with whom they intermarry, and are, occasionally, visiting one another in the greatest harmony: have the same manners, customs, and attachments.

ADAIZE, live about 40 miles from Natchitoches, below the Yattassees, on a lake called Lac Macdon, which communicates with the division of Red river that passes by Bayau Pierre. They live at or near where their ancestors have lived from time immemorial. They being the nearest nation to the old Spanish fort, or Mission of Adaize, that place was named after them, being about 20 miles from them, to the south. There are now but 20 men of them remaining, but more women. Their language differs from all other, and is so difficult to speak or under-

stand, that no nation can speak ten words of it; but they all speak Caddo, and most of them French, to whom they were always attached, and joined them against the Natchez Indians. After the massacre of Natchez, in 1798, while the Spaniards occupied the post of Adaize, their priests took much pains to proselyte these Indians to the Roman Catholic religion, but, I am informed, were totally unsuccessful.

ALICHE (commonly pronounced Eyeish), live near Nacogdoches, but are almost extinct, as a nation, not more than 25 souls of them remaining: four years ago the small pox destroyed the greater part of them. They were, some years ago, a considerable nation, and lived on a bayau which bears their name, which the road from Natchitoch to Nacogdoches crosses, about 12 miles west of Sabine river, on which a few French and American families are settled. Their native language is spoken by no other nation, but they speak and understand Caddo, with whom they are in amity, often visiting one another.

KEYES, or **KEYCHIES**, live on the east bank of Trinity river, a small distance above where the road from Natchitoches to St. Antoine crosses it. There are of them 60 men: have their peculiar native language, but mostly now speak Caddo; intermarry with them, and live together in much harmony, formerly having lived near them, on the head waters of the Sabine. They plant corn and some other vegetables.

INIES, or **TACHIES** (called indifferently by both names). From the latter name the name of the province of Tachus or Taxus is derived. The Inies live about 25 miles west of Natchitoches, on a small river a branch of Sabine, called the Naches. They are like all their neighbours, diminishing; but have now 80 men. Their ancestors, for a long time, lived where they now do. Their language the same as that of the Caddos, with whom they are in great amity. These Indians have a good character, live on excellent land, and raise corn to sell.

NABEDACHES, live on the west side of the same river, about fifteen miles above them; have about the same number of men; speak the same language; live on the best of land; raise corn in plenty; have the same manners, customs and attachments.

BEDIES, are on the Trinity river, about 60 miles to the southward of Nacogdoches; have 100 men; are good hunters for deer, which are very large and plenty about them; plant, and make good crops of corn; language differs from all other, but speak Caddo; are a peaceable, quiet people, and have an excellent character for their honesty and punctuality.

ACCOKESAWS. Their ancient town and principal place

of residence is on the west side of Colorado or Rio Rouge, about 200 miles south-west of Nacogdoches, but often change their place of residence for a season; being near the bay, make great use of fish, oysters, &c. kill a great many deer, which are the largest and fattest in the province; and their country is universally said to be inferior to no part of the province in soil, growth of timber, goodness of water, and beauty of surface; have a language peculiar to themselves, but have a mode of communication by dumb signs, which they all understand; number about 80 men. Thirty or forty years ago the Spaniards had a mission here, but broke it up, or moved it to Nacogdoches. They talk of resettling it, and speak in the highest terms of the country.

MAYES, live on a large creek called St. Gabriel, on the bay of St. Bernard, near the mouth of Guadaloupe river: are estimated at 200 men; never at peace with the Spaniards, towards whom they are said to possess a fixed hatred, but profess great friendship for the French, to whom they have been strongly attached since Mons. de Salle landed in their neighbourhood. The place where there is a talk of the Spaniards opening a new port, and making a settlement, is near them; where the party, with the governor of St. Antoine, who were there last fall to examine it, say they found the remains of a French block-house; some of the cannon now at Labahie are said to have been brought from that place, and known by the engravings now to be seen on them.

The French speak highly of these Indians for their extreme kindness and hospitality to all Frenchmen who have been amongst them: have a language of their own, but speak Attakapa, which is the language of their neighbours the Carankouas; they have likewise a way of conversing by signs.

CARANKOUAS, live on an island, or peninsula, in the bay of St. Bernard, in length about ten miles, and five in breadth; the soil is extremely rich and pleasant; on one side of which there is a high bluff, or mountain of coal, which has been on fire for many years, affording always a light at night, and a strong, thick smoke by day, by which vessels are sometimes deceived and lost on the shoaly coast, which shoals are said to extend nearly out of sight of land. From this burning coal there is emitted a gummy substance the Spaniards call *cheta*, which is thrown on the shore by the surf, and collected by them in considerable quantities, which they are fond of chewing; it has the appearance and consistence of pitch, of a strong, aromatic, and not disagreeable smell. These Indians are irreconcilable enemies to the Spaniards, always at war with them, and kill them whenever they can. The Spaniards call them cannibals, but the

French give them a different character, who have always been treated kindly by them since Mons. de Salle and his party were in the neighbourhood. They are said to be 500 men strong, but I have not been able to estimate their numbers from any very accurate information ; in a short time expect to be well informed. They speak the Attakapa language ; are friendly and kind to all other Indians, and, I presume, are much like all others, notwithstanding what the Spaniards say of them, for nature is every where the same.

Last summer an old Spaniard came to me from Labahie, a journey of about 500 miles, to have a barbed arrow taken out of his shoulder, that one of these Indians had shot in it. I found it under his shoulder-blade, near nine inches, and had to cut a new place to get at the point of it, in order to get it out the contrary way from that in which it had entered : it was made of a piece of an iron hoop, with wings like a fluke and an inch.

CANCES, are a very numerous nation, consisting of a great many different tribes, occupying different parts of the country, from the bay of St. Bernard, cross river Grand, towards La Vera Cruz. They are not friendly to the Spaniards, and generally kill them when they have an opportunity. They are attached to the French ; are good hunters, principally using the bow. They are very particular in their dress, which is made of neatly dressed leather ; the women wear a long loose robe, resembling that of a Franciscan friar ; nothing but their heads and feet are to be seen. The dress of the men is straight leather leggings, resembling pantaloons, and a leather hunting shirt, or frock. No estimate can be made of their number.

Thirty or forty years ago the Spaniards used to make slaves of them when they could take them ; a considerable number of them were brought to Natchitoches and sold to the French inhabitants at 40 or 50 dollars a head, and a number of them are still living here, but are now free. About 20 years ago an order came from the king of Spain that no more Indians should be made slaves, and those that were enslaved should be emancipated ; after which some of the women who had been servants in good families, and taught spinning, sewing, &c. as well as managing household affairs, married maitiffs of the country, and became respectable, well behaved women, and have now growing up decent families of children : have a language peculiar to themselves, and are understood, by signs, by all others. They are in amity with all other Indians except the Hietans.

TANKAWAYS (or TANKS, as the French call them) have no land, nor claim the exclusive right to any, nor have any particular place of abode, but are always moving, alternately occu-

pying the country watered by the Trinity, Braces and Colerado, towards St. a Fé. Resemble, in their dress, the Cances and Hietans, but all in one horde or tribe. Their number of men is estimated at about 200; are good hunters; kill buffaloe and deer with the bow; have the best breed of horses; are alternately friends and enemies of the Spaniards. An old trader lately informed me that he had received 5000 deer skins from them in one year, exclusive of tallow, rugs and tongues. They plant nothing, but live upon wild fruits and flesh: are strong, athletic people, and excellent horsemen.

TAWAKENOES, or THREE CANES. They are called by both names indifferently; live on the west side of the Braces, but are often, for some months at a time, lower down than their usual place of residence, in the great prairie at the Tortuga, or Turtle, called so from its being a hill in the prairie, which, at a distance, appears in the form of a turtle, upon which there are some remarkable springs of water. Their usual residence is about 200 miles to the westward of Nacogdoches, towards St. a Fé. They are estimated at 200 men: are good hunters; have guns, but hunt principally with the bow: are supplied with goods from Nacogdoches, and pay for them in rugs, tongues, tallow and skins. They speak the same language of the Panis, or Towiaches, and pretend to have descended from the same ancestors.

PANIS, or TOWIACHES. The French call them Panis, and the Spaniards Towiaches; the latter is the proper Indian name. They live on the south bank of Red river; by the course of the river upwards of 800 miles above Natchitoches, and by land, by the nearest path, is estimated at about 340. They have two towns near together; the lower town, where the chief lives, is called Niteheta, and the other is called Towaahach. They call their present chief the Great Bear. They are at war with the Spaniards, but friendly to those French and American hunters who have lately been among them. They are likewise at war with the Osages, as are every other nation. For many hundreds of miles round them, the country is rich prairie, covered with luxuriant grass, which is green summer and winter, with skirts of wood on the river bank, by the springs and creeks.

They have many horses and mules. They raise more corn, pumpkins, beans and tobacco, than they want for their own consumption; the surplusage they exchange with the Hietans for buffaloe, rugs, horses and mules: the pumpkins they cut round in their shreads, and when it is in a state of dryness that it is so tough it will not break, but bend, they plait and work it into large mats, in which state they sell it to the Hietans, who, as they travel, cut off and eat it as they want it. Their tobacco

they manufacture and cut as fine as tea, which is put into leather bags of a certain size, and is likewise an article of trade. They have but few guns, and very little ammunition; what they have they keep for war, and hunt with the bow. Their meat is principally buffaloe; seldom kill a deer, though they are so plenty they come into their villages, and about their houses, like a domestic animal: elk, bear, wolves, antelope and wild hogs are likewise plenty in their country, and white rabbits, or hares, as well as the common rabbit: white bears sometimes come down amongst them, and wolves of all colours. The men generally go entirely naked, and the women nearly so, only wearing a small flap of a piece of a skin. They have a number of Spaniards amongst them, of fair complexion, taken from the settlement of St. a Fé, when they were children, who live as they do, and have no knowledge of where they came from. Their language differs from that of any other nation, the Tawakenoes excepted. Their present number of men is estimated at about 400. A great number of them, four years ago, were swept off by the small-pox.

HIETANS, or Comanches, who are likewise called by both names, have no fixed place of residence; have neither towns nor villages; divided into so many different hordes or tribes, that they have scarcely any knowledge of one another. No estimate of their numbers can well be made. They never remain in the same place more than a few days, but follow the buffaloe, the flesh of which is their principal food. Some of them occasionally purchase of the Panis, corn, beans and pumpkins; but they are so numerous, any quantity of these articles the Panis are able to supply them with, must make but a small proportion of their food. They have tents made of neatly dressed skins, fashioned in form of a cone, sufficiently roomy for a family of ten or twelve persons; those of the chiefs will contain occasionally 50 or 60 persons. When they stop, their tents are pitched in very exact order, so as to form regular streets and squares, which in a few minutes has the appearance of a town, raised, as it were, by enchantment: and they are equally dexterous in striking their tents and preparing for a march when the signal is given; to every tent two horses or mules are allotted, one to carry the tent, and another the poles or sticks, which are neatly made of red cedar; they all travel on horseback. Their horses they never turn loose to graze, but always keep them tied with a long cabras or halter; and every two or three days they are obliged to move on account of all the grass near them being eaten up, they have such numbers of horses. They are good horsemen and have good horses, most of which are bred by themselves, and being accustomed from when very young to be handled, they are

remarkably docile and gentle. They sometimes catch wild horses, which are every where amongst them in immense droves. They hunt down the buffaloe on horseback, and kill them either with the bow or a sharp stick like a spear, which they carry in their hands. They are generally at war with the Spaniards, often committing depredations upon the inhabitants of St. a Fé and St. Antoine; but have always been friendly and civil to any French or Americans who have been amongst them. They are strong and athletic, and the elderly men as fat as though they had lived upon English beef and porter.

It is said the man who kills a buffaloe, catches the blood and drinks it while warm; they likewise eat the liver raw, before it is cold, and use the gaul by way of sauce. They are, for savages, uncommonly cleanly in their persons: the dress of the women is a long, loose robe, that reaches from their chin to the ground, tied round with a fancy sash, or girdle, all made of neatly dressed leather, on which they paint figures of different colours and significations: the dress of the men is, close leather pantaloons, and a hunting shirt, or frock of the same. They never remain long enough in the same place to plant any thing: the small Cayenne pepper grows spontaneously in the country, with which and some wild herbs and fruits, particularly a bean that grows in great plenty on a small tree resembling a willow, called masketo, the women cook their buffaloe beef in a manner that would be grateful to an English squire. They alternately occupy the immense space of country from the Trinity and Braces, crossing the Red river, to the heads of Arkansa and Missouri, to river Grand, and beyond it, about St. a Fé, and over the dividing ridge on the waters of the Western ocean, where they say they have seen large peroques, with masts to them; in describing which, they make a drawing of a ship, with all its sails and rigging; and they describe a place where they have seen vessels ascending a river, over which was a draw-bridge that opened to give them a passage. Their native language of sounds differs from the language of any other nation, and none can either speak or understand it; but they have a language by signs that all Indians understand, and by which they converse much among themselves. They have a number of Spanish men and women among them, who are slaves, and who they made prisoners when young.

An elderly gentleman now living at Natchitoches, who, some years ago, carried on a trade with the Hietans, a few days ago related to me the following story:

About 20 years ago a party of these Indians passed over the river Grand to Chewawa, the residence of the governor-general of what is called the five internal provinces; lay in ambush for an opportunity, and made prisoner the governor's daughter, a

young lady going in her coach to mass, and brought her off. The governor sent a message to him (my informant) with a thousand dollars, for the purpose of recovering his daughter : he immediately dispatched a confidential trader, then in his employ, with the amount of the 1000 dollars in merchandise, who repaired to the nation, found her, and purchased her ransom ; but to his great surprise, she refused to return with him to her father, and sent by him the following message : that the Indians had disfigured her face by tattooing it according to their fancy and ideas of beauty, and a young man of them had taken her for his wife, by whom she believed herself pregnant ; that she had become reconciled to their mode of life, and was well treated by her husband ; and that she should be more unhappy by returning to her father, under these circumstances, than by remaining where she was. Which message was conveyed to her father, who rewarded the trader by a present of 300 dollars more for his trouble and fidelity ; and his daughter is now living with her Indian husband in the nation, by whom she has three children.

NATCHITOCHES, formerly lived where the town of Natchitoches is now situated, which took its name from them. An elderly French gentleman, lately informed me, he remembered when they were 600 men strong. I believe it is now 98 years since the French first established themselves at Natchitoch ; ever since, these Indians have been their steady and faithful friends. After the massacre of the French inhabitants of Natchez, by the Natchez Indians, in 1728, those Indians fled from the French, after being reinforced, and came up Red river, and camped about six miles below the town of Natchitoches, near the river, by the side of a small lake of clear water, and erected a mound of considerable size, where it now remains. Monsieur St. Dennie, a French Canadian, was then commandant at Natchitoches ; the Indians called him the Big Foot, were fond of him, for he was a brave man. St. Dennie, with a few French soldiers, and what militia he could muster, joined by the Natchitoches Indians, attacked the Natchez in their camp, early in the morning ; they defended themselves desperately for six hours, but were at length totally defeated by St. Dennie, and what of them that were not killed in battle, were drove into the lake, where the last of them perished, and the Natchez, as a nation, became extinct. The lake is now called by no other name than the Natchez lake. There are now remaining of the Natchitoches, but 12 men and 19 women, who live in a village about 25 miles by land above the town which bears their name, near a lake, called by the French *Lac de Maure*. Their origi-

nal language is the same as the Yattassce, but speak Caddo, and most of them French.

The French inhabitants have great respect for this nation, and a number of very decent families have a mixture of their blood in them. They claim but a small tract of land, on which they live, and I am informed, have the same rights to it from government, that other inhabitants in their neighbourhood have. They are gradually wasting away; the small-pox has been their great destroyer. They still preserve their Indian dress and habits; raise corn and those vegetables common in their neighbourhood.

BOLUXAS, are emigrants from near Pensacola. They came to Red river about 42 years ago, with some French families, who left that country about the time Pensacola was taken possession of by the English. They were then a considerable numerous tribe, and have generally embraced the Roman Catholic religion, and were ever highly esteemed by the French. They settled first at Avoyall, then moved higher up to Rapide Bayau, and from thence to the mouth of Rigula de Bon-dieu, a division of Red river, about 40 miles below Natchitoch, where they now live, and are reduced to about 20 in number. Their native language is peculiar to themselves, but speak Mobilian, which is spoken by all the Indians from the east side of Mississippi. They are honest, harmless and friendly people.

APPALACHES, are likewise emigrants from West Florida, from off the river, whose name they bear; came over to Red river about the same time the Boluxas did, and have, ever since, lived on the river, above Bayau Rapide. No nation has been more highly esteemed by the French inhabitants; no complaints against them are ever heard; there are only 14 men remaining; have their own language, but speak French and Mobilian.

ALLIBAMIS, are likewise from West Florida, off the Allibani river, and came to Red river about the same time of the Boluxas and Appalaches. Part of them have lived on Red river, about 16 miles above the Bayau Rapide, till last year, when most of this party, of about 30 men, went up Red river, and have settled themselves near the Caddoques, where, I am informed, they last year made a good crop of corn. The Caddos are friendly to them, and have no objection to their settling there. They speak the Creek and Chactaw languages, and Mobilian; most of them French, and some of them English.

There is another party of them, whose village is on a small creek, in Appelousa district, about 30 miles north west from the church of Appelousa. They consist of about 40 men. They have lived at the same place ever since they came from Florida; are said to be increasing a little in numbers, for a few years past,

They raise corn, have horses, hogs and cattle, and are harmless, quiet people.

CONCHATTAS, are almost the same people as the Allibamis, but came over only ten years ago; first lived on Bayau Chico, in Appalousa district, but, four years ago, moved to the river Sabine, settled themselves on the east bank, where they now live, in nearly a south direction from Natchitoch, and distant about 80 miles. They call their number of men 160, but say, if they were all together, they would amount to 200. Several families of them live in detached settlements. They are good hunters, and game is plenty about where they are. A few days ago, a small party of them were here, consisting of 15 persons, men, women and children, who were on their return from a bear hunt up Sabine. They told me they had killed 118; but this year an uncommon number of bears have come down. One man alone, on Sabine, during the summer and fall, hunting, killed 400 deer, sold his skins at 40 dollars a hundred. The bears this year are not so fat as common; they usually yield from eight to twelve gallons of oil, each of which never sells for less than a dollar a gallon, and the skin a dollar more; no great quantity of the meat is saved; what the hunters don't use when out, they generally give to their dogs. The Conchattas are friendly with all other Indians, and speak well of their neighbours the Carankouas, who, they say, live about 80 miles south of them, on the bay, which, I believe, is the nearest point to the sea from Natchitoches. A few families of Chactaws have lately settled near them from Bayau Beauf. The Conchattas speak Creek, which is their native language, and Chactaw, and several of them English, and one or two of them can read it a little.

PACANAS, are a small tribe of about 30 men, who live on the Quelqueshoe river, which falls into the bay between Attakapa and Sabine, which heads in a prairie called Cooko prairie, about 40 miles south west of Natchitoches. These people are likewise emigrants from West Florida, about 40 years ago. Their village is about 50 miles south east of the Conchattas; are said to be increasing a little in number; quiet, peaceable and friendly people. Their own language differs from any other, but speak Mobilian.

ATTAKAPAS. This word, I am informed, when translated into English, means man-eater, but is no more applicable to them than any other Indians. The district they live in is called after them. Their village is about 20 miles to the westward of the Attakapa church, towards Quelqueshoe. Their number of men is about 50, but some Tunicas and Hemas, who have married in their nation and live with them, makes them altogether about 80. They are peaceable and friendly to every body; la-

bour, occasionally, for the white inhabitants; raise their own corn; have cattle and hogs. Their language and the Caraukouas is the same. They were, or near, where they now live, when that part of the country was first discovered by the French.

APPALOUSAS. It is said the word Appalouza, in the Indian language, means black head, or black skull. They are aborigines of the district called by their name. Their village is about 15 miles west from the Appelousa church; have about 40 men. Their native language differs from all other; understand Attakapa and speak French; plant corn; have cattle and hogs.

TUNICAS. These people lived formerly on the Bayau Tunica, above Point Coupee, on the Mississippi, east side; live now at Avoyall; do not at present exceed 25 men. Their native language is peculiar to themselves, but speak Mobilian; are employed, occasionally, by the inhabitants as boatmen, &c. in amity with all other people, and gradually diminishing in numbers.

PASCAGOLAS, live in a small village on Red river, about 60 miles below Natchitoches; are emigrants from Pascagola river, in West Florida; 25 men only of them remaining; speak Mobilian, but have a language peculiar to themselves; most of them speak and understand French. They raise good crops of corn, and garden vegetables; have cattle, horses, and poultry plenty. Their horses are much like the poorer kind of French inhabitants on the river, and appear to live about as well.

TENISAWS, are likewise emigrants from the Tenesau river, that falls into the bay of Mobile; have been on Red river about 40 years: are reduced to about 25 men. Their village is within one mile of the Pascagolas, on the opposite side, but have lately sold their land, and have, or are about moving, to Bayau Beauf, about 25 miles south from where they lately lived: all speak French and Mobilian, and live much like their neighbours the Pascagolas.

CHACTOOS, live on Bayau Beauf, about 10 miles to the southward of Bayau Rapide, on Red river, towards Appalouza: a small, honest people; are aborigines of the country where they live; of men about 30; diminishing: have their own peculiar tongue; speak Mobilian. The lands they claim on Bayau Beauf are inferior to no part of Louisiana in depth and richness of soil, growth of timber, pleasantness of surface and goodness of water. The Bayau Beauf falls into the Chaffeli, and discharges, through Appalouza and Attakapa, into Vermilion Bay.

WASHAS. When the French first came into the Mississippi, this nation lived on an island to the south west of New Orleans, called Barritaria, and were the first tribe of Indians they became

acquainted with, and were always friends. They afterwards lived on Bayau La Fosh; and, from being a considerable nation, are now reduced to five persons only, two men and three women, who are scattered in French families; have been many years extinct, as a nation, and their native language is lost.

CHACTAWS. There are a considerable number of this nation on the west side of the Mississippi, who have not been home for several years. About twelve miles above the post on Oacheta, on that river, there is a small village of them of about 30 men, who have lived there for several years, and made corn; and likewise on Bayau Chico, in the northern part of the district of Appalouza, there is another village of them of about 50 men, who have been there for about nine years, and say they have the governor of Louisiana's permission to settle there. Besides these, there are rambling hunting parties of them to be met with all over Lower Louisiana. They are at war with the Caddoques, and liked by neither red nor white people.

ARKENSAS, live on the Arkansa river, south side, in three villages, about 12 miles above the post, or station. The name of the first village is *Tucanima*, second *Oujotu*, and the third *Ocapa*; in all, it is believed, they do not at present exceed 100 men, and diminishing. They are at war with the Osages, but friendly with all other people, white and red; are the original proprietors of the country on the river, to all which they claim, for about 300 miles above them, to the junction of the river Cadwa with Arkensa; above this fork the Osages claim. Their language is Osage. They generally raise corn to sell; are called honest and friendly people.

The forementioned are all the Indian tribes that I have any knowledge of, or can obtain an account of, in Louisiana south of the river Arkensa, between the Mississippi and river Grand. At Avoyall there did live a considerable tribe of that name, but, as far as I can learn, have been extinct for many years, two or three women excepted, who did lately live among the French inhabitants on Washita.

There are a few of the Humas still living on the east side of the Mississippi, in Ixussecs parish, below Manchuck, but scarcely exist, as a nation.

That there are errors in these sketches is not to be doubted, but in all cases out of my own personal knowledge I have endeavoured to procure the best information, which I have faithfully related; and I am confident any errors that do exist are too unimportant to affect the object for which they are intended.

I am, Sir, &c.

(Signed)

JOHN SIELEY.

General H. DEARBORN.

Natchitoches, April 5, 1805.

TO GENERAL HENRY DEARBORN,
SECRETARY OF WAR.

SIR,

YOU request me to give you some account of Red river, and the country adjacent: I will endeavour to comply with your request, to the best of my knowledge and capacity. My personal knowledge of it is only from its mouth to about 70 or 80 miles above Natchitoches, being, by the course of the river, near 400 miles. After that, what I can say of it is derived from information from others, on whose veracity I have great reliance; principally from Mr. Francis Grappe, who is my assistant and interpreter of Indian languages; whose father was a French officer, and superintendent of Indian affairs, at a post, or station, occupied by France, where they kept some soldiers, and had a factory, previous to the cession of Louisiana to Spain, situate nearly 500 miles, by the course of the river, above Natchitoches, where he, my informant, was born, and lived upwards of 30 years; his time, during which, being occupied alternately as an assistant to his father, an Indian trader and hunter, with the advantage of some learning, and a very retentive memory, acquired an accurate knowledge of the river, as well as the languages of all the different Indian tribes in Louisiana, which, with his having been Indian interpreter for the Spanish government for many years past, and (I believe) deservedly esteemed by the Indians, and all others, a man of strict integrity, has, for many years, and does now possess their entire confidence, and a very extensive influence over them; and I have invariably found, that whatever information I have received from him, has been confirmed by every other intelligent person, having a knowledge of the same, with whom I have conversed.

NOTE. Contrary to geographical rules, as I ascended the river, I called the right bank the northern one, and the left the southern.

THE confluence of Red river with the Mississippi is, by the course of the latter, estimated about 220 miles from New Orleans. Descending the Mississippi, after passing the Spanish line at the 31st degree of north latitude, it makes a remarkable turn to the westward, or nearly north-west, for some distance before you arrive at the mouth of Red river, as though, notwithstanding the immense quantity of its waters already, from its almost numberless tributary streams, it was still desirous of a farther augmentation, by hastening its union with Red river

(which, perhaps, is second only in dignity to it) that they might, from thence, flow on and join the ocean together, which, for many leagues, is forced to give place to its mighty current. But there are reasons for believing the Red river did not always unite with the Mississippi, as it does at present; and that no very great length of time has elapsed since the Mississippi left its ancient bed, some miles to the eastward, and took its course westwardly for the purpose of intermarrying with Red river. The mouth of the Chaffeli, which is now, properly speaking, one of the outlets of the river Mississippi to the ocean, is just below in sight of the junction of Red river with the Mississippi; and from its resemblance to Red river in size, growth on its banks, appearance and texture of soil, and differing from that of the Mississippi, induces strongly the belief that the Chaffeli was once but the continuation of Red river to the ocean, and that it had, in its bed, no connection with the Mississippi. There is no doubt but the Mississippi has alternately occupied different places in the low grounds through which it meanders, almost from the high lands of one side to those of the other, for the average space of near 30 miles. These two great rivers happening to flow, for a distance, through the same mass of swamp, that annually is almost all inundated, it is not extraordinary that their channels should find their way together; the remarkable bend of the Mississippi, at this place, to the westward, seems to have been for the express purpose of forming this union; after which it returns to its former course.

In the month of March, 1803, I ascended Red river, from its mouth to Natchitoches, in an open boat, unless when I chose to land and walk across a point, or by the beauty of the river bank, the pleasantness of its groves, or the variety of its shrubs and flowers, I was invited ashore to gratify or please my curiosity. On entering the mouth of the river I found its waters turgid, of a red colour, and of a brackish taste; and as the Mississippi was then falling, and Red river rising, found a current, from its mouth upwards, varying considerably in places, but averaging about two miles an hour, for the first hundred miles, which, at that time, I found to be about the same in the Mississippi; but, when that river is high, and Red river low, there is very little current in the latter, for sixty or seventy miles: the river, for that distance, is very crooked, increasing the distance, by it, from a straight line, more than two thirds; the general course of it nearly west: that I was able to ascertain, from hearing the morning gun at Fort Adams, for three or four mornings after entering the river, which was not at the greatest height by about fourteen feet; and all the low grounds, for near seventy miles, entirely overflowed like those of the Mississippi, which,

in fact, is but a continuation of the same. Some places appeared, by the high water mark on the trees, to overflow not more than two or three feet, particularly the right bank, below the mouth of the Black river, and the left bank above it; the growth on the lowest places, willow and cotton wood, but on the highest, handsome oaks, swamp hickory, ash, grape vines, &c.

I made my calculation of our rate of ascent and distances up the river, by my watch, noting carefully with my pencil the minute of our stops and settings off, the inlets and outlets, remarkable bends in the river, and whatever I observed any way remarkable. About six miles from the mouth of the river, left side, there is a bayau, as it is called, comes in, that communicates with a lake called lake Long, which, by another bayau, communicates again with the river, through which, when there is a swell in the river, boats can pass, and cut off about 30 miles, being only 14 or 15 through it, and about 45 by the course of the river; and through the lake there is very little or no current; but the passage is intricate and difficult to find; a stranger should not attempt it without a pilot; people have been lost in it for several days; but not difficult for one acquainted: we, having no pilot on board to be depended on, kept the river.

From the mouth of Red river to the mouth of Black river I made it 31 miles: the water of Black river is clear, and when contrasted with the water of Red river has a black appearance. From the mouth of Black river, Red river makes a regular twining to the left, for about 18 miles, called the Grand Bend, forming a segment of nearly three fourths of a circle; when you arrive at the bayau that leads into lake Long, which, perhaps, is in a right line, not exceeding 15 miles from the mouth of the river. From Bayau Lake Long, to Avoyall landing, called Baker's landing, I made 33 miles, and the river is remarkably crooked. At this place the guns at Fort Adams are distinctly heard, and the sound appears to be but little south of east. We came through a bayau called Silver Bayau, that cut off, we understand, six miles; it was through the bayau about four miles. Until we arrived at Baker's landing, saw no spot of ground that did not overflow; the high water mark generally from 3 to 15 feet above its banks. After passing Black river, the edge of the banks near the river are highest; the land falls, from the river back. At Baker's landing I went ashore; I understood, from Baker's landing, cross the point, to Le Glass' landing, was only three or four miles, and by water 15; but I found it 6 at least, and met with some difficulty in getting from where I landed to the high land at Baker's house, for water, though at

low water it is a dry cart road, and less than a mile. I found Baker and his family very hospitable and kind; Mr. Baker told me he was a native of Virginia, and had lived there upwards of 30 years. He was living on a tolerable good high piece of land, not prairie, but joining it. After leaving Baker's house, was soon in sight of the prairie, which, I understand, is about 40 miles in circumference, longer than it is wide, very level, only a few clumps of trees to be seen, all covered with good grass. The inhabitants are settled all around the out edge of it, by the woods, their houses facing inwards, and cultivate the prairie land. Though the soil, when turned up by the plow, has a good appearance, what I could discover by the old corn and cotton stalks, they made but indifferent crops; the timber land that I saw cleared and planted, produced the best; the prairie is better for grass than for planting. The inhabitants have considerable stocks of cattle, which appears to be their principal dependence, and I was informed their beef is of a superior quality: they have likewise good pork; hogs live very well; the timbered country all round the prairie is principally oak that produces good mast for hogs. Corn is generally scarce; they raise no wheat, for they have no mills. I was informed that the lower end of the prairie that I did not see was much the richest land, and the inhabitants lived better, and were more wealthy; they are a mixture of French, Irish, and Americans, generally poor and ignorant. Avoyall, at high water, is an island, elevated 30 or 40 feet above high water mark; the quantity of timbered land exceeds that of the prairie, which is likewise pretty level, but scarcely a second quality of soil. La Glass' landing, as it is called, I found about a mile and a half from the upper end of the prairie; but the high lands bluff to the river. After leaving this place found the banks rise higher and higher on each side; and fit for settlements; on the right side pine woods sometimes in sight. I left the boat again about eight miles from Le Glass' landing, right side; walked two and a half miles cross a point, to a Mr. Hoome's; round the point is called 16 miles. I found the lands through which I passed high, moderately hilly; the soil a good second quality, clay; timber, large oak, hickory, some short leaved pine; and several small streams of clear running water. This description of lands extended back 5 or 6 miles, and bounded by open pine woods, which continue, for 30 miles, to Ocatahola. I found Mr. Hoomes' house on a high bluff very near the river; his plantation the same description of land through which I had passed, producing good corn, cotton and tobacco, and he told me he had tried it in wheat, which succeeded well, but having no mills to

manufacture it, had only made the experiment. Mr. Hoomes told me all the lands round his, for many miles, were vacant. On the south side there is a large body of rich, low grounds, extending to the borders of Appalouza, watered and drained by Bayau Robert and Bayau Beauf, two handsome streams of clear water that rise in the high lands between Red river and Sabine, and after meandering through this immense mass of low grounds of 30 or 40 miles square, fall into the Chaffeli, to the southward of Avoyall. I believe, in point of soil, growth of timber, goodness of water, and conveniency to navigation, there is not a more valuable body of land in this part of Louisiana. From Mr. Hoomes' to the mouth of Rapide Bayau is, by the river, 35 miles. A few scattering settlements on the right side, but none on the left; the right is preferred to settle on, on account of their stocks being convenient to the high lands; but the settlers on the right side own the lands on the left side too; the lands on the Bayau Rapide are the same quality as those on Bayus Robert and Beauf, and, in fact, are a continuation of the same body of lands. Bayau Rapide is somewhat in the form of a half moon; the two points, or horns, meeting the river about 20 miles from each other: the length of the bayau is about 30 miles; on the back of it there is a large bayau falls in, on which there is a saw mill, very advantageously situated, in respect to a never failing supply of water; plenty of timber; and the plank can be taken from the mill tail by water. This bayau is excellent water; rises in the pine woods, and discharges itself each way into the river, by both ends of Bayau Rapide. Boats cannot pass through the bayau, from the river to the river again, on account of rafts of timber choking the upper end of it, but can enter the lower end and ascend it more than half through it. On the lower end of the bayau, on each side, is the principal Rapide settlement, as it is called. No country whatever can exhibit handsomer plantations, or better lauds. The Rapide is a fall, or shoal, occasioned by a soft rock in the bed of the river, that extends from side to side, over which, for about five months in the year (viz.) from July to December, there is not sufficient water for boats to pass without lightening, but at all other seasons it is the same as any other part of the river. This rock, or hard clay, for it resembles the latter almost as much as the former, is so soft it may be cut away with a pen knife, or any sharp instrument, and scarcely turn the edge, and extends up and down the river but a few yards; and I have heard several intelligent persons give it as their opinion, that the extraordinary expense and trouble the inhabitants were at, in one year, in getting loaded boats over this shoal, would be more than sufficient to cut a passage through it; but it happens at a

season of the year when the able planters are occupied at home, and would make no use of the river were there no obstructions in it; but at any rate, the navigation of the river is clear a longer proportion of the year than the rivers in the northern countries are clear of ice. But this obstruction is certainly removable, at a very trifling expense, in comparison to the importance of having it done; and nothing but the nature of the government we have lately emerged from, can be assigned as a reason for its not having been effected long ago.

After passing the Rapides there are very few settlements to be seen, on the main river, for about 20 miles, though both sides appeared to me capable of making as valuable settlements as any on the river; we arrive then at the Indian villages, on both sides, situate exceedingly pleasant, and on the best lands; after passing which you arrive at a large, beautiful plantation of Mr. Gillard; the house is on a point of a high pine woods bluff, close to the river, 60 or 70 feet above the common surface of the country, overlooking, on the east, or opposite side, very extensive fields of low grounds, in high cultivation, and a long reach of the river, up and down; and there is an excellent spring of water issues from the bluff, on which the house is situated, from an aperture in the rock that seems to have been cloven on purpose for it to flow; and a small distance, back of the house, there is a lake of clear water, abounding with fish in summer and fowl in winter. I have seen in all my life, very few more beautiful or advantageously situated places.

Six miles above Gillard's you arrive at the small village of Boluxa Indians, where the river is divided into two channels, forming an island of about fifty miles in length, and three or four in breadth. The right hand division is called the *Rigula de Bondien*, on which are no settlements; but, I am informed, will admit of being well settled; the left hand division is the boat channel, at present, to Natchitoches: the other is likewise boat-able. Ascending the left hand branch for about 24 miles, we pass a thick settlement and a number of wealthy inhabitants. This is called the *River Cane* settlement; called so, I believe, from the banks some years ago, being a remarkable thick cane-brake.

After passing this settlement of about forty families, the river divides again, forming another island of about thirty miles in length, and from two to four in breadth, called the *Isle Brevel*, after a reputable old man now living in it, who first settled it. This island is sub-divided by a bayau that communicates from one river to the other, called also Bayau Brevel. The middle division of the river, is called *Little river*, and it is thickly settled, and is the boat channel: the westward division of the river

is called False river, is navigable, but not settled; the banks are too low; it passes through a lake called *Lac Occassa*. When you arrive at Natchitoches, you find it a small, irregular; and meanly built village, half a dozen houses excepted, on the west side of that division of the river it is on, the high pine and oak woods approach within two or three hundred yards of the river. In the village are about forty families, twelve or fifteen merchants or traders, nearly all French. The fort built by our troops since their arrival, called fort Claiborne, is situated on a small hill, one street from the river, and about thirty feet higher than the river banks. All the hill is occupied by the fort and barracks, and does not exceed two acres of ground. The southern and eastern prospects from it are very beautiful. One has an extensive view of the fields and habitations down the river, and the other a similar view over the river, and of the whole village. This town thirty or forty years ago, was much larger than at present, and situated on a hill about half a mile from its present site. Then most of the families of the district lived in the town, but finding it convenient on account of the stocks and farms, they filed off, one after another, and settled up and down the river. The merchants and trading people found being on the bank of the river more convenient for loading and unloading their boats, left the hill on that account: and others, finding the river ground much superior for gardens, to which they are in the habit of paying great attention, followed the merchants; after them the priests and commandant; then the church and jail (or calleboose), and now nothing of the old town is left, but the form of their gardens and some ornamental trees. It is now a very extensive common of several hundred acres, entirely tufted with clover and covered with sheep and cattle. The hill is a stiff clay, and used to make miry streets; the river soil, though much richer, is of a loose, sandy, texture; the streets are neither miry nor very dusty. Our wells do not afford us good water, and the river water, in summer, is too brackish to drink, and never clear. Our springs are about half a mile back from the river, but the inhabitants, many of them, have large cisterns, and use, principally, rain water, which is preferred to the spring water. The planters along on the river generally use rain water; though when the river is high, and the water taken up and settled in large earthen jars, (which the Indian women make of good quality and at a moderate price), it can be drank tolerably well, but it makes bad tea.

Near Natchitoches there are two large lakes, one within a mile, the other six miles to the nearest parts. One of them is fifty or sixty miles in circumference, the other upwards of thirty: these lakes rise and fall with the river. When the river

is rising the bayaus that connect with the lakes, run into the lakes like a mill-tale, till the lakes are filled; and when the river is falling, it is the same the contrary way, just like the tide, but only annual. On these creeks good mills might be erected, but the present inhabitants know nothing of mills by water, yet have excellent cotton gins worked by horses. I do not know a single mechanic in the district, who is a native of it, one tailor excepted. Every thing of the kind is done by strangers, and mostly Americans. Though Natchitoches has been settled almost one hundred years, it is not more than twelve or fifteen years since they ever had a plow, or a flat to cross the river with; both which were introduced by an Irish Pennsylvanian, under a similar opposition to the Copernican system. 'Tis almost incredible the quantity of fish and fowl these lakes supply. It is not uncommon in winter for a single man to kill from two to four hundred fowl in one evening; they fly between sundown and dark; the air is filled with them; they load and fire as fast as they can, without taking any particular aim, continuing at the same stand till they think they have killed enough, and then pick up what they have killed; they consist of several kinds of duck, geese, brant, and swan. In summer, the quantities of fish are nearly in proportion. One Indian will, with a bow and arrow, sometimes kill them faster than another, with two horses, can bring them in; they weigh, some of them, thirty or forty pounds. The lakes likewise afford plenty of shells for lime; and at low water, the greater of them is a most luxuriant meadow, where the inhabitants fatten their horses. All round these lakes above high water mark, there is a border of rich land, generally wide enough for a field. On the bank of one of them, there is plenty of stone coal, and several quarries of tolerable good building stone; at high water boats can go out of the river into them. Similar lakes are found all along Red river, for five or six hundred miles, which, besides the uses already mentioned, nature seems to have provided as reservoirs for the immense quantity of water beyond what the banks of the river will contain; otherwise no part of them could be inhabited: the low grounds, from hill to hill, would be inundated. About twelve miles north of Natchitoches, on the north-east side of the river, there is a large lake called *Lac Noiz*; the bayau of it communicates to the Rigula de Bondieu, opposite Natchitoch, which is boatable the greater part of the year. Near this lake are the salt works, from which all the salt that is used in the district, is made; and which is made with so much ease, that two old men, both of them cripples, with ten or twelve old pots and kettles, have, for several years past, made an abundant supply of salt for the whole district: they inform me they make six bushels per day.

I have not been at the place, but have a bottle of the water brought to me, which I found nearly saturated. The salt is good. I never had better bacon than I make with it. I am informed, there are twelve saline springs now open; and by digging for them, for aught any one knows, twelve hundred might be opened. A few months ago, captain Burnet, of the Mississippi territory, coming to this place by Washita, came by the salt works, and purchased the right of one of the old men he found there, and has lately sent up a boat, with some large kettles and some negroes, under the direction of his son; and expects, when they get all in order, to be able to make thirty or forty bushels a day. Captain Burnet is of opinion, that he shall be able to supply the Mississippi territory, and the settlements on Mississippi, from point Coupee, upwards, lower than they can get it in New Orleans and bring it up. Cathartic salts, and magnesia, might likewise be made in large quantities, if they understood it. The country all round the Sabine and Black lake is vacant, and from thence to Washita, a distance of about one hundred and twenty miles, which I am informed affords considerable quantities of well timbered good uplands, and well watered. There is a small stream we cross on the Washita road, the English call it *Little river*, the French *Dogdimona*, affording a wide rich bottom: this stream falls into the Acatahola lake; from thence to Washita, it is called Acatahola river; its course is eastwardly, and falls into Washita, near the mouth of Tensaw, where the road from Natchitoches to Natchez, crosses it: from the confluence of these three rivers, downwards, it is called Black river, which falls into Red river, sixty miles below. There is a good salt spring near the Acatahola lake.

Ascending Red river, above Natchitoches, in about three miles arrive at the upper mouth of the Rigula de Boudieu: there are settlements all along; plantations adjoining. From the upper mouth of the Rigula de Boudieu, the river is one channel through the settlement called Grand Ecore, of about six miles; it is called Grand Ecore, (or in English the Great Bluff) being such a one on the left hand side, near one hundred feet high. The face next the river, almost perpendicular, of a soft, white rock; the top, a gravel loam, of considerable extent, on which grow large oaks, hickory, black cherry, and grape vines. At the bottom of one of these bluffs, for there are two near each other, is a large quantity of stone-coal, and near them several springs of the best water in this part of the country; and a lake of clear water within two hundred yards, bounded by a gravelly margin. I pretend to have no knowledge of military tactics, but think, from the river in this place being all in one channel,

the goodness of the water, a high, healthy country, and well timbered all round it, no height near it so high, its commanding the river, and a very public ferry just under it, and at a small expense, would be capable of great defence with a small force. The road from it to the westward, better than from Natchitoch, and by land only about five miles above it, and near it plenty of good building stone. These advantages it possesses beyond any other place within my knowledge on the river, for a strong fort, and safe place of deposit. Just about this bluff, the river makes a large bend to the right, and a long reach nearly due east and west by it: the bluff overlooks, on the opposite side, several handsome plantations. I have been induced, from the advantages this place appeared to me to possess, to purchase it, with four or five small settlements adjoining, including both bluffs, the ferry, springs and lake, the stone quarries, and coal; and a field of about five hundred acres of the best low grounds, on the opposite side. After leaving Grand Ecore, about a mile, on the left side comes in a large bayau, from the Spanish lake, as it is called, boatable the greater part of the year. This lake is said to be about fifty miles in circumference, and rises and falls with the river, into which, from the river, the largest boats may ascend, and from it, up the mouths of several large bayaus that fall into it, for some distance, one in particular called bayau Dupong, up which boats may ascend within one and a half mile of old fort Adaize. Leaving this bayau about two miles, arrive at a fort or division of the river; the left hand branch bears westwardly for sixty or eighty miles; then eastwardly, meeting the branch it left, after forming an island of about one hundred miles long, and, in some places, nearly thirty miles wide. Six or seven years ago, boats used to pass this way into the main river again; its communication with which being above the great raft or obstruction; but it is now choaked, and requires a portage of three miles; but at any season, boats can go from Natchitoches, about eighty miles, to the place called the point, where the French had a factory, and a small station of soldiers to guard the Indian trade, and is now undoubtedly a very eligible situation for a similar establishment. The country bounded to the east and north, by this branch or division of the river, is called the bayau Pierre settlement, which was begun, and some of the lands granted before Louisiana was ceded to Spain by France, and continued under the jurisdiction of the commandant of Natchitoches until about twenty years ago, when, by an agreement between a Mr. Vogone, then commandant of this place, and a Mr. Elibarbe, commandant at Natchitoches, the settlement called Bayau Pierre, was placed under the jurisdiction of the latter, and has so continued ever

since. The settlement, I believe, contains about forty families; and generally they have large stocks of cattle: they supply us with our cheese entirely, and of a tolerable quality, and we get from them some excellent bacon hams. The country is interspersed with prairies, resembling, as to richness, the river bottoms, and, in size, from five to five thousand acres. The hills are a good grey soil, and produce very well, and afford beautiful situations. The creek called Bayau Pierre, (stony creek) passes through the settlement, and affords a number of good mill seats, and its bed and banks lined with a good kind of building stone, but no mills are erected on it. Some of the inhabitants have tried the uplands in wheat, which succeeded well. They are high, gently rolling, and rich enough; produce good corn, cotton, and tobacco. I was through the settlement in July last, and found good water, either from a spring or well, at every house. The inhabitants are all French, one family excepted. A few miles to the westward, towards Sabine, there is a Saline where the inhabitants go and make their salt. On the whole, for health, good water, good living, plenty of food for every kind of animal, general conveniency, and handsome surface, I have seen few parts of the world more inviting to settlers.

Returning back again to the fork of the main river we left, for the purpose of exploring the Bayau Pierre branch, we find irregular settlements, including Campti, where a few families are settled together on a hill near the river, north east side. For about 20 miles the river land is much the same every where, but the Campti settlement is more broken with bayaus and lagoons than any place I am acquainted with on the river, and for want of about a dozen bridges is inconvenient to get to, or travel through. The upper end of this settlement is the last on the main branch of Red river, which, straight by land, does not exceed 25 miles above Natchitoches. At the upper house the great raft or jam of timber begins; this raft chokes the main channel for upwards of 100 miles, by the course of the river; not one entire jam from the beginning to the end of it, but only at the points, with places of several leagues that are clear. The river is very crooked, and the low grounds are wide and rich, and I am informed, no part of Red river will afford better plantations than along its banks by this raft, which is represented as being so important as to render the country above it of little value for settlements; this opinion is founded entirely upon incorrect information. The first or lowest part of the raft is at a bend or point in the river, just below the upper plantation, at which, on the right side, a large bayau, or divi-

sion of the river, called Bayau Channo, comes in, which is free of any obstructions, and the greater part of the year boats of any size may ascend it, into lake Bistino, through which, to its communication with the lake, is only about three miles; the lake is about 60 miles long, and lays nearly parallel with the river, from the upper end of which it communicates again with the river, by a bayau called *Daichet*, about forty miles above the upper end of the raft; from the lake to the river, through Bayau Daichet, is called nine miles; there is always in this bayau sufficient water for any boat to pass; from thence upwards Red river is free of all obstructions to the mountains. By lake Bistino, and these two bayaus, an island is formed, about 70 miles long, and three or four wide, capable of affording settlements inferior to none on the river. From the above account you will perceive, that the only difficulty in opening a boat passage by this raft, through the lake, which is much shorter than by the course of the river, and avoid the current, and indeed, was the river unobstructed, would always be preferred, is this small jam of timber at the point, just below the bayau Channo, as it is called.

After the receipt of your letter I had an opportunity of seeing some of the inhabitants who live near this place, who informed me, that that small raft was easily broken, and that they had lately been talking of doing it. I persuaded them to make the attempt, and they accordingly appointed the Friday following, and all the neighbours were to be invited to attend and assist. They met accordingly, and effected a passage next to one bank of the river, so that boats could pass, but did not entirely break it; they intend to take another spell at it, when the water falls a little, and speak confidently of succeeding.

The country about the head of lake Bistino, is highly spoken of, as well the high lands, as the river bottom. There are falling into the river and lake in the vicinity, some handsome streams of clear wholesome water from towards Washita, one in particular called bayau Badkah by the Indians, which is boatable at some seasons; this bayau passes through a long, narrow, and rich prairie, on which my informant says, 500 families might be desirably settled; and from thence up to where the Caddos lately lived, the river banks are high, bottoms wide and rich as any other part of the river. From thence it is much the same to the mouth of the Little river of the left; this river is generally from 50 to an 100 yards wide; heads in the great prairies, south of Red river, and interlocks with the head branches of the Sabine and Trinity rivers; and in times of high water is boatable 40 or 50 leagues, affording a large body of excellent, well timbered and rich land, the low grounds from 3 to 6 miles

wide; but the quality of the water, though clear, is very inferior to that of the streams that fall into Red river on the north side. The general course of the Red river from this upwards is nearly from west to east, till we arrive at the Panis towns, when it turns north westwardly. After leaving the mouth of the Little river of the left, both banks are covered with strong thick cane for about 20 miles; the low grounds very wide, rich and do not overflow; the river widening in proportion as the banks are less liable to overflow; you arrive at a handsome, rich prairie, 25 miles long on the right side, and 4 or 5 miles wide; bounded by handsome oak and hickory woods, mixed with some short leaved pine, interspersed with pleasant streams and fountains of water. The opposite, or left side is a continuation of thick cane; the river or low lands 10 or 12 miles wide. After leaving the prairie, the cane continues for about 40 miles; you then arrive at another prairie, called Little prairie, left side, about 5 miles in length, and from 2 to in 3 breadth; opposite side continues cane as before; low lands wide, well timbered, very rich, and overflow but little; the river still widening. Back of the low grounds, is a well timbered, rich upland country; gently rolling and well watered; from the Little prairie, both banks cane for 10 or 12 miles, when the oak and pine woods come bluff to the river for about 5 miles; left hand side, cane as before; then the same on both sides, for from 10 to 20 miles wide, for about 15 miles, when the cedar begins on both sides, and is the principal growth on the wide, rich river bottom for 40 miles; in all the world there is scarcely to be found a more beautiful growth of cedar timber; they, like the cedars of Libanus, are large, lofty and straight.

You now arrive at the mouth of the Little river of the right; this river is about 150 yards wide; the water clear as crystal; the bottom of the river stony, and is boatable, at high water, up to the great prairies near 200 miles by the course of the river; the low grounds generally from 10 to 15 miles wide, abounding with the most luxuriant growth of rich timber, but subject to partial inundation at particular rainy seasons. After leaving this river, both banks of Red river are cane as before, for about 20 miles, when you come to the round prairie, right side, about 5 miles in circumference. At this place Red river is fordable at low water; a hard stony bottom, and is the first place from its mouth where it can be forded. This round prairie is high and pleasant; surrounded by handsome oak and hickory uplands; left side cane as before, and then the same both sides for 20 miles, to the long prairie, left side, 40 miles long; opposite side cane as before; near the middle of this prairie, there is a lake of about 5 miles in circumference, in an oval

form, neither tree nor shrub near it, nor stream of water running either in or out of it ; it is very deep, and the water so limpid that a fish may be seen 15 feet from the surface. By the side of this lake the Caddoquies have lived from time immemorial. About one mile from the lake is the hill on which, they say, the Great Spirit placed one Caddo family, who were saved when, by a general deluge, all the world were drowned ; from which family all the Indians have originated. For this little natural eminence all the Indian tribes, as well as the Caddoquies, for a great distance, pay a devout and sacred homage. Here the French, for many years before Louisiana was ceded to Spain, had erected a small fort ; kept some soldiers to guard a factory they had here established for the Indian trade, and several French families were settled in the vicinity, built a flour mill, and cultivated wheat successfully for several years ; and it is only a few years ago that the mill irons and mill stones were brought down ; it is about 25 years since those French families moved down, and 14 years since the Caddoquies left it. Here is another fording place when the river is low. On the opposite side a point of high oak, hickory, and pine land comes bluff to the river for about a mile ; after which, thick cane to the upper end of the prairie ; then the same on both sides for about 12 miles ; then prairie on the left side for 20 miles, opposite side cane ; then the same for 30 miles, then an oak high bluff three miles, cane again for about the same distance, on both sides ; then for about one league, left side, is a beautiful grove of pacans, intermixed with no other growth ; after which, cane both sides for 40 miles ; then prairie, left side, for 20 miles, and from one to two miles only in depth ; about the middle of which comes in a bayau of clear running water, about 50 feet wide ; then cane again both sides of the river for about 40 miles ; then, on the right side, a point of high pine woods bluff to the river for about half a mile, cane again 15 or 16 miles ; then a bluff of large white rocks for about half a mile, near 100 feet high, cane again about 45 miles, to a prairie on the right side, of about 50 miles long, and 12 or 15 miles wide ; there is a thin skirt of wood along the bank of the river, that when the leaves are on the trees, the prairie is, from the river, scarcely to be seen. From the upper end of this prairie it is thick cane again for about six miles, when we arrive to the mouth of Bayau Galle, which is on the right side, about thirty yards wide, a beautiful, clear, running stream of wholesome well tasted water ; after passing which it is thick cane again for 25 miles, when we arrive at a river that falls in on the right side, which is called by the Indians *Kiomitchie*, and by the French *La Riviere la Mine*, or Mine river, which is

about 150 yards wide, the water clear and good, and is boatable about 60 miles to the silver mine, which is on the bank of the river, and the ore appears in large quantities, but the richness of it is not known. The Indians inform of their discovering another, about a year ago, on a creek that empties into the Kiomitchie, about three miles from its mouth, the ore of which they say resembles the other. The bottom land of this river is not wide, but rich; the adjoining high lands are rich, well timbered, well watered and situated. About the mine the current of the river is too strong for boats to ascend it, the country being hilly. After passing the Kiomitchie, both banks of the river are covered with thick cane for 25 miles, then, left side, a high pine bluff appears again to the river for about half a mile, after which nothing but cane again on each side for about 40 miles, which brings you to the mouth of a handsome bayau, left side, called by the Indians *Nahaucha*, which, in English, means the Kick; the French call it *Bois d' Arc*, or Bow-wood creek, from the large quantity of that wood that grows upon it. On this bayau trappers have been more successful in catching beaver than on any other water of Red river; it communicates with a lake, three or four miles from its mouth, called Swan lake, from the great number of swan that frequent it; it is believed that this bayau is boatable at high water, for 20 or 30 leagues, from what I have been informed by some hunters with whom I have conversed, who have been upon it. The low grounds are from three to six miles wide, very rich, the principal growth on it is the bois d'arc. The great prairies approach pretty near the low grounds on each side of this creek; leaving which it is cane both sides for about eight miles, when we arrive at the mouth of the Vazzures, or Boggy river, which is about 200 yards wide, soft miry bottom, the water whitish, but well tasted. Attempts have been made to ascend it in perogues, but it was found to be obstructed by a raft of logs, about 20 miles up it. The current was found to be gentle, and depth of water sufficient; was the channel not obstructed might be ascended far up it. The low grounds on this river are not as wide as on most of the rivers that fall into Red river, but very rich; the high lands are a strong clay soil; the principal growth oak. After leaving this river the banks of Red river are alternately cane and prairie; the timber is very small and scattered along only in places; it is only now to be seen along the water courses. From the Boggy river to the Blue river is about 50 miles, which comes in on the right side. The water of this river is called *blue*, from its extreme transparency; it is said to be well tasted, and admired, for its quality, to drink. The bed of this river is lined generally with black and greyish flint stones;

it is about 50 yards wide, and represented as a beautiful stream; perogues ascend it about 60 or 70 miles. The low grounds of Blue river are a good width for plantations, very rich; the growth pacan, and every species of the walnut. The whole country here, except on the margin of the water courses, is one immense prairie. After passing this river coves of wood only are to be seen here and there along the river bank for 25 miles, to a small turgid river, called by the Indians *Bahachaha*, and by the French *Fauxoachita*, or False oachito; some call it the Missouri branch of Red river; it emits a considerable quantity of water; runs from north to south, and falls into Red river nearly at right angles, and heads near the head of the Arkensa, and is so brackish it cannot be drank. On this river, and on a branch of the Arkensa, not far from it, the Indians find the salt rock; pieces of it have often been brought to Natchitoches by hunters, who procured it from the Indians. From the mouth of this river, through the prairie, to the main branch of the Arkensa, is three days journey; perhaps 60 or 70 miles in a straight line. From this to the Panis, or Towrache towns, by land, is about 30 miles, and by water, double that distance; the river is nearly a mile wide. The country on each side, for many hundreds of miles, is all prairie, except a skirt of wood along the river bank, and on the smaller streams; what trees there are, are small; the grass is green summer and winter. In between 33 and 34 degrees of north latitude, the soil is very rich, producing, luxuriously, every thing that is planted in it: the river, from this upwards, for 150 miles, continues at least a mile wide, and may be ascended in perogues.

Mr. Grappe, to whom I am indebted for the foregoing accurate description of Red river, informed me, that his personal knowledge of it did not extend but little above the Panis towns; but Mr. Brevel, of the Isle Brevel, who was born at the Caddo old towns, where he was, had been farther up it, and that whatever account he gave me might be relied on.

I therefore sought an opportunity, a few days after, to obtain from Mr. Brevel the following narrative, which I wrote down from his own mouth, as he related it:

"About 40 years ago, I set off, on foot, from the Panis nation (who then lived about 50 leagues above where they now live), in company with a party of young Indian men, with whom I had been partly raised, on a hunting voyage, and to procure horses. We kept up on the south side of Red river, as near it as we could conveniently cross the small streams that fall in, sometimes at some distance, and at others very near it, and in sight of it. We found the country all prairie, except small coves of wood, cedar, cotton wood, or musketo, amongst

which a stick six inches in diameter could not be found; the surface becoming more and more light, sandy and hilly, with ledges of cliffs of a greyish sandy rock, but every where covered with herbage. We found many small streams falling into the river, but none of any considerable size, or that discharged much water in dry seasons, but many deep gullies formed by the rain water. After travelling for several days over a country of this description, the country became more broken, the hills rising into mountains, amongst which we saw a great deal of rock salt, and an ore the Indians said was my (meaning the white people's) treasure, which I afterwards learned was silver. And that amongst these mountains of mines, we often heard a noise like the explosion of a cannon, or distant thunder, which the Indians said was the spirit of the white people working in their treasure, which, I afterwards was informed, was the blowing of the mines, as it is called, which is common in all parts of Spanish America where mines exist. The main branch of the river becoming smaller, till it divided into almost innumerable streams that issued out of the vallies amongst these mountains; the soil very light and sandy, of a reddish grey colour. We travelled on from the top of one mountain to the top of another, in hopes the one we were ascending was always the last, till the small streams we met with ran the contrary way, towards the setting sun, and the lands declining that way. We continued on till the streams enlarged into a river of considerable size, and the country became level, well timbered, the soil a rich black loam; the waters were all clear and well tasted. Here we found a great many different tribes of the Hietan, Appaches, and Concee Indians; we likewise fell in with them frequently from the time we had been a few days out from the Panis towns, and were always treated kindly by them. I believe the distance from the Panis old towns to where we saw the last of Red river water, is at least one hundred leagues; and in crossing over the ridge, we saw no animals that were not common in all the country of Louisiana, except the spotted tyger, and a few white bears. After spending some days on the western waters, we set off for the settlements of St. a Fé, steering nearly a south-east course, and in a few days were out of the timbered country into prairie; the country became broken and hilly; the waters all running westwardly; the country clothed with a luxuriant herbage, and frequently passing mines of silver ore. We arrived, at length, at a small meanly-built town in the St. a Fé settlement, containing about one hundred houses, round which were some small cultivated fields, fenced round with small cedar and musketo brush, wattled in stakes. This little town was on a small

stream of water that ran westwardly, and in a dry season scarcely run at all ; and that the inhabitants were obliged to water their cattle from wells. And I understood that the bayau upon which this town is situated, was no part of Rio Grandi, but fell into the western ocean ; but of that I might have been mistaken. I understood that similar small towns, or missions, were within certain distances of each other for a great extent southwardly, towards Mexico ; and that the inhabitants were mostly christianised Indians and Matiffs. That the mines in that settlement afforded very rich ore, which was taken away in large quantities, packed on mules, and had the same appearance of what we met with about the head branches of Red river. After furnishing ourselves with horses at this place, we set off again for the Panis towns, from whence we started, steering at first southwardly, in order to avoid a high mountainous country that is difficult to cross, that lies between St. a Fé and Red river. After travelling some distance south, we turned our course north-eastwardly, and arrived at the Panis towns in eighteen days from the day we left St. a Fé settlements, and three months and twenty days from the time we started."

He is of the opinion, that from the Panis towns to St. a Fé, in a right line, is nearly three hundred miles, and all the country prairie, a few scattering cedar knobs excepted. After he had finished his narrative, I asked him how far Red river was boatable. He said, not much above the Panis old towns ; not that he knew of any particular falls or obstructions, but that the head branches of the river came from steep mountains, on which the rain often poured down in torrents, and runs into the river with such velocity, sweeping along with it large quantities of loose earth, of which these hills and mountains are composed : that it rolls like a swell in the sea, and would either sink or carry along with it any boat that it might meet in the river. But, he observed at the same time, that his opinion was founded on no experiment that he had ever known made. I asked him if the Indians had no perogues high up in the river. He told me, that the Indians there knew nothing of the use of them ; for, instead of there being for hundreds of miles a tree large enough for a canoe, one could scarcely be found large enough to make a fowl trough. I asked him what animals were found in the Great prairies. He told me, that from Blue river, upwards, on both sides of Red river, there were innumerable quantities of wild horses, buffalo, bears, wolves, elk, deer, foxes, sangliers or wild hogs, antelope, white hares, rabbits, &c. and on the mountains the spottedtyger, panther, and wild cat. He farther told me, that about twenty-three years ago, he was employed by the governor of St. An-

toine, to go from that place into some of the Indian nations that lived towards St. a Fé, who were at war with the Spaniards, to try to make a peace with them, and bring in some of the chiefs to St. Antoine. He set off from that place with a party of soldiers, and was to have gone to St. a Fé; they passed on a north-westwardly course for about two hundred miles, but after getting into the Great Prairie, being a dry season, they were forced to turn back for want of water for themselves and horses, and that he does not know how near he went to St. a Fé, but believes he might have been half way.

The accounts given by Mr. Brevel, Mr. Grappe, and all other hunters with whom I have conversed, of the immense droves of animals that, at the beginning of winter, descend from the mountains down southwardly, into the timbered country, is almost incredible. They say the buffaloe and bear particularly are in droves of many thousands together, that blacken the whole surface of the earth, and continue passing, without intermission, for weeks together, so that the whole surface of the country is, for many miles in breadth, trodden like a large road.

I am, sir, &c. &c.

(Signed)

JOHN SIBLEY.

Natchitoches, 10th April, 1805.

Distances up Red river by the course of the river.

	MILES.
From the mouth of Red river to Black river . . .	31
to Baker's landing, lower end avoyal . . .	51
La Glee's ditto, upper end avoyal . . .	15
Rice's	6
Hoome's	18
Nicholas Grubb's	21
mouth of bayau Rapide	15
	— 157
Indian villages	22
Mount Pleasant, Gillard's place	7
mouth of Rigula de Bondieu	6
Mounete's plantation	10
mouth of Little river	24
bayau Brevell	20
Natchitoches	20
	— 109
	<hr/> 266

<i>Continued.</i>		MILES.	266
Grand Ecore	.	10	
Compti	.	20	
bayau Channo	.	13	
lake Bistino, through bayau Channo	.	3	
through lake Bistino to the upper end of Channo	.	60	
through bayau Daichet to the river again	.	9	
late Caddo villages where they lived 5 years ago		80	
		—	197
Little river of the left	.	80	
long prairie, right side	.	25	
upper end of ditto	.	25	
little prairie, left side	.	40	
upper end ditto	.	5	
		—	175
pine Bluff, right side	.	12	
upper end ditto	.	5	
cedars	.	15	
upper end ditto and mouth of Little river of the right	.	40	
		—	72
round prairie, right side (first fording place)	.	20	
lower end of long prairie, left side	.	25	
upper end ditto	.	40	
next prairie, same side	.	12	
upper end of the same	.	20	
3 mile oak and pine Bluff	.	30	
Pacan grove	.	9	
upper end of the same	.	6	
prairie next above the Pacans	.	40	
upper end of the same	.	25	
pine Bluff, right side	.	45	
white oak Bluff	.	15	
next prairie, right side	.	45	
upper end ditto	.	30	
bayau Galle, right side	.	6	
mouth of Kiomitchie, or mine river	.	25	
		—	231
pine Bluff, left side	.	25	
bayau Kick, or Bois d'arc creek	.	40	
the Vazzures, or Boggy river, right side	.	8	
Blue river, right side	.	50	
Faux Oacheto or Missouri branch	.	25	
		—	148
			1,251

<i>Continued.</i>		MILES. 1,251
Panis or Towiache towns		70
Panis or ditto old towns		150
head branch of Red river, or dividing ridge		300—520
To which may be added for so much the distance being shortened by going through lake Bistino, than the course of the river		60
		<hr/> 1,831
Computed length of Red river from where it falls into the Mississippi, to which add the distance from the mouth of Red river to the ocean, by either the Mississippi, or the Cheffeli, which was once probably the mouth of Red river		320
		<hr/>
Total length of Red river		Miles. 2,151

OBSERVATIONS

Made in a voyage commencing at St. Catharine's landing, on the east bank of the Mississippi, proceeding downwards to the mouth of Red river, and from thence ascending that river, the Black river, and the Washita river, as high as the hot springs in the proximity of the last-mentioned river, extracted from the journals of William Dunbar, Esquire, and Doctor Hunter.

Mr. DUNBAR, Doctor Hunter, and the party employed by the United States to make a survey of, and explore the country traversed by the Washita river, left St. Catharine's landing, on the Mississippi, in latitude $31^{\circ} 26' 30''$ N. and longitude $64^{\circ} 5' 56''$ W. from the meridian of Greenwich, on Tuesday the 16th of October, 1804. A little distance below St. Catharine's creek, and five leagues from Natches, they passed the White Cliffs, composed chiefly of sand, surmounted by pine, and from one hundred to two hundred feet high. When the waters of the Mississippi are low, the base of the cliff is uncovered, which consists of different coloured clays, and some beds of ochre, over which there lies, in some places, a thin lamina of iron ore. Small springs possessing a petrifying quality flow over the clay and ochre, and numerous logs and pieces of timber, converted into stone, are strewn about the beach. Fine pure argil, of various colours, chiefly white and red, is found here.

On the 17th they arrived at the mouth of Red river, the confluence of which with the Mississippi, agreeably to the observations of Mr. de Ferrer, lies in latitude $31^{\circ} 1' 15''$, and longitude

6h 7' 11" west of Greenwich. Red river is here about five hundred yards wide, and without any sensible current. The banks of the river are clothed with willow; the land low and subject to inundation, to the height of thirty feet or more above the level of the water at this time. The mouth of the Red river is accounted to be seventy-five leagues from New Orleans, and three miles higher up than the Chafalaya, or Opelousa river, which was probably a continuation of the Red river when its waters did not unite with those of the Mississippi but during the inundation.

On the 18th the survey of the Red river was commenced, and on the evening of the 19th the party arrived at the mouth of the Black river, in latitude $31^{\circ} 15' 48''$ N. and about 26 miles from the Mississippi. The Red river derives its name from the rich fat earth, or marle, of that colour, borne down by the floods; the last of which appeared to have deposited on the high bank a stratum of upwards of half an inch in thickness. The vegetation on its banks is surprisingly luxuriant; no doubt owing to the deposition of marle during its annual floods. The willows grow to a good size; but other forest trees are much smaller than those seen on the banks of the Mississippi. As you advance up the river, it gradually narrows; in latitude $31^{\circ} 08'$ N. it is about two hundred yards wide, which width is continued to the mouth of Black river, where each of them appears one hundred and fifty yards across. The banks of the river are covered with pea vine and several sorts of grass, bearing seed, which geese and ducks eat very greedily; and there are generally seen willows growing on one side, and on the other a small growth of black oak, packawn, hickory, elm, &c. The current in the Red river is so moderate as scarcely to afford an impediment to its ascent.

On sounding the Black river a little above its mouth, there was found twenty feet of water, with a bottom of black sand. The water of Black river is rather clearer than that of the Ohio, and of a warm temperature, which it may receive from the water flowing into it from the valley of the Mississippi, particularly by the Catahoola. At noon on the 23d, by a good meridian observation, they ascertained their latitude to be $30^{\circ} 36' 29''$ N. and were then a little below the mouths of Catahoola, Washita and Bayau Tenza, the united waters of which form the Black river. The current is very gentle the whole length of the Black river, which in many places does not exceed eighty yards in width. The banks on the lower part of the river present a great luxuriance of vegetation and rank grass, with red and black oak, ash, paccawn, hickory, and some

elms*. The soil is black marle, mixed with a moderate proportion of sand, resembling much the soil on the Mississippi banks ; yet the forest trees are not lofty, like those on the margin of the Great river, but resembling the growth on the Red river. In latitude $31^{\circ} 22' 46''$ N. they observed that canes grew on several parts of the right bank, a proof that the land is not deeply overflowed ; perhaps from one to three feet : the banks have the appearance of stability ; very little willow, or other productions of a newly formed soil being seen on either side. On advancing up the river, the timber becomes larger, in some places rising to the height of forty feet ; yet the land is liable to be inundated, not from the waters of this small river, but from the intrusion of its more powerful neighbour the Mississippi. The lands decline rapidly, as in all alluvial countries, from the margin to the Cypress swamps, where more or less water stagnates all the year round. On the 21st they passed a small, but elevated island, said to be the only one in this river for more than one hundred leagues ascending. On the left bank, near this island, a small settlement of a couple of acres has been begun by a man and his wife. The banks are not less than forty feet above the present level of the water in the river, and are but rarely overflowed : on both sides they are clothed with rich cane brake, pierced by creeks fit to carry boats during the inundation.

They saw many cormorants, and the hooping crane ; geese and ducks are not yet abundant, but are said to arrive in myriads, with the rains and winter's cold. They shot a fowl of the duck kind, whose foot was partially divided, and the body covered with a bluish, or lead coloured plumage. On the morning of the twenty-second, they observed green matter floating on the river, supposed to come from the Catahoola and other lakes and bayaus of stagnant water, which, when raised a little by rain, flow into the Black river : and also many patches of an aquatic plant, re-

* Among the plants growing on the margin of the river is the cheria root, used in medicine, and the cantac, occasionally used by the hunters for food : the last has a bulbous root, ten times the size of a man's fist. In preparing it, they first wash it clean from earth, then pound it well, and add water to the mass and stir it up ; after a moment's settlement the water and fecula is poured off : this operation is repeated until it yields no more fecula, the fibrous part only being left, which is thrown away as useless : the water is then poured from the sediment, which is dried in the sun and will keep a long time. It is reduced into powder and mixed with Indian meal or flour, and makes wholesome and agreeable food. The labour is performed by the women whilst they are keeping the camp, and their husbands are in the woods hunting.

sembling small islands, some floating on the surface of the river, and others adhering to, or resting on the shore and logs. On examining this plant, it was found a hollow, jointed stem, with roots of the same form, extremely light, with very narrow willow shaped leaves projecting from the joint, embracing, however, the whole of the tube, and extending to the next inferior joint or knot. The extremity of each branch is terminated by a spike of very slender, narrow seminal leaves from one to two inches in length, and one tenth, or less, in breadth, producing its seed on the underside of the leaf, in a double row almost in contact; the grains alternately placed in perfect regularity: not being able to find the flower, its class and order could not be determined, although it is not probably new. Towards the upper part of the Black river, the shore abounded with muscles and periwinkles: The muscles were of the kind called pearl muscles. The men dressed a quantity of them, considering them as an agreeable food; but Mr. D. found them tough and unpalatable.

On arriving at the mouth of the Catahoola, they landed to procure information from a Frenchman settled there. Having a grant from the Spanish government, he has made a small settlement, and keeps a ferry boat for carrying over men and horses travelling to and from Natchez, and settlements on Red river and on the Washita river. The country here is all alluvial. In process of time, the rivers shutting up ancient passages and elevating the banks over which their waters pass, no longer communicate with the same facility as formerly; the consequence is, that many larger tracts formerly subject to inundation, are now entirely exempt from that inconvenience. Such is the situation of a most valuable tract upon which this Frenchman is settled. His house stands on an Indian mount, with several others in view. There is also a species of rampart surrounding this place, and one very elevated mount, a view and description of which is postponed till the return; their present situation not allowing of the requisite delay. The soil is equal to the best Mississippi bottoms*.

* There is an embankment running from the Catahoola to Black river (inclosing about two hundred acres of rich land), at present about ten feet high, and ten feet broad. This surrounds four large mounds of earth at the distance of a bow-shot from each other; each of which may be twenty feet high, one hundred feet broad, and three hundred feet long at the top, besides a stupendous turret situate on the back part of the whole, or farthest from the water, whose base covers about an acre of ground, rising by two steps or stories tapering in the ascent, the whole surmounted by a great cone with its top cut off. This tower of earth on admeasurement was found to be eighty feet perpendicular.

They obtained from the French settler the following list of distances between the mouth of Red river and the post on the Washita, called fort Miro.

From the mouth of Red river to the mouth of Black river,
10 leagues.

To the mouth of Catahoola, Washita, and	
Tenza,	22
To the river Ha-ha, on the right,	1
To the Prairie de Villemont, on the same side, . .	5
To the bayau Louis, on the same side, rapids here	1
To bayau Bœufs, on the same side,	4
To the Prairie Noyu, (drowned savanna), . . .	3
To Pine Point, on the left,	4½
To bayau Calumet	3½
To the Coalmine, on the right, and Gypsum	
on the opposite shore,	3
To the first settlement,	12
To fort Miro,	22

Leagues, 91

From this place they proceeded to the mouth of Washita, in lat. 35° 37' 7" N. and encamped on the evening of the 23d.

This river derives its appellation from the name of an Indian tribe, formerly resident on its banks; the remnant of which, it is said, went into the great plains to the westward, and either compose a small tribe themselves, or are incorporated into another nation. The Black river loses its name at the junction of the Washita, Catahoola, and Tenza, although our maps represent it as taking place of the Washita. The Tenza and Catahoola are also named from Indian tribes now extinct. The latter is a creek twelve leagues long, which is the issue of a lake of the same name, eight leagues in length, and about two leagues in breadth. It lies west from the mouth of the Catahoola, and communicates with the Red river during the great annual inundation. At the west or north-west angle of the lake, a creek called Little river, enters, which preserves a channel with running water at all seasons, meandering along the bed of the lake; but in all other parts its superficies, during the dry season from July to November, and often later, is completely drained, and becomes covered with the most luxurious herbage; the bed of the lake then becomes the residence of immense herds of deer, of turkeys, geese, crane, &c. which feed on the grass and grain. Bayau Tenza serves only to drain off a part of the waters of the inundation from the low lands of the Mississippi, which here communicate with the Black river during the season of high water.

Between the mouth of the Washita, and Villemont's prairie on the right, the current of the river is gentle, and the banks

favourable for towing. The lands on both sides have the appearance of being above the inundation ; the timber generally such as high lands produce, being chiefly red, white and black oaks, interspersed with a variety of other trees. The magnolia grandiflora, that infallible sign of the land not being subject to inundation, is not, however, among them. Along the banks a stratum of solid clay, or marle, is observable, apparently of an ancient deposition. It lies in oblique positions, making an angle of nearly thirty degrees with the horizon, and generally inclined with the descent of the river, although in a few cases the position was contrary. Timber is seen projecting from under the solid bank, which seems indurated, and unquestionably very ancient, presenting a very different appearance from recently formed soil. The river is about 80 yards wide. A league above the mouth of the Washita, the bayau Ha-ha comes in unexpectedly from the right, and is one of the many passages through which the waters of the great inundation penetrate and pervade all the low countries, annihilating, for a time, the currents of the lesser rivers in the neighbourhood of the Mississippi. The vegetation is remarkably vigorous along the alluvial banks, which are covered with a thick shrubbery, and innumerable plants in full blossom at this late season.

Villemont's prairie is so named in consequence of its being included within a grant under the French government to a gentleman of that name. Many other parts on the Washita are named after their early proprietors. The French people projected and begun extensive settlements on this river, but the general massacre planned, and in part executed by the Indians against them, and the consequent destruction of the Natchez tribe by the French, broke up all these undertakings, and they were not recommenced under that government. Those prairies are plains, or savaumas, without timber ; generally very fertile, and producing an exuberance of strong, thick and coarse herbage. When a piece of ground has once got into this state, in an Indian country, it can have no opportunity of re-producing timber, it being an invariable practice to set fire to the dry grass in the fall or winter, to obtain the advantage of attracting game when the young tender grass begins to spring : this destroys the young timber, and the prairie annually gains upon the wood-land. It is probable that the immense plains known to exist in America, may owe their origin to this custom. The plains of the Washita lie chiefly on the east side, and being generally formed like the Mississippi land, sloping from the bank of the river to the Great river, they are more or less subject to inundation in the rear ; and in certain great floods the water has advanced so far as to be ready to pour over the

margin into the Washita. This has now become a very rare thing, and it may be estimated that from a quarter of a mile to a mile in depth, will remain free from inundation during high floods. This is pretty much the case with those lands nearly as high as the post of the Washita, with the exception of certain ridges of primitive high-land; the rest being evidently alluvial, although not now subject to be inundated by the Washita river in consequence of the great depth which the bed of the river has acquired by abrasion. On approaching towards the bayau Louis, which empties its waters into the Washita on the right, a little below the rapids, there is a great deal of high land on both sides, which produces pine and other timber, not the growth of inundated lands. At the foot of the rapids the navigation of the river is impeded by beds of gravel formed in it. The first rapids lie in latitude $31^{\circ} 48' 57'' 5$ N. a little above which there is a high ridge of primitive earth, studded with abundance of fragments of rocks, or stone, which appears to have been thrown up to the surface in a very irregular manner. The stone is of a friable nature, some of it having the appearance of indurated clay; the outside is blackish from exposure to the air, within it is a greyish white; it is said that in the hill the strata are regular, and that good grindstones may be here obtained. The last of the rapids, which is formed by a ledge of rocks crossing the entire bed of the river, was passed in the evening of the 27th; above it the water became again like a mill pond, and about one hundred yards wide. The whole of these first shoals, or rapids, embraced an extent of about a mile and a half; the obstruction was not continued, but felt at short intervals in this distance. On the right, about four leagues from the rapids, they passed the "Bayau Aux Boeufs," a little above a rocky hill: high lands and savanna is seen on the right. On sounding the river they found three fathoms water on a bottom of mud and sand. The banks of the river, above the bayau, seem to retain very little alluvial soil; the highland earth, which is a sandy loam of a light grey colour, with streaks of red sand and clay, is seen on the left bank; the soil not rich, bearing pines, interspersed with red oak, hickory and dogwood. The river is from sixty to one hundred yards wide here, but decreases as you advance. The next rapid is made by a ledge of rocks traversing the river, and narrowing the water channel to about thirty yards. The width between the high banks cannot be less than one hundred yards, and the banks from thirty to forty feet high. In latitude $32^{\circ} 10' 13''$ rapids and shoals again occurred, and the channel was very narrow; the sand bars, at every point, extended so far into the bend as to leave little more than the breadth of the boat of water suffi-

ciently deep from her passage, although it spreads over a width of seventy or eighty yards upon the shoal.

In the afternoon of the 31st, they passed a little plantation or settlement on the right, and at night arrived at three others adjoining each other. These settlements are on a plain or prairie, the soil of which we may be assured is alluvial from the regular slope which the land has from the river. The bed of the river is now sufficiently deep to free them from the inconvenience of its inundation; yet in the rear, the waters of the Mississippi approach, and sometimes leave dry but a narrow stripe along the bank of the river. It is however now more common, that the extent of the fields cultivated (from $\frac{1}{4}$ to $\frac{1}{2}$ mile) remains dry during the season of inundation; the soil here is very good, but not equal to the Mississippi bottoms; it may be esteemed second rate. At a small distance to the east are extensive cypress swamps, over which the waters of the inundation always stand to the depth of from fifteen to twenty-five feet. On the west side, after passing over the valley of the river whose breadth varies from a quarter of a mile to two miles, or more, the land assumes a considerable elevation, from one hundred to three hundred feet, and extends all along to the settlements of the Red river. These high lands are reported to be poor, and badly watered, being chiefly what is termed pine barren. There is here a ferry and road of communication between the post of the Washita, and the Natchez, and a fork of this road passes on to the settlement called the rapids, on Red river, distant from this place by computation one hundred and fifty miles.

On this part of the river lies a considerable tract of land granted by the Spanish government to the marquis of Maison Rouge, a French emigrant, who bequeathed it with all his property to M. Bouligny, son of the late colonel of the Louisiana regiment, and by him sold to Daniel Clarke. It is said to extend from the post of Washita with a breadth of two leagues, including the river, down to the bayau Calumet; the computed distance of which along the river is called thirty leagues, but supposed not more than twelve in a direct line.

On the 6th of November, in the afternoon, the party arrived at the post of the Washita, in lat. $32^{\circ} 29' 37'' 25$ N. where they were politely received by lieut. Bowmar, who immediately offered the hospitality of his dwelling with all the services in his power.

From the ferry to this place the navigation of the river is, at this season, interrupted by many shoals and rapids. The general width is from eighty to a hundred yards. The water is extremely agreeable to drink, and much clearer than that of the Ohio. In this respect it is very unlike its two neighbours, the

Arkansa and Red rivers, whose waters are loaded with earthy matters of a reddish brown colour, giving to them a chocolate-like appearance; and, when those waters are low, are not potable, being brackish from the great number of salt springs which flow into them, and probably from the beds of rock salt over which they may pass. The banks of the river presented very little appearance of alluvial land, but furnished an infinitude of beautiful landscapes, heightened by the vivid colouring they derive from the autumnal changes of the leaf. Mr. Dunbar observes, that the change of colour in the leaves of vegetables, which is probably occasioned by the oxygen of the atmosphere acting on the vegetable matter, deprived of the protecting power of the vital principle, may serve as an excellent guide to the naturalist who directs his attention to the discovery of new objects for the use of the dyer. For he has always remarked that the leaves of those trees whose bark or wood are known to produce a dye, are changed in autumn to the same colour which is extracted in the dyers vat from the woods; more especially by the use of mordants, as alum, &c. which yields oxygen: thus the foliage of the hickory, and oak, which produces the quercitron bark, is changed before its fall into a beautiful yellow; other oaks assume a fawn colour, a liver colour, or a blood colour, and are known to yield dyes of the same complexion.

In lat. $32^{\circ} 18''$ N. doctor Hunter discovered along the river side a substance nearly resembling mineral coal: its appearance was that of the carbonated wood described by Kirwan. It does not easily burn; but on being applied to the flame of a candle, it sensibly increased it, and yielded a faint smell, resembling in a slight degree, that of the gum lac of common sealing wax.

Soft friable stone is common, and great quantities of gravel and sand, upon the beaches in this part of the river. A reddish clay appears in the strata; much indurated and blackened by exposure to the light and air.

The position called fort Miro being the property of a private person, who was formerly civil commandant here, the lieutenant has taken post about four hundred yards lower; has built himself some log houses, and inclosed them with a slight stockade. Upon viewing the country east of the river, it is evidently alluvial; the surface has a gentle slope from the river to the rear of the plantations. The land is of excellent quality, being a rich black mould to the depth of a foot, under which there is a friable loam of a brownish liver colour.

At the post of the Washita, they procured a boat of less draught of water than the one in which they ascended the river thus far; at noon, on the 11th of November, they proceeded

on the voyage, and in the evening encamped at the plantation of Baron Bastrop.

This small settlement on the Washita, and some of the creeks falling into it, contains not more than five hundred persons, of all ages and sexes. It is reported, however, that there is a great quantity of excellent land upon these creeks, and that the settlement is capable of great extension, and may be expected, with an accession of population, to become very flourishing. There are three merchants settled at the post, who supply, at very exorbitant prices, the inhabitants with their necessities; these, with the garrison, two small planters, and a tradesman or two, constitute the present village. A great proportion of the inhabitants continue the old practice of hunting, during the winter season, and they exchange their peltry for necessities, with the merchants, at a low rate. During the summer these people content themselves with raising corn, barely sufficient for bread during the year. In this manner they always remain extremely poor: some few who have conquered that habit of indolence, which is always the consequence of the Indian mode of life, and attend to agriculture, live more comfortably, and taste a little the sweets of civilized life.

The lands along the river above the post, are not very inviting, being a thin poor soil, and covered with pine wood. To the right, the settlements on the bayau Barthelemi and Siard, are said to be rich land.

On the morning of the thirteenth, they passed an island and a strong rapid, and arrived at a little settlement below a chain of rocks, which cross the channel between an island and the main land, called Roque Raw. The Spaniard and his family, settled here, appear, from their indolence, to live miserably. The river acquires here a more spacious appearance, being about one hundred and fifty yards wide. In the afternoon they passed the bayau Barthelemi on the right, above the last settlements, and about twelve computed leagues from the post. Here commences Baron Bastrop's great grant of land from the Spanish government, being a square of twelve leagues on each side, a little exceeding a million of French acres. The banks of the river continue about thirty feet high, of which eighteen feet from the water are a clayey loam of a pale ash colour, upon which the water has deposited twelve feet of light sandy soil, apparently fertile, and of a dark brown colour. This description of land is of small breadth, not exceeding half a mile on each side the river, and may be called the valley of the Washita, beyond which there is high land covered with pines.

The soil of the "Bayau des Buttes," continues thin, with a growth of small timber. This creek is named from a number

of Indian mounts discovered by the hunters along its course. The margin of the river begins to be covered with such timber as usually grows on inundated land, particularly a species of white oak, vulgarly called the over-cup oak; its timber is remarkably hard, solid, ponderous and durable, and it produces a large acorn in great abundance, upon which the bear feeds, and which is very flattering to hogs.

In lat. $32^{\circ} 50' 8''$ N. they passed a long and narrow island. The face of the country begins to change; the banks are low and steep; the river deeper and more contracted, from thirty to fifty yards in width. The soil in the neighbourhood of the river is a very sandy loam, and covered with such vegetables as are found on the inundated lands of the Mississippi. The tract presents the appearance of a new soil, very different from what they passed below. This alluvian tract may be supposed the site of a great lake, drained by a natural channel, from the abrasion of the waters; since which period the annual inundations have deposited the superior soil; eighteen or twenty feet is wanting to render it habitable for man. It appears, nevertheless, well stocked with the beasts of the forest, several of which were seen.

Quantities of water fowl are beginning to make their appearance, which are not very numerous here until the cold rains and frost compel them to leave a more northern climate. Fish is not so abundant as might be expected, owing, it is said, to the inundation of the Mississippi, in the year 1709, which dammed up the Washita, some distance above the post, and produced a stagnation and consequent corruption of the waters that destroyed all the fish within its influence.

At noon, on the 15th of November, they passed the island of Mallet, and at ninety yards north-east from the upper point of the island, by a good observation ascertained their latitude to be $32^{\circ} 59' 27'' 5$ N. or two seconds and a half of latitude south of the dividing line between the territories of Orleans and Louisiana. The bed of the river along this alluvial country is generally covered with water, and the navigation uninterrupted; but in the afternoon of this day, they passed three contiguous sand bars, or beaches, called "*les trois battures*," and before evening the "*bayau de grand Marais*," or great marsh creek on the right, and "*la Cyprer Chatelrau*," a point of high land on the other side, which reaches within half a mile of the river. As they advanced towards the *marais de saline*, on the right, a stratum of dirty white clay under the alluvial tract, shewed them to be leaving the sunken, and approaching the high land country. The salt lick marsh does not derive its name from any brackishness in the water of the lake or marsh, but from its contiguity to some of the licks, sometimes called "*saline*," and sometimes "*glaise*," generally found in a clay,

compact enough for potter's ware. The bayau de la Tulipe forms a communication between the lake and the river. Opposite to this place, there is a point of high land, forming a promontory, advancing within a mile of the river, and to which boats resort when the low grounds are under water. A short league above is the mouth of the grand bayau de la Saline (Salt Lick creek). This creek is of a considerable length, and navigable for small boats. The hunters ascend it, to one hundred of their leagues, in pursuit of game, and all agree that none of the springs which feed this creek are salt. It has obtained its name from the many buffalo salt licks which have been discovered in its vicinity. Although most of these licks, by digging, furnish water which holds marine salt in solution, there exists no reason for believing that many of them would produce nitre. Notwithstanding this low and alluvial tract appears in all respects well adapted to the growth of the long moss (*tilandsia*), none was observed since entering it in latitude $32^{\circ} 52'$, and as the pilot informed them none would be seen in their progress up the river, it is probable that the latitude of thirty-three degrees is about the northern limit of vegetation. The long-leaf pine, frequently the growth of rich and even inundated land, was here observed in great abundance: the short-leaved or pitch pine, on the contrary, is always found upon arid lands, and generally in sandy and lofty situations.

This is the season when the poor settlers on the Washita turn out to make their annual hunt. The deer is now fat and the skins in perfection; the bear is now also in his best state, with regard to the quality of his fur, and the quantity of fat or oil he yields, as he has been feasting luxuriantly on the autumnal fruits of the forest. It is here well known that he does not confine himself, as some writers have supposed, to vegetable food; he is particularly fond of hogs flesh; sheep and calves are frequently his prey, and no animal escapes him which comes within his power, and which he is able to conquer. He often destroys the fawn, when chance throws it in his way; he cannot, however, discover it by smelling, notwithstanding the excellence of his scent, for nature has, as if for its protection, denied the fawn the property of leaving any effluvium upon its track, a property so powerful in the old deer*. The bear, unlike most other

* It may not be generally known to naturalists, that between the hoof of the deer, &c. there is found a sack, with its mouth inclining upwards, containing more or less of musk, and which, by escaping over the opening, in proportion to the secretion, causes the foot to leave a scent on the ground wherever it passes. During the rutting season this musk is so abundant, particularly in old males, as to be smelt by the hunters at a considerable distance.

beasts of prey, does not kill the animal he has seized upon before he eats it; but regardless of its struggles, cries, and lamentations, fastens upon, and if the expression is allowable, devours it alive. The hunters count much on their profits from the oil drawn from the bears fat, which, at New Orleans, is always of ready sale, and much esteemed for its wholesomeness in cooking, being preferred to butter or hogs lard. It is found to keep longer than any other animal oil without becoming rancid; and boiling it, from time to time, upon sweet bay leaves, restores its sweetness, or facilitates its conservation.

In the afternoon of the 17th they passed some sand beaches, and over a few rapids. They had cane brakes on both sides of the river; the canes were small, but demonstrate that the water does not surmount the bank more than a few feet. The river begins to widen as they advance: the banks of the river shew the high land soil, with a stratum of three or four feet of alluvion deposited by the river upon it. This superstratum is greyish, and very sandy, with a small admixture of loam, indicative of the poverty of the mountains and uplands where the river rises. Near this they passed through a new and very narrow channel, in which all the water of the river passes, except in time of freshes, when the interval forms an island. A little above this pass is a small clearing, called "Cache la Tulipe" (Tulip's hiding place); this is the name of a French hunter who here concealed his property. It continues the practice of both the white and red hunters to leave their skins, &c. often suspended to poles, or laid over a pole placed upon two forked posts, in sight of the river, until their return from hunting. These deposits are considered as sacred, and few examples exist of their being plundered. After passing the entrance of a bay, which within must form a great lake during the inundation, great numbers of the long leaf pine were observed; and the increased size of the canes along the river's bank, denoted a better and more elevated soil; on the left was a high hill (300 feet) covered with lofty pine trees.

The banks of the river present more the appearance of upland soil, the under stratum being a pale yellowish clay, and the alluvial soil of a dirty white, surmounted by a thin covering of a brown vegetable earth. The trees improve in appearance, growing to a considerable size and height, though yet inferior to those on the alluvial banks of the Mississippi. After passing the "Bayau de Hachis," on the left points of high land, not subject to be overflowed, frequently touch the river, and the valley is said to be more than a league in breadth on both sides. On the left are pine hills, called "Code de Champignole." The river is not more than fifty or sixty yards wide. On the morning

of the 20th they passed a number of sand beaches, and some rapids, but found good depth of water between them. A creek called "Chemin Couvert," which forms a deep ravine in the high lands, here enters the river; almost immediately above this is a rapid where the water in the river is confined to a channel of about forty yards in width; above it they had to quit the main channel, on account of the shallowness and rapidity of the water, and pass along a narrow channel of only sixty feet wide: without a guide a stranger might take this passage for a creek.

Notwithstanding the lateness of the season, and the northern latitude they were in, they this day met with an alligator. The banks of the river are covered with cane, or thick under brush, frequently so interwoven with thorns and briars as to be impenetrable. Birch, maple, holly, and two kinds of wood to which names have not yet been given, except "water side wood," are here met with; as also persimons and small black grapes. The margin of the river is fringed with a variety of plants and vines, among which are several species of convolvulus.

On the left they passed a hill and cliff one hundred feet perpendicular, crowned with pines, and called "Cote de Finn" (Fin's hill) from which a chain of high land continues some distance. The cliff presents the appearance of an ash-coloured clay. A little farther to the right is the Bayau d'Acasia (Locust creek.) The river varies here from eighty to an hundred yards in width, presenting frequent indications of iron along its banks, and some thin strata of iron ore. The ore is from half an inch to three inches in thickness.

On the morning of the 22d of November, they arrived at the road of the Chadadoquis Indian nation, leading to the Arkansa nation; a little beyond this is the Ecor a Frabri (Fabri's cliffs) from 80 to 100 feet high; and a little distance above, a smaller cliff, called "Le Petit Ecor a Fabri" (the Little Cliff of Fabri). These cliffs appear chiefly to be composed of ash-coloured sand, with a stratum of clay at the base, such as runs all along under the banks of this river. Above these cliffs are several rapids; the current is swifter, and denotes their ascent into a higher country: the water becomes clear, and equal to any in its very agreeable taste, and as drinking water. In the river are immense beds of gravel and sand, over which the water passes with great velocity in the season of its floods, carrying with it vast quantities of drift wood, which it piles up, in many places, to the height of twenty feet above the present surface, pointing out the difficulty and danger of navigation in certain times of the flood; accidents, however, are rare with the canoes of the country.

As the party ascended they found the banks of the river less

elevated, being only from nine to twelve feet, and are probably surmounted by the freshes some feet. The river becomes more obstructed by rapids, and sand and gravel beaches, among which are found fragments of stone of all forms, and a variety of colours, some highly polished and rounded by friction. The banks of the river in this upper country suffer greatly by abrasion, one side and sometimes both being broken down by every flood.

At a place called "Auges d'Arclon," (Arclon's troughs) is laminated iron ore, and a stratum of black sand, very tenacious, shining with minute crystals. The breadth of the river is here about eighty yards: in some places, however, it is enlarged by islands, in others, contracted to eighty or one hundred feet. Rocks of a greyish colour, and rather friable, are here found in many places on the river*. On the banks grow willows of a different form from those found below, and on the margin of the Mississippi; the last are very brittle; these, on the contrary, are extremely pliant, resembling the osier, of which they are probably a species.

At noon on the 24th, they arrived at the confluence of the lesser Missouri with the Washita; the former is a considerable branch, perhaps the fourth of the Washita, and comes in from the left hand. The hunters often ascend the Little Missouri, but are not inclined to penetrate far up, because it reaches near the great plains or prairies upon the Red river, visited by the lesser Osage tribes of Indians, settled on Arkansa; these last frequently carry war into the Chadadoquis tribe settled on the Red river, about west-south-west from this place, and indeed they are reported not to spare any nation or people. They are prevented from visiting the head waters of the Washita by the steep hills in which they rise. These mountains are so difficult to travel over, that the savages, not having an object sufficiently desirable, never attempt to penetrate to this river, and it is supposed to be unknown to the nation. The Cadadoquis (or Cadaux, as the French pronounce the word) may be considered as Spanish Indians; they boast, and it is said with truth, that they never have imbrued their hands in the blood of a white man. It is said that the stream of the Little Missouri, some distance from its mouth, flows over a bright splendid bed of mineral of a yellowish white colour (most probably martial pyrites), that thirty years ago, several of the inhabitants, hunters,

* The banks rise into hills of free stone of a very sharp and fine grit, fit for grind stones; the strata irregular, inclining from 20° to 30° down the river.

worked upon this mine, and sent a quantity of the ore to the government at New Orleans, and they were prohibited from working any more.

There is a great sameness in the appearance of the river banks : the islands are skirted with osier, and immediately within, on the bank, grows a range of birch trees and some willows ; the more elevated banks are covered with cane, among which grows the oak, maple, elm, sycamore, ash, hickory, dog-wood, holly, iron-wood, &c. From the pilot they learned that there is a body of excellent land on the Little Missouri, particularly on the creek called the " Bayau a terre noire," which falls into it. This land extends to Red river, and is connected with the great prairies which form the hunting grounds of the Cadeaux nation, consisting of about two hundred warriors. They are warlike, but frequently unable to defend themselves against the tribe of Osages settled on the Arkansa river, who, passing round the mountains at the head of the Washita, and along the prairies, which separate them from the main chain on the west, where the waters of the Red and Arkansa rivers have their rise, pass into the Cadeaux country, and rob and plunder them.

The water in the river Washita rising, the party are enabled to pass the numerous rapids and shoals which they meet with in the upper country, some of which are difficult of ascent. The general height of the main banks of the river is from six to twelve feet above the level of the water ; the land is better in quality, the canes, &c. shewing a more luxuriant vegetation. It is subject to inundation, and shews a brown soil mixed with sand. Near Cache Maçon (Maison's hiding place), on the right, they stopped to examine a supposed coal mine : doctor Hunter and the pilot set out for this purpose, and at about a mile and a half north-west from the boat, in the bed of a creek*, they found a substance similar to what they had before met with under that name, though more advanced towards a state of perfect coal. At the bottom of the creek, in a place then dry, was found detached pieces of from fifty to one hundred pounds weight, adjoining to which lay wood changing into the same substance. A stratum of this coal, six inches thick, lay on both sides of this little creek, over another of yellow clay, and covered by one foot of gravel : on the gravel is eight inches of loam, which bears a few inches of vegetable mould. This stratum of coal is about three feet higher than the water in the creek, and appears manifestly to have been, at some period, the surface of the ground. The gravel and loam have been deposited there since, by the waters.

* Called Coal-mine creek.

Some pieces of this coal were very black and solid, of an homogeneous appearance, much resembling pit coal, but of less specific gravity. It does not appear sufficiently impregnated with bitumen, but may be considered as vegetable matter in the progress of transmutation to coal.

Below the "Bayau de l'eau Froide," which runs into the Washita from the right, the river is 170 yards, flowing through tolerably good land. They passed a beautiful forest of pines, and on the 28th fell in with an old Dutch hunter and his party, consisting in all of five persons.

This man has resided forty years on the Washita, and before that period, has been up the Arkansa river, the White river, and the river St. Francis; the two last, he informs, are of difficult navigation, similar to the Washita; but the Arkansa river is of great magnitude, having a large and broad channel, and when the water is low, has great sand banks, like those in the Mississippi. So far as he has been up it, the navigation is safe and commodious, without impediments from rocks, shoals, or rapids, its bed being formed of mud and sand. The soil on it is of the first-rate quality. The country is easy of access, being lofty open forests, unembarrassed by canes or under growth. The water is disagreeable to drink, being of a red colour, and brackish when the river is low. A multitude of creeks which flow into the Arkansa furnish sweet water, which the voyager is obliged to carry with him for the supply of his immediate wants. This man confirms the accounts of silver being abundant up that river: he has not been so high as to see it himself; but says he received a silver pin from a hunter, who assured him that he himself collected the virgin silver from the rock, out of which he made the epinglete by hammering it out. The tribe of the Osage live higher up than this position, but the hunters rarely go so high, being afraid of these savages, who are at war with all the world, and destroy all strangers they meet with. It is reported that the Arkansa nation, with a part of the Choctaws, Chickasaws, Shawneese, &c. have formed a league, and are actually gone, or going, 800 strong, against these depredators, with a view to destroy or drive them entirely off, and possess themselves of their fine prairies, which are most abundant hunting ground, being plentifully stocked with buffalo, elk, deer, bear, and every other beast of the chase common to those latitudes in America. This hunter having given information of a small spring in their vicinity, from which he frequently supplied himself by evaporating the water, doctor Hunter, with a party, accompanied him, on the morning of the 29th November, to the place. They found a saline, about a mile and a half north of the camp from whence they set out, and near a creek which enters the Washita a little

above. It is situated in the bottom of the bed of a dry gulley. The surrounding land is rich and well timbered, but subject to inundation, except an Indian mount on the creek side, having a base of eighty or a hundred feet diameter, and twenty feet high. After digging about three feet, through blue clay, they came to a quick sand, from which the water flowed in abundance: its taste was salt and bitter, resembling that of water in the ocean. In a second hole, it required them to dig six feet before they reached the quick sand, in doing which they threw up several broken pieces of Indian pottery. The specific gravity, compared with the river, was, from the first pit, or that three feet deep, 1,02720, from the second pit, or that six feet deep, 1,02104, yielding a saline mass, from the evaporation of ten quarts, which, when dry, weighed eight ounces. This brine is, therefore, about the same strength as that of the ocean on our coast, and twice the strength of the famous licks in Kentucky, called Bullet's lick and Mann's lick, from which so much salt is made.

The "Fourche de Cadaux" (Cadadoquis fork) which they passed on the morning of the 30th, is about one hundred yards wide at its entrance into the Washita, from the left: immediately beyond which, on the same side, the land is high; probably elevated three hundred feet above the water. The shoals and rapids here impede their progress. At noon they deduced their latitude, by observation, to be $30^{\circ} 11' 37''$ N. Receiving information of another salt lick, or saline, doctor Hunter landed, with a party, to view it. The pit was found in a low flat place, subject to be overflowed from the river; it was wet and muddy, the earth on the surface yellow, but on digging through about four feet of blue clay, the salt water oozed from a quick sand. Ten quarts of this water produced, by evaporation, six ounces of a saline mass, which, from taste, was principally marine salt; to the taste, however, it shewed an admixture of soda, and muriated magnesia, but the marine salt greatly preponderated. The specific gravity was about 1,076, probably weakened from the rain which had fallen the day before. The ascent of the river becomes more troublesome, from the rapids and currents, particularly at the "isle du bayau des Roches" (Rocky creek island), where it required great exertions, and was attended with some hazard to pass them. This island is three-fourths of a mile in length. The river presents a series of shoals, rapids, and small cataracts; and they passed several points of high land, full of rocks and stones, much harder and more solid than they had yet met with.

The rocks were all silicious, with their fissures penetrated by sparry matter. Indications of iron were frequent, and fragments

of poor ore were common, but no rich ore of that or any other metal was found. Some of the hills appear well adapted to the cultivation of the vine; the soil being a sandy loam, with a considerable proportion of gravel, and a superficial covering of good vegetable black earth. The natural productions are, several varieties of oak, pine, dog-wood, holly, &c. with a scattering undergrowth of whortleberry, hawthorn, china briar, and a variety of small vines.

Above the Isle de Mallon, the country wears another prospect: high lands and rocks frequently approach the river. The rocks in grain resemble free stone, and are hard enough to be used as hand mill-stones, to which purpose they are frequently applied. The quality of the lands improves, the stratum of vegetable earth being from six to twelve inches, of a dark brown colour, with an admixture of loam and sand. Below Deer Island they passed a stratum of free stone, fifty feet thick, under which is a quarry of imperfect slate in perpendicular layers. About a league from the river, and a little above the slate quarry, is a considerable plain, called "Prairie de Champignole," often frequented by buffaloe. Some salt licks are found near it, and in many situations on both sides of this river, there are said to be salines which may hereafter be rendered very productive, and from which the future settlements may be abundantly supplied.

About four miles below the "chuttes" (falls), they, from a good observation, found the latitude $34^{\circ} 21' 25'' 5$. The land on either hand continues to improve in quality, with a sufficient stratum of dark earth of a brownish colour. Hills frequently rise out of the level country, full of rocks and stones, hard and flinty, and often resembling Turkey oil stones. Of this kind was a promontory which came in from the right hand, a little below the chuttes; at a distance it presented the appearance of ruined buildings and fortifications, and several insulated masses of rock, conveyed the idea of redoubts and out-works. This effect was heightened by the rising of a flock of swans which had taken their station in the water, at the foot of these walls. As the voyagers approached, the birds floated about majestically on the glassy surface of the water, and in tremulous accents seemed to consult upon means of safety. The whole was a sublime picture. In the afternoon of the 3d of December, they reached the chuttes, and found the falls to be occasioned by a chain of rocks of the same hard substance seen below, extending in the direction of north-east and south-west, quite across the river. The water passes through a number of branches worn by the impetuosity of the torrent where it forms so many

cascades. The chain of rock or hill on the left, appears to have been cut down to its present level by the abrasion of the waters. By great exertion, and lightening the boat, they passed the chuttes this evening, and encamped just above the cataracts, and within the hearing of their incessant roar.

Immediately above the chuttes, the current of the water is slow, to another ledge of hard free stone; the reach between is spacious, not less than two hundred yards wide, and terminated by a hill, three hundred feet high, covered with beautiful pines: this is a fine situation for building. In latitude $34^{\circ} 25' 48''$ they passed a very dangerous rapid, from the number of rocks which obstruct the passage of the water, and break it into foam. On the right of the rapid is a high rocky hill, covered with very handsome pine woods. The strata of the rock has an inclination of 30° to the horizon, in the direction of the river descending. This hill may be three hundred or three hundred and fifty feet high; a border or list of green cane skirts the margin of the river, beyond which generally rises a high, and sometimes a barren hill. Near another rapid they passed a hill on the left, containing a large body of blue slate. A small distance above the bayau de Saline they had to pass a rapid of one hundred and fifty yards in length, and four feet and a half fall, which, from its velocity, the French have denominated "La Cascade." Below the cascade there are rocky hills on both sides composed of very hard free stone. The stone in the bed of the river, and which has been rolled from the upper country, was of the hardest flint, or of a quality resembling the Turkey oil stone. "Fourche au Tygree" (Tyger's creek), which comes in from the right, a little above the cascade, is said to have many extensive tracts of rich level land upon it. The rocky hills here frequently approach the Washita on both sides; rich bottoms are nevertheless infrequent, and the upland is sometimes of moderate elevation and tolerably level. The stones and rocks here met with have their fissures filled by sparry and crystalline matter.

Wild turkies become more abundant and less difficult of approach than below; and the howl of the wolves is heard during the night.

To the "Fourche of Calfat" (Caulker's creek) where the voyage terminates, they found level and good land on the right and high hills on the left hand. After passing over a very precipitous rapid, seemingly divided into four steeps or falls, one of which was at least fifteen inches in perpendicular height, and which together could not be less than five and a half feet, they arrived at Ellis's camp, a small distance below the Fourche au Calfat, where they stopped on the 6th of December, as the pi-

lot considered it the most convenient landing from whence to carry their necessary baggage to the hot springs, the distance being about three leagues. There is a creek about two leagues higher up, called "bayau des sources chauds" (hot spring creek), upon the banks of which the hot springs are situated at about two leagues from its mouth. The banks of it are hilly, and the road less eligible than from Ellis's camp.

On ascending the hill to encamp, they found the land very level and good, some plants in flower, and a great many ever-green vines; the forest oak with an admixture of other woods. The latitude of this place is $34^{\circ} 27' 31'' 5$. The ground on which they encamped was about fifty feet above the water in the river, and supposed to be thirty feet higher than the inundations. Hills of considerable height, and clothed with pine, were in view, but the land around, and extending beyond their view, lies handsomely for cultivation. The superstratum is of a blackish-brown colour, upon a yellow basis, the whole intermixed with gravel and blue schistus, frequently so far decomposed as to have a strong alluminous taste. From their camp, on the Washita, to the hot springs, a distance of about nine miles, the first six miles of the road is in a westerly direction, without many sinuosities, and the remainder northwardly, which courses are necessary to avoid some very steep hills. In this distance, they found three principal salt licks, and some inferior ones, which are all frequented by buffaloe, deer, &c. The soil around them is a white tenacious clay, probably fit for potters' ware: hence the name of "glaise," which the French hunters have bestowed upon most of the licks, frequented by the beasts of the forest, many of which exhibit no saline impregnation. The first two miles from the river camp is over level land of the second-rate quality; the timber, chiefly oak, intermixed with other trees common to the climate, and a few scattering pines. Further on, the lands on either hand rise into gently swelling hills, covered with handsome pine woods. The road passes along a valley, frequently wet by the numerous rills and springs of excellent water which issue from the foot of the hills. Near the hot springs the hills become more elevated, steeper of ascent, and rocky. They are here called mountains, although none of them in view exceed four or five hundred feet in altitude. It is said, that mountains of more than five times the elevation of these hills are to be seen in the north-west, towards the sources of the Washita. One of them is called the glass, crystal, or shining mountain, from the vast number of hexagonal prisms of very transparent and colourless crystal which are found on its surface; they are generally surmounted by pyramids at one end,

rarely on both. These crystals do not produce a double refraction of the rays of light. Many searches have been made over these mountains for the precious metals, but it is believed without success.

At the hot springs they found an open log cabin, and a few huts of split boards, all calculated for summer encampment, and which had been erected by persons resorting to the springs for the recovery of their health.

They slightly repaired these huts, or cabins, for their accommodation during the time of their detention at the springs, for the purpose of examining them and the surrounding country; and making such astronomical observations as were necessary for ascertaining their geographical position.

It is understood that the hot springs are included within a grant of some hundred acres, granted by the late Spanish commandant of the Washita, to some of his friends; but it is not believed that a regular patent was ever issued for the place; and it cannot be asserted that residence, with improvement here, form a plea to claim the land upon.

On their arrival, they immediately tasted the waters of the hot springs, that is, after a few minutes cooling, for it was impossible to approach it with the lips when first taken up, without scalding: the taste does not differ from that of good water, rendered hot by culinary fire.

On the 10th they visited all the hot springs. They issue on the east side of the valley, where the huts are, except one spring, which rises on the west bank of the creek, from the sides and foot of a hill. From the small quantity of calcareous matter yet deposited, the western spring does not appear to be of long standing: a natural conduit probably passes under the bed of the creek, and supplies it. There are four principal springs rising immediately on the east bank of the creek, one of which may be rather said to spring out of the gravel bed of the run; a fifth, a smaller one than that above mentioned, as rising on the west side of the creek; and a sixth, of the same magnitude, the most northerly, and rising near the bank of the creek: these are all the sources that merit the name of springs, near the huts; but there is a considerable one below, and all along, at intervals, the warm water oozes out, or drops from the bank into the creek, as appears from the condensed vapour floating along the margin of the creek where the drippings occur.

The hill from which the hot springs issue is of a conical form, terminating at the top with a few loose fragments of rock, covering a flat space twenty-five feet in diameter. Although the figure of the hill is conical it is not entirely insulated,

but connected with the neighbouring hills by a very narrow ridge. The primitive rock of this hill, above the base, is principally silicious, some part of it being of the hardest flint, others a freestone extremely compact and solid, and of various colours. The base of the hill, and for a considerable extent, is composed of a blackish blue schistus, which divides into perpendicular lamina like blue slate. The water of the hot springs is, therefore, delivered from the silicious rock, generally invisible at the surface, from the mass of calcareous matter with which it is incrustated, or rather buried, and which it is perpetually precipitating from the water of the springs: a small proportion of iron, in the form of a red calx, is also deposited; the colour of which is frequently distinguishable in the lime.

In ascending the hill several patches of rich black earth are found, which appear to be formed by the decomposition of the calcareous matter: in other situations the superficial earth is penetrated, or encrusted, by limestone, with fine lamina, or minute fragments of iron ore.

The water of the hot springs must formerly have issued at a greater elevation in the hill, and run over the surface, having formed a mass of calcareous rock one hundred feet perpendicular, by its deposition. In this high situation they found a spring, whose temperature was 140° of Fahrenheit's thermometer. After passing the calcareous region they found the primitive hill covered by a forest of not very large trees, consisting chiefly of oak, pine, cedar, holly, hawthorn, and others common to the climate, with a great variety of vines, some said to produce black, and others yellow grapes, both excellent in their kinds. The soil is rocky, interspersed with gravel, sand, and fine vegetable mould. On reaching the height of two hundred feet perpendicular, a considerable change in the soil was observable; it was stony and gravelly, with a superficial coat of black earth, but immediately under it lies a stratum of fat, tenacious, soapy, red clay, inclining to the colour of bright Spanish snuff, homogeneous, with scarcely any admixture of sand, no saline, but rather a soft agreeable taste: the timber diminishes, and the rocks increase in size to the summit. The whole height is estimated at three hundred feet above the level of the valley.

On examining the four principal springs, or those which yield the greatest quantity of water, or of the highest temperature, No. 1 was found to raise the mercury to 150, No. 2 to 154, No. 3 to 136 and No. 4 to 132 degrees of Fahrenheit's thermometer: the last is on the west side of the creek: No. 3 is a small basin in which there is a considerable quantity of green matter, having much the appearance of a vegetable body,

but detached from the bottom, yet connected with it by something like a stem, which rests in calcarious matter. The body of one of these pseudo plants was from four to five inches in diameter; the bottom a smooth film of some tenacity, and the upper surface divided into ascending fibres of half or three fourths of an inch long, resembling the gills of a fish, in transverse rows. A little farther on was another small muddy basin in which the water was warm to the finger: in it was a vermes about half an inch long, moving with a serpentine or vermicular motion. It was invariably observed, that the green matter forming on the stones and leaves covered a stratum of calcarious earth, sometimes a little hard, or brittle, at others soft and imperfect. From the bottom of one of the hot springs a frequent ebullition of gas was observed, which not having the means of collecting, they could not ascertain its nature: it was not inflammable, and there is little doubt of its being carbonic acid, from the quantity of lime, and the iron, held in solution by the water.

They made the following rough estimate of the quantity of water delivered by the springs. There are four principal springs, two of inferior note; one rising out of the gravel, and a number of drippings and drainings, all issuing from the margin, or from under the rock which overhangs the creek. Of the first mentioned, three deliver nearly equal quantities, but No. 1, the most considerable, delivers about five times as much as one of the other three; the two of inferior note may, together, be equal to one; and all the droppings and small springs, are probably underrated at double the quantity of one of the three; that is, all together, they will deliver a quantity equal to eleven times the water issuing from the one most commodiously situated for measurement. This spring filled a vessel of eleven quarts in eleven seconds, hence the whole quantity of hot water delivered from the springs at the base of the hill is 165 gallons in a minute, or 377½ hogsheds in 24 hours, which is equal to a handsome brook, and might work an over-shot mill. In cool weather condensed vapour is seen rising out of the gravel bed of the creek, from springs which cannot be taken into account. During the summer and fall the creek receives little or no water but what is supplied by the hot springs: at that season itself is a hot bath, too hot, indeed, near the springs; so that a person may choose the temperature most agreeable to himself, by selecting a natural basin near to, or farther from, the principal springs. At three or four miles below the springs the water is tepid and unpleasant to drink.

From the western mountain, estimated to be of equal
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height with that from which the hot springs flow, there are several fine prospects. The valley of the Washita, comprehended between the hills on either side, seemed a perfect flat, and about twelve miles wide. On all hands were seen the hills, or mountains, as they are here called, rising behind each other. In the direction of north, the most distant were estimated to be fifty miles off, and are supposed to be those of the Arkansa river, or the rugged mountains which divide the waters of the Arkansa from those of the Washita, and prevent the Osage Indians from visiting the latter, of whom they are supposed ignorant: otherwise their excursions here would prevent this place from being visited by white persons, or other Indians. In a south-west direction, at about forty miles distance, is seen a perfectly level ridge, supposed to be the high prairies of the Red river.

Notwithstanding the severity of the weather, a considerable number, and some variety of plants were in flower, and others retained their verdure: indeed the ridge was more temperate than the valley below; there it was cold, damp, and penetrating; here dry, and the atmosphere mild. Of the plants growing here was a species of cabbage: the plants grow with expanded leaves, spreading on the ground, of a deep green, with a shade of purple; the taste of the cabbage was plainly predominant, with an agreeable warmth inclining to that of the radish; several tap-roots penetrated into the soil, of a white colour, having the taste of horse radish, but much milder. A quantity of them taken to the camp and dressed, proved palatable and mild. It is not probable that cabbage seed has been scattered on this ridge; the hunters ascending this river have always had different objects. Until further elucidation, this cabbage must be considered as indigenous to this sequestered quarter, and may be denominated the cabbage radish of the Washita. They found a plant, then green, called by the French "*racine rouge*," (red root), which is said to be a specific in female obstructions; it has also been used, combined with the China root, to dye red, the last probably acting as a mordant. The top of this ridge is covered with rocks of a flinty kind, and so very hard as to be improper for gun-flints, for when applied to that use it soon digs cavities in the hammer of the lock. This hard stone is generally white, but frequently clouded with red, brown, black, and other colours. Here and there fragments of iron-stone were met with, and where a tree had been overturned, its roots brought to view fragments of schistus, which were suffering decomposition from exposure to the atmosphere. On digging where the slope of the hill was precipitous, they found the second stratum to be a reddish clay, resembling that found on

the conical hill, east of the camp. At two-thirds down the hill, the rock was a hard freestone, intermixed with fragments of flint, which had probably rolled from above. Still lower was found a blue schistus, in a state tending to decomposition where exposed to the atmosphere, but hard and resembling coarse slate in the interior. Many stones had the appearance of Turkey oil stones: at the foot of the hill it expands into good farming lands.

Dr. Hunter, upon examining the waters of the hot springs, obtained the following results:

It differed nothing from the hot water in smell or taste, but caused a slight eructation shortly after drinking it.

Its specific gravity is equal to rain or distilled water.

It gave to litamus paper, a slight degree of redness, evincing the presence of the carbonic acid, or fixed air sulphuric, and threw down a few detached particles. Oxylat of ammoniac caused a deposition and white cloud, shewing the presence of a small portion of lime. Prusiat of potash produced a slight and scarcely perceptible tinge of blue, designating the presence of a small quantity of iron.

Sixteen pounds of water evaporated to dryness left ten grains of a grey powder, which proved to be lime.

The myrtle wax tree grows in the vicinity of the springs. At the season in which the voyagers were there, the wax was no longer green, but had changed its colour to a greyish-white, from its long exposure to the weather. The berry when examined by a microscope, is less than the smallest garden pea, approaching to an oval in form. The nucléus, or real seed, is the size of the seed of a radish, and is covered with a number of kidney shaped glands, of a brown colour and sweet taste; these glands secrete the wax which completely envelopes them, and, at this season, gives to the whole the appearance of an imperfectly white berry. This is a valuable plant and merits attention: its favourite position is a dry soil, rather poor, and looking down upon the water. It is well adapted to ornament the margins of canals, lakes, or rivulets. The cassina yapon, is equally beautiful, and proper for the same purpose: it grows here along the banks of this stony creek, intermingled with the myrtle, and bears a beautiful little red berry, very much resembling the red currant.

The rock through which the hot springs either pass or trickle over, appears undermined by the waters of the creek. The hot water is continually depositing calcarious, and, perhaps, some silicious matter, forming new rocks, always augmenting and projecting their promontories over the running water of the creek, which prevents its formation below the surface. Where-

ver this calcarious crust is seen spreading over the bank and margin of the creek, there, most certainly, the hot water will be found, either running over the surface, or through some channel, perhaps below the new rock, or dripping from the edges of the overhanging precipice. The progress of nature in the formation of this new rock is curious, and worthy the attention of the mineralogist. When the hot water issues from the fountain, it frequently spreads over a superficies of some extent; so far as it reaches, on either hand, there is a deposition of, or growth of green matter. Several lamina of this green matter will be found lying over each other, and immediately under, and in contact with the inferior lamina, which is not thicker than paper, is found a whitish substance resembling a coagulum; when viewed with a microscope, this last is also found to consist of several, sometimes a good number of lamina, of which that next the green is the finest and thinnest, being the last formed; those below increasing in thickness and tenacity until the last terminates in a soft earthy matter, which reposes in the more solid rock. Each lamina of the coagulum is penetrated in all its parts by calcarious grains, extremely minute, and divided in the more recent web; but much larger and occupying the whole of the inferior lamina. The understratum is continually consolidating, and adding bulk and height to the rock. When this acquires such an elevation as to stop the passage of the water, it finds another course over the rock, hill, or margin of the creek, forming, in turn, accumulations of matter over the whole of the adjacent space. When the water has found itself a new channel, the green matter, which sometimes acquires a thickness of half an inch, is speedily converted into a rich vegetable earth, and becomes the food of plants. The surface of the calcarious rock also decomposes and forms the richest black mould intimately mixed with a considerable portion of soil; plants and trees vegetate luxuriantly upon it.

On examining a piece of ground upon which the snow dissolved as it fell, and which was covered with herbage, they found, in some places, a calcarious crust on the surface; but in general a depth of five inches to a foot of the richest black mould. The surface was sensibly warm to the touch. In the air the mercury in the thermometer stood at 44° ; when placed four inches under the surface, and covered with earth, it rose rapidly to 62° ; and upon the calcarious rock, eight inches beneath the surface, it rose to 80° . This result was uniform over the whole surface, which was about a quarter of an acre.

On searching they found a spring, about fifteen inches under the surface, in the water of which the thermometer shewed a temperature of 130° . Beneath the black mould was found a brown mixture of lime and silex, very loose and divisible, ap-

parently in a state of decomposition, and progressing towards the formation of black mould; under this brownish mass it became gradually whiter and harder, to the depth of from six to twelve inches, where it was a calcarious sparkling stone. It was evident that the water had passed over this place, and formed a flat superficies of silicious limestone; and that its position, nearly level, had facilitated the accumulation of earth, in proportion as the decomposition advanced. Similar spots of ground were found higher up the hill, resembling little savannas, near which hot springs were always discovered, which had once flowed over them. It appears probable that the hot water of the springs, at an early period, had all issued from its grand reservoir in the hill, at a much greater elevation than at present. The calcarious crust may be traced up, in most situations on the west side of the hill looking down the creek and valley, to a certain height, perhaps one hundred feet perpendicular; in this region the hill rises precipitously; and is studded with hard silicious stones; below, the descent is more gradual, and the soil a calcarious black earth. It is easy to discriminate the primitive hill from that which has accumulated, by precipitation, from the water of the springs; this last is entirely confined to the west side of the hill, and washed at its base by the waters of the creek, no hot spring being visible in any other part of its circumference. By actual measurement along the base of the hill the influence of the springs is found to extend seventy perches, in a direction a little to the east of north; along the whole of this space the springs have deposited stony matter, calcarious, with an addition of siliceous, or crystalized lime. The accumulation of calcarious matter is more considerable at the north end of the hill than the south; the first may be above a hundred feet perpendicular, but sloping much more gradually than the primitive hill above, until it approaches the creek, where not unfrequently it terminates in a precipice of from six to twenty feet. The difference between the primitive and secondary hill is so striking that a superficial observer must notice it; the first is regularly very steep, and studded with rock and stone of the hardest flint, and other silicious compounds, and a superficies of two or three inches of good mould covers a red clay; below, on the secondary hill, which carries evident marks of recent formation, no flint, or silicious stone, is found; the calcarious rock conceals all from view, and is, itself, frequently covered by much fine rich earth. It would seem that this compound, precipitated from the hot waters, yields easily to the influence of the atmosphere; for where the waters cease to flow over any portion of the rock, it speedily decomposes; probably more rapidly from the heat communicated

from the interior of the hill, as insulated masses of the rock are observed to remain without change.

The cedar, the wax myrtle, and the cassina yapon, all evergreens, attach themselves particularly to the calcarious region, and seem to grow and thrive even in the clefts of the solid rock.

A spring, enjoying a freedom of position, proceeds with great regularity in depositing the matter it holds in solution; the border or rim of its basin forms an elevated ridge, from whence proceeds a glacis all around, where the waters have flowed for some time over one part of the brim; this becomes more elevated, and the water has to seek a passage where there is less resistance, thus forming, in miniature, a crater, resembling in shape the conical summit of a volcano. The hill being steep above, the progress of petrification is stopped on that side, and the waters continue to flow and spread abroad, incrusting the whole face of the hill below. The last formed calcarious border of the circular basin is soft, and easily divided; at a small depth it is more compact; and at the depth of six inches it is generally hard white stone. If the bottom of the basin is stirred up, a quantity of the red calx of iron rises, and escapes over the summit of the crater.

Visitants to the hot springs having observed shrubs and trees with their roots in the hot water, have been induced to try experiments, by sticking branches of trees in the run of hot water. Some branches of the wax myrtle were found thrust into the bottom of a spring run, the water of which was 130° by Fahrenheit's thermometer; the foliage and fruit of the branch were not only sound and healthy, but at the surface of the water roots were actually sprouting from it: on pulling it up the part which had penetrated the hot mud was found decayed.

The green substance discoverable at the bottom of the hot springs, and which at first sight has the appearance of plush, on examination by the microscope, was found to be a vegetable production. A film of green matter spreads itself on the calcarious base, from which rises fibres more than half an inch in length, forming a beautiful vegetation. Before the microscope it sparkled with innumerable nodules of lime, some part of which was beautifully crystalized. This circumstance might cause a doubt of its being a true vegetable, but its great resemblance to some of the mosses, particularly the byssi, and the discovery which Mr. Dunbar made of its being the residence of animal life, confirmed his belief in its being a true moss. After a diligent search he discovered a very minute shell fish, of the bivalve kind, inhabiting this moss; its shape nearly that of the fresh water muscle; the colour of the

shell a greyish brown, with spots of a purplish colour. When the animal is undisturbed, it opens the shell, and thrusts out four legs, very transparent, and articulated like those of a quadruped; the extremities of the fore legs are very slender and sharp, but those of the hind legs somewhat broader, apparently armed with minute toes: from the extremity of each shell issues three or four forked hairs, which the animal seems to possess the power of moving; the fore-legs are probably formed for making incisions into the moss for the purpose of procuring access to the juices of the living plant, upon which, no doubt, it feeds: it may be provided with a proboscis, although it did not appear while the animal was under examination: the hind legs are well adapted for propelling it in its progress over the moss, or through the water.

It would be desirable to ascertain the cause of that perpetual fire which keeps up the high temperature of so many springs as flow from this hill, at a considerable distance from each other: upon looking around, however, sufficient data for the solution of the difficulty is not discoverable. Nothing of a volcanic nature is to be seen in this country; neither could they learn that any evidence in favour of such a supposition was to be found in the mountains connected with this river. An immense bed of dark blue schistus appears to form the base of the hot spring hill, and of all those in its neighbourhood: the bottom of the creek is formed of it; and pieces are frequently met with rendered soft by decomposition, and possessing a strong aluminous taste, requiring nothing but lixiviation and crystalization to complete the manufacture of alum. As bodies undergoing chemical changes generally produced an alteration of temperature, the heat of these springs may be owing to the disengagement of caloric, or the decomposition of the schistus. Another, and perhaps a more satisfactory cause may be assigned: it is well known, that within the circle of the waters of this river, vast beds of martial pyrites exist; they have not yet, however, been discovered in the vicinage of the hot springs, but may, nevertheless, form immense beds under the bases of these hills; and as in one place at least there is evidence of the presence of bitumen*, the union of these agents will, in the progress of decomposition, by the admission of air and moisture, produce degrees of heat capable of supporting the phenomena of the hot springs. No sulphuric acid is present in this water: the springs may be supplied

* Having thrust a stick down into the crater of one of the springs, at some distance up the hill, several drops of petroleum, or naptha, rose and spread upon the surface: it ceased to rise after three or four attempts.

by the vapour of heated water, ascending from caverns where the heat is generated, or the heat may be immediately applied to the bottom of an immense natural cauldron of rock, contained in the bowels of the hill, from which as a reservoir the springs may be supplied.

A series of accurate observations determined the latitude of the hot springs to be $34^{\circ} 31' 4'' 16$ N. and long. $6^{\text{h}} 11' 25''$, or $92^{\circ} 50' 45''$ west from the meridian of Greenwich.

While Mr. Dunbar was making arrangements for transporting the baggage back to the river camp, doctor Hunter, with a small party, went on an excursion into the country. He left the hot springs on the morning of the 27th, and after travelling sometimes over hills and steep craggy mountains with narrow valleys between them, then up the valleys, and generally by the side of a branch emptying into the Washita, they reached the main branch of the Calfat in the evening, about twelve miles from the springs. The stones they met with during the first part of the day were silicious, of a whitish grey, with flints, white, cream-coloured, red, &c. The beds of the rivulets, and often a considerable way up the hills, shewed immense bodies of schistus, both blue and grey, some of it efflorescing and tasting strongly of alum. The latter part of the day, they travelled over and between hills of black, hard, and compact flint, in shapeless masses, with schist as before. On ascending these high grounds, you distinctly perceive the commencement of the piney region, beginning at the height of sixty or seventy feet, and extending to the top. The soil in these narrow valleys is thin and full of stones. The next day, which was stormy, they reached a branch of the bayau de saline, which stretches towards the Arkansa, and empties into the Washita many leagues below, having gone about twelve miles. The mountains they had passed being of the primitive kind, which seldom produce metals, and having hitherto seen nothing of a mineral kind, a little poor iron ore excepted, and the face of the country, as far as they could see, presenting the same aspect; they returned to the camp, at the hot springs, on the evening of the thirtieth, by another route, in which they met with nothing worthy notice.

In consequence of the rains which had fallen, Mr. Dunbar, and those who were transporting the baggage to the river camp, found the road watery. The soil on the flat lands, under the stratum of vegetable mould, is yellowish, and consists of decomposed schistus, of which there are immense beds in every stage of dissolution, from the hard stone recently uncovered and partially decomposed, to the yellow and apparently homogeneous earth. The covering of vegetable earth between the hills and the river is, in most places, sufficiently thick to constitute a good

soil, being from four to six inches; and it is the opinion of the people upon the Washita, that wheat will grow here to great perfection. Although the higher hills, three hundred to six hundred feet in height, are very rocky, yet the inferior hills, and the sloping bases of the first, are generally covered with a soil of a middling quality. The natural productions are sufficiently luxuriant, consisting chiefly of black and red oak, intermixed with a variety of other woods, and a considerable undergrowth. Even on these rocky hills are three or four species of vines, said to produce annually an abundance of excellent grapes. A great variety of plants which grow here, some of which in their season are said to produce flowers highly ornamental, would probably reward the researches of the botanist.

On the morning of the 8th January, 1805, the party left Ellis's on the river camp, where they had been detained for several days, waiting for such a rise in the waters of the river, as would carry their boat in safety over the numerous rapids below. A rise of about six feet, which had taken place the evening before, determined them to move this morning; and they passed the chuttes about one o'clock. They stopped to examine the rocky promontory below these falls, and took some specimens of the stone which so much resembles the Turkey oil stone. It appears too hard. The strata of this chain were observed to run perpendicularly nearly east and west, crossed by fissures at right angles from five to eight feet apart; the lamina from one-fourth of an inch to five inches in thickness. About a league below, they landed at Whetstone-hill and took several specimens. This projecting hill is a mass of greyish blue schistus of considerable hardness, and about twenty feet perpendicular, not regularly so, and from a quarter to two inches in thickness, but does not split with an even surface.

They landed again on the morning of the 9th, in sight of the bayau de la prairie de champignole, to examine and take specimens of some free stone and blue slate. The slate is a blue schistus, hard, brittle, and unfit for the covering of a house; none proper for that purpose have been discovered, except on the Calfat, which Dr. Hunter met with in one of his excursions.

On the evening of the 10th they encamped near Arclon's Troughs, having been only three days in descending the distance which took them thirteen to ascend. They stopped some time at the camp of a Mr. Le Fevre. He is an intelligent man, a native of the Illinois, but now residing at the Arkansas. He came here with some Delaware and other Indians, whom he had fitted out with goods, and receives their peltry, fur, &c. at a stipulated

price, as it is brought in by the hunters. Mr. Le Fevre possesses considerable knowledge of the interior of the country; he confirms the accounts before obtained, that the hills or mountains which give rise to this little river are in a manner insulated; that is, they are entirely shut in and inclosed by the immense plains or prairies which extend beyond the Red river, to the south, and beyond the Missouri, or at least some of its branches, to the north, and range along the eastern base of the great chain, or dividing ridge, commonly known by the name of the sand hills, which separate the waters of the Mississippi from those which fall into the Pacific ocean. The breadth of this great plain is not well ascertained. It is said by some to be at certain parts, or in certain directions, not less than two hundred leagues; but it is agreed by all who have a knowledge of the western country, that the mean breadth is at least two-thirds of that distance. A branch of the Missouri, called the river Platte, or Shallow river, is said to take its rise so far south as to derive its first waters from the neighbourhood of the sources of the Red and Arkansa rivers. By the expression plains or prairies in this place, is not to be understood a dead flat, resembling certain savannas, whose soil is stiff and impenetrable, often under water, and bearing only a coarse grass resembling reeds; very different are the western prairies, which expression signifies only a country without timber. These prairies are neither flat nor hilly, but undulating into gently swelling lawns, and expanding into spacious vallies, in the centre of which is always found a little timber growing on the banks of the brooks and rivulets of the finest waters. The whole of these prairies are represented to be composed of the richest and most fertile soil; the most luxuriant and succulent herbage covers the surface of the earth, interspersed with millions of flowers and flowering shrubs, of the most ornamental kinds. Those who have viewed only a skirt of these prairies, speak of them with enthusiasm, as if it was only there that nature was to be found truly perfect; they declare, that the fertility and beauty of the rising grounds, the extreme richness of the vales, the coolness and excellent quality of the water found in every valley, the salubrity of the atmosphere, and, above all, the grandeur of the enchanting landscape which this country presents, inspire the soul with sensations not to be felt in any other region of the globe. This paradise is now very thinly inhabited by a few tribes of savages, and by the immense herds of wild cattle (bison) which people these countries. The cattle perform regular migrations, according to the seasons, from south to north, and from the plains to the mountains, and in due time, taught by their instincts, take a retrograde direction. These tribes move in the rear of the herds, and pick up stragglers, and

such as lag behind, which they kill with the bow and arrow, for their subsistence. This country is not subjected to those sudden deluges of rain which in most hot countries, and even in the Mississippi territory, tear up and sweep away with irresistible fury, the crop and soil together: on the contrary, rain is said to become more rare in proportion as the great chain of mountain is approached; and it would seem that within the sphere of the attraction of those elevated ridges, little or no rain falls on the adjoining plains. This relation is the more credible, as in that respect our new country may resemble other flat or comparatively low countries, similarly situated, such as the country lying between the Andes and the western Pacific; the plains are supplied with nightly dews so extremely abundant, as to have the effect of refreshing showers of rain; and the spacious vallies, which are extremely level, may with facility be watered by the rills and brooks which are never absent from these situations. Such is the description of the better known country lying to the south of Red river, from Nacogdoches towards St. Antonio, in the province of Texas: the richest crops are said to be procured there without rain; but agriculture in that quarter is at a low ebb; the small quantities of maize furnished by the country, is said to be raised without cultivation. A rude opening is made in the earth, sufficient to deposit the grain, at the distance of four or five feet, in irregular squares, and the rest is left to nature. The soil is tender, spongy, and rich, and seems always to retain humidity sufficient, with the bounteous dews of Heaven, to bring the crops to maturity.

The Red and Arkansas rivers, whose courses are very long, pass through portions of this fine country. They are both navigable to an unknown distance by boats of proper construction; the Arkansas river is, however, understood to have greatly the advantage with respect to the facility of navigation. Some difficult places are met with in the Red river below the Nakitosh, after which it is good for one hundred and fifty leagues (probably computed leagues of the country, about two miles each); there the voyager meets with a very serious obstacle, the commencement of the "raft," as it is called; that is, a natural covering which conceals the whole river for an extent of seventeen leagues, continually augmenting by the drift-wood brought down by every considerable fresh. This covering, which for a considerable time was only drift-wood, now supports a vegetation of every thing abounding in the neighbouring forest, not excepting trees of a considerable size; and the river may be frequently passed without any knowledge of its existence. It is said that the annual inundation is opening for itself a new passage through the low grounds near the hills; but it must be long before na-

ture, unaided, will excavate a passage sufficient for the waters of Red river. About fifty leagues above this natural bridge, is the residence of the Cadeaux or Cadadoquies nation, whose good qualities are already mentioned. The inhabitants estimate the post of Nakitosh to be half way between New Orleans and the Cadeaux nation. Above this point the navigation of Red river is said to be embarrassed by many rapds, falls, and shallows. The Arkansa river is said to present a safe, agreeable, and uninterrupted navigation as high as it is known. The lands on each side are of the best quality, and well watered with springs, brooks, and rivulets, affording many situations for mill-seats. From description, it would seem that along this river there is a regular gradation of hill and dale, presenting their extremities to the river; the hills are gently swelling eminences, and the dales spacious vallies, with living water meandering through them; the forests consist of handsome trees, chiefly what is called open woods. The quality of the land is supposed superior to that on Red river, until it ascends to the prairie country, where the lands on both rivers are probably similar. About two hundred leagues up the Arkansa is an interesting place, called the Salt prairie. There is a considerable fork of the river there, and a kind of savanna where the salt water is continually oozing out, and spreading over the surface of a plain. During the dry summer season the salt may be raked up in large heaps; a natural crust of a hand breadth in thickness is formed at this season. This place is not often frequented, on account of the danger from the Osage Indians; much less dare the white hunters venture to ascend higher, where it is generally believed that silver is to be found. It is further said, that high up the Arkansa river salt is found in form of a solid rock, and may be dug out with the crow-bar. The waters of the Arkansa, like those of Red river, are not potable during the dry season, being both charged highly with a reddish earth or mould, and extremely brackish. This inconvenience is not greatly felt upon the Arkansa, where springs and brooks of fresh water frequent: the Red river is understood not to be so highly favoured. Every account seems to prove that immense natural magazines of salt must exist in the great chain of mountains to the westward; as all the rivers in the summer season, which flow from them, are strongly impregnated with that mineral, and are only rendered palatable after receiving the numerous streams of fresh water which join them in their course. The great western prairies, besides the herds of wild cattle (bison, commonly called buffaloe), are also stocked with vast numbers of wild goat (not resembling the domestic goat), extremely swift footed. As the description given of this goat is not perfect, it may from its swiftness prove

to be the antelope, or it possibly may be a goat which has escaped from the Spanish settlements of New Mexico. A Canadian, who had been much with the Indians to the westward, speaks of a wool-bearing animal, larger than a sheep, the wool much mixed with hair, which he had seen in large flocks. He pretends also to have seen a unicorn, the single horn of which, he says, rises out of the forehead and curls back, conveying the idea of the fossil cornu ammonis. This man says, he has travelled beyond the great dividing ridge so far as to have seen a large river flowing to the westward. The great dividing mountain is so lofty, that it requires two days to ascend from the base to its top; other ranges of inferior mountains lie before and behind it; they are all rocky and sandy. Large lakes and vallies lie between the mountains. Some of the lakes are so large as to contain considerable islands, and rivers flow from some of them. Great numbers of fossil bones, of very large dimensions, are seen among the mountains, which the Canadian supposes to be the elephant. He does not pretend to have seen any of the precious metals, but has seen a mineral which he supposes might yield copper. From the top of the high mountain the view is bounded by a curve as upon the ocean, and extends over the most beautiful prairies, which seem to be unbounded, particularly towards the east. The finest of the lands he has seen are on the Missouri; no other can compare in richness and fertility with them. This Canadian, as well as Le Fevre, speak of the Osages of the tribe of Whitehairs, as lawless and unprincipled; and the other Indian tribes hold them in abhorrence as a barbarous and uncivilized race; and the different nations who hunt in their neighbourhood, have their concerting plans for their destruction. On the morning of the 11th, the party passed the petit ecor a Fabri. The osier, which grows on the beaches above, is not seen below upon this river; and here they began to meet with the small tree called "charnier," which grows only on the water side, and is met with all the way down the Washita. The latitude of $33^{\circ} 40'$ seems the northern boundary of the one, and the southern boundary of the other of those vegetables. Having noticed the limit set to the long moss (Telandria), on the ascent of the river, in latitude 33° , Mr. Dunbar made inquiry of Mr. Le Fevre, as to its existence on the Arkansa settlement, which is known to lie in about the same parallel; he said, that its growth is limited about ten miles south of the settlement, and that as remarkably as if a line had been drawn east and west for the purpose, as it ceases all at once, and not by degrees. Hence it appears, that nature has marked with a distinguishing feature the line established by congress, between the Orleans and Louisiana territo-

ries. The cypress is not found on the Washita higher than 34 degrees of north latitude.

In ascending the river, they found their rate of going to exceed that of the current about six miles and a half in twenty-four hours ; and that on the 12th they had passed the apex of the tide or wave, occasioned by the fresh, and were descending along an inclined plane: as they encamped at night, they found themselves in deeper water the next morning, and on a more elevated part of the inclined plane than they had been in the preceding evening, from the progress of the apex of the tide during their repose.

At noon, on the 16th, they reached the post of the Washita.

Mr. Dunbar being anxious to reach the Natchez as early as possible, and being unable to procure horses at the post, took a canoe with one soldier and his own domestic, to push down to the Catahoola, from whence to Concord there is a road of thirty miles across the low grounds. He set off early on the morning of the 20th, and at night reached the settlement of an old hunter, with whom he had conversed on his way up the river. This man informed him, that at the place called the Mine, on the Little Missouri, there is a smoke which ascends perpetually from a particular place, and that the vapour is sometimes insupportable. The river, or a branch of it, passes over a bed of mineral, which from the description given is, no doubt, martial pyrites. In a creek, or branch of the Fourche a' Luke*, there is found on the beaches and in the cliffs a great number of globular bodies, some as large, or larger, than a man's head, which, when broken, exhibit the appearance of gold, silver, and precious stones, most probably pyrites and crystalized spar. And at the Fourche des Glaisses a' Paul (higher up the river than Fourche a' Luke), near the river there is a cliff full of hexagonal prisms, terminated by pyramids, which appear to grow out of the rock: they are from six to eight inches in length, and some of them are an inch in diameter. There are beds of pyrites found in several small creeks communicating with the Washita, but it appears that the mineral indications are greatest on the Little Missouri, because, as before noted, some of the hunters actually worked on them, and sent a parcel of the ore to New Orleans. It is the belief here, that the mineral contains precious metal, but that the Spanish government did not choose a mine should be opened so near to the British settlements. An express prohibition was issued against working these mines.

* Three leagues above Ellis's camp.

At this place, Mr. Dunbar obtained one or two slips of the "bois de arc" (bow wood, or yellow wood), from the Missouri. The fruit which had fallen before maturity, lay upon the ground. Some were of the size of a small orange, with a rind full of tubercles; the colour, though it appeared faded, still retained a resemblance to pale gold.

The tree in its native soil, when laden with its golden fruit (nearly as large as the egg of an ostrich), presents the most splendid appearance; its foliage is of a deep green, resembling the varnished leaf of the orange tree, and, upon the whole, no forest tree can compare with it in ornamental grandeur. The bark of the young tree resembles, in texture, the dog-wood bark. The appearance of the wood recommends it for trial as an article which may yield a yellow dye. It is deciduous; the branches are numerous, and full of short thorns or prickles, which seem to point it out as proper for hedges or live fences. This tree is known to exist near the Nakitosh (perhaps in latitude 32°), and upon the river Arkansa, high up (perhaps in latitude 36°); it is therefore probable that it may thrive from latitude 38° to 40° , and will be a great acquisition to the United States if it possess no other merit than that of being ornamental.

In descending the river, both Mr. Dunbar and Dr. Hunter searched for the place said to yield gypsum, or plaister of Paris, but failed. The former gentleman states, that he has no doubt of its existence, having noted two places where it has been found; one of which is the first hill, or high land which touches the river on the west, above the bayau Calumet and the other is the second high land on the same side. As these are two points of the same continued ridge, it is probable that an immense body of gypsum will be found in the bowels of the hills where they meet, and perhaps extending far beyond them.

On the evening of the 22d Mr. Dunbar arrived at the Catahoola, where a Frenchman of the name of Hebrard, who keeps the ferry across Black river, is settled. Here the road from the Washita forks, one branch of it leading to the settlement on Red river, and the other up to the post on the Washita. The proprietor of this place has been a hunter and a great traveller up the Washita and into the western country: he confirms generally the accounts received from others. It appears, from what they say, that in the neighbourhood of the hot springs, but higher up, among the mountains, and upon the Little Missouri, during the summer season, explosions are very frequently heard, proceeding from under the ground: and not rarely a curious phenomenon is

seen, which is termed the blowing of the mountains ; it is confined elastic gas forcing a passage through the side or top of a hill, driving before it a great quantity of earth and mineral matter. During the winter season the explosions and blowing of the mountains entirely cease, from whence we may conclude, that the cause is comparatively superficial, being brought into action by the increased heat of the more direct rays of the summer sun.

The confluence of the Washita, Catahoola, and Tenza, is an interesting place. The last of these communicates with the Mississippi low lands, by the intervention of other creeks and lakes, and by one in particular, called "Bayau d'Argent," which empties into the Mississippi, about fourteen miles above Natchez. During high water there is a navigation for batteaux of any burthen along the bayau. A large lake, called St. John's lake, occupies a considerable part of the passage between the Mississippi and the Tenza ; it is in a horse-shoe form, and has, at some former period, been the bed of the Mississippi : the nearest part of it is about one mile removed from the river at the present time. This lake, possessing elevated banks, similar to those of the river, has been lately occupied and improved. The Catahoola bayau is the third navigable stream : during the time of the inundation there is an excellent communication by the lake of that name, and from thence, by large creeks, to the Red river. The country around the point of union of these three rivers is altogether alluvial, but the place of Mr. Hebrard's residence is no longer subject to inundation. There is no doubt, that as the country augments in population and riches, this place will become the site of a commercial inland town, which will keep pace with the progress and prosperity of the country. One of the Indian mounds here is of considerable elevation, with a species of rampart surrounding a large space, which was, no doubt, the position of a fortified town.

While here, Mr. Dunbar met with an American who pretended to have been up the Arkansa river three hundred leagues. The navigation of this river he says is good to that distance, for boats drawing three or four feet water. Implicit faith, perhaps, ought not to be given to his relation, respecting the quantity of silver he pretends to have collected there. He says he has found silver on the Washita, thirty leagues above the hot springs, so rich, that three pounds of it yielded one pound of silver, and that this was found in a cave. He asserts, also, that the ore of the mine upon the little Missouri, was carried to Kentucky, by a person of the name of Boon, where it was found to yield largely in silver. This man says he has been up the Red river

likewise, and that there is a great rapid just below the raft, or natural bridge, and several others above it; that the Caddo nation is about fifty leagues above the raft, and near to their village commences the country of the great prairies, which extend four or five hundred miles to the west of the sand mountains, as they are termed. These great plains reach far beyond the Red river to the south, and northward over the Arkansa river, and among the numerous branches of the Missouri. He confirms the account of the beauty and fertility of the western country.

On the morning of the 25th Mr. Dunbar set out, on horseback, from the Catahoola to Natchez. The rain which had fallen on the preceding days rendered the roads wet and muddy, and it was two in the afternoon before he reached the Bayau Crocodile, which is considered half way between the Black river and the Mississippi. It is one of the numerous creeks in the low grounds which assist in venting the waters of the inundation. On the margins of the water courses the lands are highest, and produce canes; they fall off, in the rear, into cypress swamps and lakes. The waters of the Mississippi were rising, and it was with some difficulty that they reached a house near Concord that evening. This settlement was begun since the cession of Louisiana to the United States, by citizens of the Mississippi territory, who have established their residence altogether upon newly acquired lands, taken up under the authority of the Spanish commandant, and have gone to the expense of improvement either in the names of themselves or others, before the 20th of December, 1803, hoping thereby to hold their new possessions under the sanction of the law.

Exclusive of the few actual residents on the banks of the Mississippi, there are two very handsome lakes in the interior, on the banks of which similar settlements have been made. He crossed at the ferry, and at mid-day of the 26th reached his own house.

Dr. Hunter and the remainder of the party, followed Mr. Dunbar, down the Washita, with the boat in which they ascended the river, and, ascending the Mississippi, reached St. Catharine's landing on the morning of the 31st January, 1805.

METEOROLOGICAL Observations made by Mr. Dunbar and Doctor Hunter, in their Voyage up the Red and Washita Rivers, in the Year 1864.

Time of observ.		THERMOMETER.				Wind.	Weather and Meteorological Phenomena, &c.
Day of the month.		Surf. River.	3 P.M.	5 P.M.	In River Water.		
1864.							
October	20	40°	86°	—	73°	—	—
—	21	60	83	—	—	S. S. E.	Light clouds.
—	22	65	79	—	—	S. S. E.	Cloudy.
—	23	67	75	—	—	—	—
—	24	54	68	—	71	S. S.W.	Cloudy in morn. evening clear
—	25	49	60	—	68	North.	Cloudy morn; clear evening.
—	26	40	70	—	65	S. W.	Light clouds.
—	27	32	73	—	64	North.	Clear frost, fog on river; clear above.
—	28	49	75	56	65	—	—
—	29	41	85	62	62	sw, sw.	Fog on river.
—	30	47	85	60	60	w. N. W.	Fog on river; clear above.
—	31	44	84	—	62	N S W.	Ditto, ditto
November	1	48	85	64	62	—	Calm and clear above.
—	2	48	84	73	62	S. S. E.	—
—	3	52	86	72	64	—	Some light clouds.
—	4	54	83	65	64	—	Clear.
—	5	52	68	53	62	S. W.	Heavy fog and damp air.
—	6	45	79	—	64	West.	Heavy fog.
—	7	52	80	67	64	—	Clear. Lat. 32° 29' N.
—	8	53	61	56	58	—	Cloudy. A disagreeable damp day.
—	9	42	72	—	61	—	Cloudy, damp and cold.
—	10	40	72	54	58	—	Clear and calm.
—	11	24	—	—	53	—	Do. ditto
—	12	36	—	54	54	—	Clear & calm; cloudy evening
—	13	53	65	62	55	South.	Fog on river; calm evening; cloudy
—	14	44	58	44	55	—	Clear and calm.
—	15	38	60	53	54	—	Clear and calm.
—	16	38	51	42	54	North.	Morning calm; afternoon cloudy, damp & disagreeable.
—	17	40	51	54	54	—	Calm, fog on riv. lat. 35° 15' N.
—	18	32	—	57	52	—	Severe morning; cloudy even.
—	19	54	67	52	54	—	Cloudy; calm.
—	20	59	62	54	54	—	Cloudy; calm.
—	21	43	72	55	54	—	Calm; a little fog.
—	22	49	68	—	—	—	—
—	23	48	7	54	54	—	Light clouds; calm.
—	24	48	72	59	54	—	Light clouds; calm.
—	25	—	—	—	—	—	Rainy.
—	26	50	68	62	57	—	Clear.
—	27	54	71	66	58	—	Cloudy.
—	28	68	78	73	60	—	Cloudy; calm.
—	29	72	75	62	62	South.	Cloudy & strong wind; rain.
—	30	52	57	—	60	—	A. M. clear at noon. Cloudy and calm.

Time of observ.		THERMOMETER.				Wind.	Weather and Meteorological Phenomena, &c.
Day of the month	Sun's Rise.	3 P M	8 P M	In River Water.			
1804.							
December	1	32°	58°	35°	54°	—	Clear and calm.
—	2	30	59	38	50	—	Clear and calm.
—	3	38	59	44	48	—	Clear and calm.
—	4	36	50	36	48	—	Clear and calm.
—	5	23	56	38	47	—	Serene and calm.
—	6	45	67	56	48	s. w.	Cloudy; light wind.
—	7	38	50	24	47	N. w.	Cloudy, Lat. 34° 27' 31"
—	8	10	47	—	43	N. w.	High wind; very serene.
—	9	19	42	28	41	N. w.	Very serene; wind moderate.
—	10	26	50	28	—	N. w.	Very serene; wind moderate. Lat. 34° 31' N. at Hot Springs.
—	11	48	59	50	—	s. e.	Cloudy, damp, & penetrating.
—	12	36	44	32	—	North.	Cloudy, damp, & disagreeable
—	13	26	40	30	—	North.	Cloudy, dark, & disagreeable.
—	14	28	40	32	—	N. e.	Cloudy, dark, and cold, with sleet.
—	15	26	32	30	—	N. w.	Wind strong; cloudy.
—	16	21	32	22	—	N. w.	Wind moderate.
—	17	26	42	28	—	N. w.	Wind moderate; bright morn; fine day; rain in the night.
—	18	34	36	32	—	North.	Cold and damp; dark and cloudy; rain at noon; hail and snow in evening.
—	19	30	30	23	—	West.	Snowing. Ground covered 4 inches with snow.
—	20	30	36	32	—	West.	Light driving clouds from N W
—	21	32	—	31	—	North.	Cloudy and damp; snow on ground.
—	22	31	36	34	—	North.	Dark and cloudy; rain early in the day; snow in evening.
—	23	30	40	33	—	N. w.	Clouds begin to dissipate.
—	24	32	45	34	—	N. w.	Wind moderate.
—	25	34	50	44	—	N. w.	Cloudy.
—	26	34	50	34	—	N. w.	Clear and windy.
—	27	26	45	38	—	N. e.	Clear and cold.
—	28	34	32	30	—	s. w.	Cloudy in morning; snow in afternoon.
—	29	25	—	24	—	N. w.	Strong wind; stormy afternoon; calm night.
—	30	9	38	21	36	N. w.	High wind; last night very cold.
—	31	29	32	—	36	s. e.	Snow. Lat 34° 28' N.
1805.							
January	1	26	32	18	—	—	Snow.
—	2	6	45	32	32	—	Calm.
—	3	22	48	30	34	N. w.	Wind moderate.
—	4	22	50	32	36	—	—
—	5	22	55	28	36	N. w. s. e.	Clear.
—	6	28	50	44	38	—	Cloudy and a little rain.
—	7	64	78	38	44	—	Night cloudy, cold & moist.
—	8	28	37	37	46	—	Rain in evening and night.

Time of observ.		THERMOMETER.				Wind.	Weather and Meteorological Phenomena, &c.
Day of the month		Sun's Rise.	3 P M.	4 P M.	In River Water.		
1805.							
January	9	42°	56°	24°	44°	North.	Dark, cloudy and cold, with hail.
—	10	23	32	19	42	North.	Cold and damp. Lat. 34° N.
—	11	11	32	26	39	—	Fine morning, and very cold
—	12	20	43	30	40	—	The air damp and penetrating.
—	13	27	53	30	40	N. E.	Morning fine and dry; evening moist.
—	14	23	53	32	40	N. W.	Light wind; atmosphere dry.
—	15	30	61	43	40	S. E.	Cloudy; wind light.
—	16	36	65	60	41	—	At Fort Miro. Lat. 32° 30' N.
—	17	60	—	—	44	S. W.	Cloudy.
—	18	—	—	—	—	—	—
—	19	—	58	50	43	S. W.	Clear.
—	20	56	51	40	43	—	Cloudy, and drizzly rain.
—	21	21	36	26	40	East.	Wind variable.
—	22	21	48	40	39	N. E.	Weather raw and cold.
—	23	49	64	54	42	S. E.	Clouds and drizzly raw.
—	24	55	50	45	43	—	Rain. Lat. 31° 37' N.
—	25	36	40	40	40	—	Windy; cold and raw.
—	26	32	36	33	42	N. E.	Stormy and snow.
—	27	24	50	32	44	East.	Lat. 31° N.
—	28	26	56	40	34	North.	On Mississippi river; clear and moderate.
—	29	34	56	—	33	North.	Fine weather.
—	30	36	55	53	34	N. E.	Raw and cloudy.
—	31	56	—	—	38	S. E.	Cloudy and moderate.

END OF LEWIS AND CLARKE'S TRAVELS.

