

AMERICAN JOURNEYS COLLECTION



A Journey in North America,
Containing a Survey of the
Mississippi, Ohio, Missouri
and Other Affluing Rivers

VOLUME 1

by Georges-Henri-Victor Collot

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*Lyman C. Draper -
1849.*

A JOURNEY IN NORTH AMERICA,

CONTAINING

A SURVEY OF THE COUNTRIES WATERED BY THE MISSISSIPPI, OHIO, MISSOURI,
AND OTHER AFFLUING RIVERS;
WITH EXACT OBSERVATIONS ON THE COURSE AND SOUNDINGS OF THESE
RIVERS; AND ON THE TOWNS, VILLAGES, HAMLETS AND FARMS
OF THAT PART OF THE NEW-WORLD;
FOLLOWED BY PHILOSOPHICAL, POLITICAL, MILITARY AND COMMERCIAL
REMARKS
AND BY A PROJECTED LINE OF FRONTIERS AND GENERAL LIMITS,

Illustrated

BY 36 MAPS, PLANS, VIEWS AND DIVERS CUTS

BY VICTOR COLLOT,

Late General in the French service, and Governor of Guadeloupe.

PARIS,

PRINTED FOR ARTHUS BERTRAND, BOOKSELLER,

N° 23, RUE HAUTEFEUILLE.

1826.



PREFACE

OF THE EDITOR.

THE author of the work we offer at present to the Public served during the first American war in the staff of the French army, under the command of Marshal Rochambeau.

Though still young at that time, he reflected on the high importance of geographical inquiries respecting that part of the American continent to the trade and policy of the European Powers. He felt a strong wish to undertake those inquiries which he would immediately have made, had not particular circumstances opposed his purpose.

PREFACE OF THE EDITOR.

Named Governor of Guadeloupe, General Collot administer'd that colony until its capture by the English. He then fell himself in their hands, and was sent to the United States.

Scarcely had he arrived in Philadelphia, when he was arrested at the suit of a merchant of that city, for having, during his administration at Guadeloupe, confirmed the sentence of the *Conseil des prises*, condemning a vessel which belonged to the American merchant. He was forced to give bail, and to promise on his honor to remain in the country, in case his presence might be necessary before the courts of law.

To beguile the hardship of his position, M. Collot wished to employ the time of his banishment in a manner useful to his country, and in consequence he resumed his former project of travelling in the interior of North America.

Adjutant general Warin, an officer of high merit, who had served under his orders and ac-

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accompanied him to the United States, joined him in his enterprise. The Work we publish is the result of their labours, which cost the infortunate companion of the General his life.

As soon as general Collot returned to France, he set down to digest the notes he had taken. The Work was written and printed in French and in English, a translation in the latter language having been carefully made by an Englishman, under the eyes of the General himself. The maps and views, 38 in number, were engraved when death surprized the author.

The whole edition has lately been sold by the notary of the Estate, and the bookseller who purchased it reserved no more than 300 copies in French, and 100 in English. All the rest have been destroyed in a view to give more value to this important Work.

The Editor cannot help acknowledging that some things are altered in America since the time

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this Journey was written; but whatever concerns the topography of this country and the course of the rivers has remained the same. It is that which the editor flatters himself will long give interest to the present work, and render valuable in the eyes of the Public the observations of so judicious a Traveller.

INTRODUCTION.



M. ADET, Minister Plenipotentiary from France to the United States, having proposed to me to furnish him with a minute detail of the political, commercial, and military state of the western part of that continent, I determined to undertake an expedition, which might procure to the French Republic a portion at least of such information, as the Minister was desirous of obtaining. I did not deceive myself respecting the difficulties, and even the dangers, of the journey; but at a distance from the theatre where I might have encountered perils as a soldier in the service of my country, I found pleasure in undertaking a task, which, though laborious, was useful, and expressed my warmest gratitude to the minister for the choice, which afforded me an opportunity so auspicious to my wishes.

It must be acknowledged, that England holds a great superiority over us in every thing which relates to the

discovery of remote countries. In England, the government, the learned societies, and private associations, are continually employed in sending out, at their own expense, well-informed men, for the purpose of increasing the mass of this kind of knowledge, which is peculiar to that nation. The natural propensity of the English for distant expeditions furnishes the government and those societies with ample means of accomplishing this honorable and important purpose; and the extension and prodigious activity of English commerce gives an extraordinary facility to such enterprises. Almost the whole of the globe has been visited within the last twenty years by the English; whilst under the old French government, the nation, buried in apathy, remained an idle spectator of the toils of English travellers. The nature of that government, the ideas and habits which resulted from its administration, left in a state of supineness that industry and activity which it was so easy to animate; and we obtained from translations only that knowledge which English travellers gathered at the very source. Our shameful indifference concurred, in this manner, to foster in the mind of the English the persuasion of their superiority over us; a sentiment which they have not failed to propagate, wherever they have acquired any influence.

Among the various countries concerning which the old French government were interested in gaining the most certain information, North America holds the first rank. To have contributed so powerfully to the independence of the United States, and to have torn them from England, was undoubtedly a great enterprise; but a knowledge of their resources, of the means of making them contribute to our own advantage, of their political and geographical situation, as well as more detailed information of the countries by which they were surrounded, was necessary in order to make ourselves intimately acquainted with the means of assisting the United States, if they remained our allies, or of menacing their tranquillity if they joined our enemies. America seems destined to act a brilliant part, some years hence, in the political balance of Europe. Our enemies and friends possess immense territories in these regions; and it is only by topographical knowledge that governments can be enlightened with respect to concessions, conventions, and demands, which, though apparently indifferent at present, may, nevertheless, at a future period, determine the pre-eminence or inferiority of our nation, of our allies, or of our enemies, in that interesting part of the world. The English, in consequence of their taste for travelling, the ambitious views of their government, and their extend-

ed commerce, particularly in the fur trade, have enriched themselves with a considerable portion of essential information, which had hitherto been concealed. Such, for instance, was the journey of Mackenzie, in 1794, when he penetrated to the Pacific Ocean across the western deserts; whilst a few memorials of Jesuits, or other missionaries, written more than sixty years since, are the only monuments which France can produce of its labors and its researches into Northern America. Let us not, however, admit a doubt that France, awakened to the spirit of liberty, will, by a natural consequence, be animated also to every undertaking which can contribute to the happiness and glory of the nation. Let us cherish the persuasion that the government, anxious to take advantage of that intelligence, activity, and patriotism, which no other nation possesses in so eminent a degree, will cultivate this important branch of knowledge; and that France, which from an ardent love of liberty, has, by its courage and intrepidity, filled the whole world with the fame of its victories, will assume also the first rank in every department of science, of learning, and of enterprise, which can add to its prosperity, and contribute to the extension of its intellectual attainments.

In the account which I had to render of my mission, it appeared to me that the most simple mode was the best. I have therefore classed, in a regular manner, the different objects which I saw during a journey of ten months. I shall make no apologies for inaccuracies of style; I have no pretension to the character of a literary man, nor have I been in the habit of writing; but I can assert with confidence, that the most unwearied attention, the most persevering labors, have not been spared, in order to obtain every kind of information; and that, in the narrative I am about to offer, I have preserved the most scrupulous veracity. I should have considered myself as unworthy of being entrusted with so important a mission, had I on any occasion swerved from the rigor of truth.

PHILADELPHIA,
24th Ventose, 4th year of the French Republic,
One and Indivisible.

The Minister Plenipotentiary of the French Republic at the
United States, to the Citizen Victor Collot, General of
Brigade.

" CITIZEN,

" Considering your services as useful to the
" Republic, I inform you, that it is my intention to employ
" you in your quality of General of Brigade during the period
" of the mission which I purpose to confide to you, or until
" the Executive Directory has otherwise ordered."

PRELIMINARY DESCRIPTION;

OR SKETCH OF THE GENERAL OUTLINE OF NORTH AMERICA,
AND OF THE COUNTRY WHICH FORMS THE PLAIN OF
THE MISSISSIPI.



THE two great chains of mountains which bound and traverse the continent of America, and which are called the Alleghanies and the Cordeleras, are the continuation of those lofty heights, which, after traversing South America, form, one the isthmus of Panama, the other the chain of the Antilles. These mountains lose themselves at the north and east of North America; the Cordeleras at the point discovered by Mackenzie towards the sixty-first degree of northern latitude; the Alleghanies at Niagara, where the river St. Lawrence pierces its bed of granite, and forms the celebrated cataract which bears its name.

These are the only two chains of mountains in the continent of America, which, from their elevation, their nature, and their vast extent, can be classed under the

name of primitive mountains; the rest are only secondary, or of the third order, which, branching out in different directions, form lower ranges of hills or promontories.*

These two chains of mountains run nearly at equal distances; the one from the coasts of the Southern Ocean, the other from those of the Northern. The space, which separates those mountains in North America, is a vast plain, watered by the Mississippi, and by the rivers tributary to this stream; which may be distinguished by

* The following characteristics distinguish these two classes of mountains: the primitive mountains traverse a vast extent of country, without varying in their general direction; they never disappear, and are connected together, unless broken by great objects, such as the sea: the secondary mountains, on the contrary, occupy less space in the same track, extend themselves in various directions, and are either insulated, grouped, or scattered. When it happens that the primitive mountains are composed of several ranges, these ranges run always parallel to each other; unlike secondary mountains, which often form lines that are infinitely varied, and angles of different degrees. The summits of the primitive mountains are seldom or never covered with wood; and, when they are thus clothed, it is only by one kind, which is resinous wood, such as pines or cedars: the secondary mountains, on the contrary, are well covered from their summit to their base, and with wood of every kind. The primitive mountains are very unequal in their elevation, and are jagged at the tops; whilst the others are generally smooth, round, or flattened, and appear to the eye as if they were festooned or cylindrical. On the whole, it is the secondary mountains alone

the names of the waters of Mexico and the plain of the Mississippi.

The Alleghanies divide the waters of the Atlantic from those of the Mississippi; the Cordeleras, those of the Mississippi from the Pacific Ocean. The Mississippi may, therefore, be considered as the great artery of the northern continent of America; the rivers of which take their source, some at the east in the Alleghanies, the others at the west in the Cordeleras; and which, after traversing almost every temperate latitude, throw themselves into the gulf of Mexico, which forms the grand receptacle.

Independently of this general division of the waters, there are also important subdivisions, formed by secondary mountains, or elevated plains. The plateau, elevated plain*(A), one of the most remarkable, (See the map, No. I.)

which form the vallies, the undulations, the elevated plains, the falls, and the rapids. The difference in their substance is also striking. See on this subject, Kirwan, Ramond, Dolomieu, etc.

* This plateau, as far as respects military objects, is, perhaps, the first on the globe: it is a block of granite without mountains, commanding, on every part of its circumference, an immense distance; situated precisely on the extremity of the natural and probable frontier of the English, Spanish, and American possessions. Hitherto it is a region belonging to no state; but the power, into whose hands it falls, will incontestably possess the key of all the waters of this vast plain.

divides the waters of the river of St. Lawrence, of Hudson's Bay, and of the Mississippi, from those which throw themselves into the Pacific Ocean and the Icy Sea. This immense plain, which reaches from the twenty-ninth to the forty-first degree, (where are supposed to be the sources of the Missouri,) is covered with forests, natural meadows, lakes, rivers, streams, and falls of water.

The forests of this plain bear no resemblance to those of the northern and eastern parts of America, the greater part of which forests are thick and humid, impervious to the beams of the sun, and through which the air scarcely circulates. Those, on the contrary, which cover the lands watered by the Ohio, the Mississippi, the Red River; those of St. Francis, the Arkansas, of the Grand Osages, and all the western part of the Mississippi, are composed of lofty trees, clear, without brushwood, open to the sun, and to the free circulation of the air. It is observed, also, that the height, the size, and the quality of the wood, are very superior to that which grows towards the north and east.

Barren and gravelly veins of earth, called by the Canadians *pays de misère*, are sometimes found on elevated spots: this soil is thinly covered with a kind of brushwood, resembling young shoots of two years

growth. Such spots are not very frequent, and seldom occupy much space.

These immense forests are often intersected by natural meadows, the extent of which can scarcely be measured by the eye, and is sometimes so vast that they seem to blend with the horizon. There are two kinds of those meadows, that of the vallies and that of the heights. The meadows of the vallies are situated in low grounds, and on the banks of great rivers; the most extensive are those which line the borders of the great Osages, of the Arkansas, the Missouri, and the right side of the Mississippi, from the fall of St. Anthony to the mouth of the Missouri. The soil of the meadows of the vallies is chiefly formed of earth washed down from the hills, and is in general extremely fertile. These meadows are covered with medicinal plants and herbs of endless variety; some of these plants are nearly twenty feet high: these meadows are without trees; which, however, does not arise from the nature of the soil, since it is well known that, if planted, they would grow with extreme rapidity.

The meadows on the heights, particularly those to the north of the Missouri, are composed of a light and gravelly soil, impregnated often with metallic and sulphurous substances, brought down probably from the

Cordeleras. What leads to this conjecture is the observation, that the nearer you approach these mountains, the forests are more thinly scattered, the wood is clearer, the trees smaller, and the meadows on the heights more numerous, so that towards the Madane,* very few trees are seen.

These meadows are covered with herbs of smaller growth, and less abundant than those which grow in the vallies; they are also more aromatic. Sometimes they are intercepted by tufts of wood composed of small oaks, black and stunted, called by the Americans *post oak*. These meadows occupy a plain surface, but less extensive than the former.

On the right side of the Missouri, at the west or south west, there are meadows of so extraordinary a nature, that they belong to neither of the other classes. The soil through which run the rivers Plata and Qui court, is composed of a mass of pure marl, which is covered only by a coat of very fine sand, and on which scarcely any traces of vegetation are to be seen. This marl is easily diluted, if we may judge from the waters of those rivers, which are white as milk; a tint which they pre-

* An Indian nation dwelling on the Missouri.—See the Chart, and the chapter Missouri.

serve during the whole of their course, and which they communicate to the Missouri.

Towards the south-west, between the sources of the river of the Arkansas and those of the great Osages, the whole soil is sprinkled with a powder of efflorescent salt, which is continually penetrating across the pores of the earth, and which, from its extreme divisibility, is almost impalpable.* Here and there a small fine grass may be sometimes perceived starting through this dust, not unlike that which grows on our downs, but shorter. The mountains which border this valley are composed of a fossil salt, pure and hard as a rock. Their summits, on the northern side only, are covered with a brown and duskish crust, which the inclemency of the seasons appears to have imprinted: the opposite sides and the flanks of these mountains are white, and brilliant as chrystal. The waters of the river of the Arkansas, which in some places perforate veins of these pillars of salt, are impregnated with this mineral like those of the sea. At their source they are of the finest blue; and it is only after running some hundreds of miles that they grow turbid,

*It is probable that this efflorescent salt is a carbonate of potash, of a nature analogous to the natrum of Egypt, the result of that kind of decomposition of sea salt by clay, and which was discovered by M. Guyton Morveau.

take a yellowish tint, and become fit to drink; preserving, however, a brackish taste, till they fall in with the waters of the Mississippi.

This valley is filled with a multitude of animals, attracted by the salt: whole droves of every kind are seen peaceably roving, nor does it appear that the strongest take any advantage of their power over those which are weaker. Nature displays in this valley the most stupendous aspect of rude magnificence, the contemplation of which excites the most singular emotions.

These mountains are formed by pillars of salt heaped on each other: these pillars are pyramidical; some are scattered, others remain in groups, but all thrown together in such confusion that they seem to have been the sport of tempests. The variety of brown, black, and luminously white colors, the splendor of which is redoubled by the rays of the sun; the groups of animals embellished at a distance by the reflection of the light on the white and shining dust which covers this vast plain; the lowing of those savage herds, joined to the noise of the torrents which rush from the mountains; the desolating nakedness and total absence of all vegetation, as if nature had disdained in this region to clothe the earth; the turbid and tinted waters of the different rivers which rush along this valley, and, by the rapidity

of their course seem anxious to escape from abodes to which they can give neither life nor beauty; to these objects if we add the various optical illusions which take place, the effects of light and shade of the morning and evening, we may form some idea of the changing scenes which these mountains present—scenes which it is impossible to describe, but which leave on the mind impressions of melancholy and sublimity that can never be effaced. These mountains are called by the Indians *Enchanted Mountains*, and by the Canadians *Shining Mountains*. A chain of heights branches off from these masses of salt, and after having changed its nature, takes its direction towards the South, crosses a part of New Mexico and New Leon, and separates the waters of the river Mississippi from those which throw themselves into the river Rio Bravo.*

Nature in the plains of the Mississippi has not been less lavish in the formation of lakes than in that of meadows and forests; their number and extent are prodigious; they are also extremely dissimilar. The lakes of the plains and the salt lakes have features that are entirely distinct.

* Those heights are the natural limits which will one day separate Louisiana from New Mexico.

The lakes of the plains are found in sunken hills, or in vallies surrounded by secondary mountains, in which the waters are collected, till rising to a certain height they open a passage on the side of those which are the least elevated, and from thence generally form streams or rivers, of which these lakes may be considered as the reservoirs. The disorder which prevails in the distribution of the secondary mountains is such, that they are often linked together, often insulated, and sometimes form a continued chain of lakes. Such are the lakes Superior, Michigan, Huron, Erie, and Ontario; which lakes, after communicating their waters to each other by natural canals or straits, give birth to the river St. Lawrence. The Slave and Athabasca Lakes mingle their waters and form Slave River, which loses itself in the Icy Sea.

Bear Lake alone forms the primitive source of the Mississippi, which is augmented at some distance by the waters which flow from several other small lakes that are adjoining, but distinct from each other.

The Western river, lately discovered, and which throws itself into the Southern Ocean, towards the forty-fourth degree of latitude, takes its rise also from lake Organ alone.

The communication of lake Superior with Rainy lake* is partly formed by a cluster of small lakes strung, as it were, together like beads; sometimes connected, and sometimes at small distances from each other.

But though the lakes seem dispersed in this plain, their common centre is the Plateau, or elevated plain (A), whence they all take their rise. It is from this centre that they pursue their different directions to the north, the south, the east, and west; and, after forming internal navigations which have no parallel, communicate with the Icy Sea, Hudson's Bay, the gulf of St. Lawrence, and the gulf of Mexico.‡

Whether these lakes were the work of the sea, when parts of the continent were successively buried under its waters; or whether they were produced by some extraordinary commotion of the earth, which formed abysses of elevated plains; it is certain, that one of the indispen-

* See the chapter on the Fur Trade, at the end of this book.

‡ The communication of these waters with the Icy Sea is formed by the lakes Winnipeg, Athabasca, the Slave lake, and Slave river; with the gulf of St. Lawrence, by the lakes Superior, Huron, Erie, Ontario, and the river St. Lawrence; with Hudson's Bay, by the rivers Severn, Nelson, and Churchill, which take their sources from the Slave lake and from the lake of Athabasca; and lastly with the gulf of Mexico, by the river Mississippi.

sable requisites for the preservation of these lakes in their present form, extent, and depth, is that the rivers which empty themselves into these reservoirs be pure and limpid; since were this not the case, they would soon be choaked up by the sand, or earth, brought down by the waters; it is, however, to be remarked, that their waters are clear, and that the rivers which flow into them are, from their very sources, of the same nature. From these observations it necessarily results, that the beds of these lakes are of rock or gravel, and that the soil of all the lands around them, as well as of the plateau (A), is composed of the same substances.

The salt lakes are generally found in the midst of alluvions, near coasts that are low and sandy, and in the proximity of the mouths of rivers which flow gently, and are subject to inundations. These waters, escaping by channels, or filtering through the sands, and not having sufficient force to overcome the obstacles which they meet from the sea-breakers, flow back and form inland basins.

When the current of these rivers is very rapid, the breakers give rise only to bars;* but if, on the contrary,

* As may be seen at the chief outlet of the Mississippi, of the Amazons, and the Oronooko.

the current be slow, flowing from small branches of rivers, then the sea, breaking continually on these bars, and adding new matter, at length forms banks, which dividing from the sea the waters that its waves have driven back, leave a greater or less volume between the banks and the old ground. It is in this manner that the lakes Borgnes, Barataria, Maurepas, Pontchartrain, and all small lakes in general, are formed.

The lakes Borgnes, Maurepas, and Pontchartrain, which intermingle their waters, are formed by the current of the river Amit, and by a small branch of the Mississippi; but the waters of the Mississippi flow only in times of inundation, and when a part escapes by the channel of Ibberville.*

The waters of the river Amit communicate the whole year with those of the lakes; the Mississippi only for three months; those of the Amit are clear; the waters of the Mississippi, on the contrary, are muddy. When this river mingles, the lake becomes muddy also; but when it subsides, the lake regains its limpidity. Were there not this difference between the waters of the Mississippi and the river Amit, which last is employed to clear away in twelve months what the former has deposited during

* See the description of this river.

three, these lakes would at length be choaked up. It is, nevertheless, observable, that they diminish insensibly in depth, and form every year new bays and new banks, which render the navigation uncertain and difficult.

The lake Barataria, which is insulated and formed only by the waters of the Mississippi when they are periodically introduced by the forks of the Chetimacha, has lost more than a third of its diameter, and at least half its depth. It is only from this circumstance of the three months inundation that it remains still a lake, and that it is not already become a morass.

The bed of those lakes is mud, and the soil which surrounds them is commonly sandy or marshy; in comparing, therefore, the opposite qualities of the lakes of the plains and salt lakes, we find that the first are situated near the sources of rivers, and the latter near their mouths; that the one serve as reservoirs to rivers, and the others only as sewers; that the waters of the lakes of plains are clear and limpid, and that those of salt lakes are almost always turbid; that the bed of salt lakes is mud, and the navigation often dangerous; that the bed of the lakes of plains is either rock or gravel, and the navigation always safe; upon the whole, that every thing concurs to the preservation of the one, and the destruction of the other.

From the disparity between these two kinds of lakes, the following consequences result:—That whatever undertakings may be formed to render the salt lakes of advantage to commerce and home navigation, either by means of artificial canals to connect their waters with those of rivers or the sea, or by other works to counteract the effect of depôts which are daily forming in a greater or less degree, such enterprises can have only a momentary success, which will turn sooner or later to the disgrace of those who shall have formed the plan, and the detriment of those who furnish the costs; whilst, on the contrary, if views of public utility were turned towards the lakes of the plains, by plans well combined and wisely directed, nothing could prevent the governments which undertake such enterprises from reaping the most solid advantages, as well in military as commercial points of view. Some exceptions may no doubt be made to this general principle; but if any such exist, they are rare, and we may be assured in such instances that, strictly speaking, the premises are not the same.

No rivers in any part of Europe are of so great an extent as those in America, where they frequently take their source in the Cordeleras, and empty their waters into the Atlantic² and where, excepting the narrow space which separates the Cordeleras from the Pacific Ocean,

they traverse the whole continent from west to east. In the elevation of these mountains, so superior to that of the Alleghanies, and in their geographical situation, we must look for the causes of these mighty rivers; since the prodigious height of these mountains make the land incline necessarily towards the east. If we have formed a just idea of the north western coast from the different descriptions which have been given us,* and the well-known direction of the Cordeleras, running always parallel with the coast at the distance of one hundred and sixty leagues, we may attribute to the same cause our persuasion, that there can be no great rivers which throw their waters into the Pacific Ocean, since such rivers must necessarily pierce through these mountains. The course of the most extensive rivers on this coast, so long as their nature remains the same, cannot be more than the distance which exists between the Cordeleras and the Pacific Ocean. All those vast openings, therefore,

* In the description which has lately been published in the journals of Legeen and Vancouver, this coast is represented as extremely high and perpendicular, having always a great depth of water, often masked by groups of great trees well covered with wood, and the land behind these coasts rising gradually till the horizon is bounded by a long chain of moun-

seen along the coast by Lapeyrouse and other celebrated navigators, and which seem to have left doubts on this subject, are no other than the entrance of bays, roads, or ports, formed by the waters of the sea, and sheltered by the clusters of wooded islands, with which this coast is lined, and which receive, like all other bays or ports that are known, rivers of the second order. The river lately discovered by Mr. Mackenzie, and running northwest, does not destroy this opinion, because we already know that it takes its source only in the Yellow Mountain, and that consequently it can have but a very limited course: we also know that its course is interrupted by a multitude of rapids, like those of the Slave and Coppermine rivers. It must be observed too, that the coast may, perhaps, change; and it is even probable, that after passing the fiftieth degree of latitude, it flattens, and that the Cordeleras, varying their direction, incline more towards the east, become less connected, and form groups, like the Alleghanies at Niagara, after passing the forty-third degree. Upon the whole, we must again repeat that those rivers running to the west and the north, cannot have their point of departure more distant than the elevated plain (A), which we have already described as the divisionary point marked out by nature in North America for the distribution of its waters, being its most elevated

spot, and in which plain the rivers necessarily take their source.

But independently of the consideration that the extent of these rivers is comparatively limited with that of the great rivers coming from the west,* the navigation of the former can never be of any great utility, since it is easy to foresee that their beds must be intercepted by falls and rapids, as their waters cannot penetrate to the Pacific Ocean, without piercing some scattered branches of the Cordeleras or promontories; in the same manner as the waters which throw themselves into the Atlantic, from the Floridas to the river St. Lawrence, are forced to pierce the Alleghanies.

The rivers situated on the west of the Mississippi alone traverse immense spaces with uninterrupted course, their waters having none of the great obstacles of nature to encounter; since on the one side they escape from the Cordeleras, and, by throwing themselves into the gulf of Mexico, avoid on the other the Alleghanies, which, as

* From White Bear Lake, where the Mississippi takes its source, to the mouth of this river, is four thousand miles, taking in all its bendings. The Missouri throws itself into the Mississippi at about two thousand miles distance from the mouth of this river, and two thousand five hundred miles have already been explored without meeting either falls or rapids; which makes four thousand five hundred miles already known.

we have already observed, have here ceased following the coast, to form the chain of the Antilles.

The difference which is observable between the rivers coming from the west, the waters of which empty themselves into the gulf of Mexico; and those which in North America throw themselves into the Atlantic, in which there are neither falls nor rapids,* whilst the streams to the east of the Mississippi are filled with both: the immense plain which these waters traverse without any other obstacles than secondary mountains or hills, which they perforate or divide, and of which they are continually diminishing the mass: the soil of sand or clay, which they alternately wash and dissolve; the rapidity of their currents, compared with that of the rivers on the east, interrupted either by falls or rapids; the wrecks of sand, mud, and wood, which the western floods precipitate towards the sea in the season of their inundations, which are so extended and so frequent: the quantity of alluvions§

* As these rivers are interrupted by neither falls nor rapids, except towards their sources, they have very swift currents; notwithstanding this favorable circumstance for the speedy emptying of the waters in the season of inundations, they rise in some places an hundred feet; what would be the effect if these rivers were as smooth as those of the east?

§ In no other part are alluvions found so considerable and frequent as those which are formed by the rivers of the east, At the mouths of the

that are found at the mouth of all these great rivers, which are the result of depôts accumulated every year towards the gulf, and thereby diminishing its basin: the salt lakes which are imperceptibly filling up, the void of which, left by the waters, is successively changed into morass, and afterwards into solid ground; the Allegany mountains, in short, which, instead of following the turn of the coast, suddenly break off to gain the point of the Floridas: all these circumstances combined are well calculated to excite

Mississippi and the Amazons there are some which extend from thirty to forty leagues. The reason is, that these rivers traverse a much greater space than any in Europe. In the rapidity of their course they wash away and dissolve different substances. These wrecks are carried down from one river to another, till they reach the sea. The heavy, sandy, and mineral parts sink to the bottom; but the calcarious and argillaceous earths mingling with the waters in their current, detach themselves as soon as the river becomes more tranquil, sometimes on one side, sometimes on the other, and form an alluvion, a bank, or an island, composed at first only of thick and moving particles;* but after a certain time, these alluvions, by the action of the sun, acquire consistency and solidity. Each inundation adds a new layer, till the alluvions attain such an elevation that the waters can no longer reach them. Plants, and at length trees, spread themselves over these new lands, where they grow and perish; and their destruction forms a vegetable crust upon the surface, of a richness and fertility unknown in the old world.

* See the description of these quicksands in the chapter on the Missouri.

doubts respecting the system so often published, but never clearly proved, that "the Antilles formerly made part of "the continent of America," and leave room, on the contrary, to conjecture that they may be tending to form that junction. The same doubts are applicable to the islands in the Southern Ocean, which may also become the foundations of other new continents. But I shall not here attempt the examination of the first of these questions, which is worthy of fixing the attention of the most celebrated geologists; my abode also in the Antilles during most stormy periods of the revolution, was too short to have admitted of such investigation. It is not in the midst of poignards that objects of this nature become fit subjects of meditation.*

* I was governor at Guadaloupe in 1795 and 1794, without money, without marine, without soldiers, and without laws.
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CHAPTER I.

Departure from Philadelphia.—Military and Topographical Description of the Alleghanies.—Defiles or Gaps.—Observation on the Insurrection of 1794.

ON the twenty-first of March, 1796, Adjutant-General Warin and myself left Philadelphia. After fourteen days march, and halting twice, we reached a new establishment called M'Kees's Port, situated on the Monongahela. Several reasons decided us to take this route in preference to the road which leads directly by Pittsburgh. We were desirous of acquiring a detailed knowledge of the river Monongahela, which we considered as one of the sources of the Ohio; and we had been informed in our route, that we should find no boat at Pittsburgh fit for our voyage, since it is only on the Monongahela that they are built; and also that we should much more easily equip ourselves on this river than on any other. We had reason

to be satisfied with this information, which if we had not followed, we should have been greatly retarded, and our expenses increased a third.

The road which leads from Philadelphia to Pittsburgh is too well known to render any long details necessary. The Alleghenies alone excited our attention, as they are destined, at some future period, to become the limits of the western states, and those of the Atlantic.

The Alleghenies, properly so called, are formed of many chains of mountains running parallel to each other, nearly from north east to south west, and are divided into secondary and primitive mountains. The secondary are the first which present themselves to the eye of the traveller, in coming from the coast; the distance of these mountains from the sea is from one hundred and sixty to one hundred and eighty and two hundred miles, but never more. This space of ground is called *flat* or *plain*, and forms, as it were, the glacis of the secondary mountains, extending as far as the ocean.

These mountains are composed of three principal and distinct ranges, running each in the same direction, and always parallel to each other at greater or less distances; leaving in their intervals small vallies, the most extensive of which is not more than eight or ten miles broad, and the narrowest from three to four. The denomination of

these mountains changes according to the States which they traverse. The two first ranges are not very lofty; the third is more elevated, but sinks often beneath the soil, and becomes again perceptible in North Carolina towards the thirty-fifth degree of latitude, where it is known under the name of the Blue Ridge. The secondary mountains are generally granitous, at least from Niagara to the Floridas.

The most remarkable of the different vallies which form these ranges is the third, that of Shenandoah; it takes its rise at Hudson's River, and is found the same in Georgia and the Floridas. This valley separates the secondary from the primitive mountains, and a part is watered by the river Shenandoah, which throws itself into the Potomac a little below Shepherd's-town. Its average breadth may be about twenty miles.

After crossing those different lines of vallies, and secondary mountains, we reached the primitive mountains or principal chain of that part of North America; this chain consists of different parallel ranges, called the Apalachian or Allegany mountains.

The first range of the Alleganies is called Northern or Blue Mountains; it is divided into different branches; in the west it is known under the name of Apalachian, in the north by that of Allegany.

The Alleghanies, properly so called, are covered with a kind of grindstone, which is found upon the Ohio, and as far as the country of the Illinois; this is the loftiest chain; several rivers spring from its sides, and it is the only chain that is not pierced by any river.

Next to the Alleghanies are three other distinct ranges of less elevation; these are Fadelings Hill, Laurel Hills, and Chesnut Ridge; this is the last range on the western side, and makes part of the primitive mountains. The distance from this mountain to the Ohio is only forty or forty-five miles; it is also at this point that the great division of the waters takes place, which run into the gulf of Mexico and the Atlantic Ocean; this mountain is nevertheless pierced by a few great rivers, which take their source in the Alleghanies.

After passing this last range, the nature of the soil evidently changes; it becomes more loamy, browner, less gravelly, and the vegetation is stronger than on the eastern side.

Independently of these mountains, there are vast elevated plains. One of considerable extent lies on the north of the whole range of these mountains, which takes up the interval between the sources of the Mohawk river and the Niagara; its direction is to the west.

From this elevated plain spring the Allegany, Susquehannah, and Mohawk rivers, whilst it divides the waters of these different rivers from those that run into the lakes Erie and Ontario. In this region the mountains entirely disappear, and are perceptible only on the other side of the Niagara.

As the greater part of the large rivers which traverse the Atlantic States, take their source in the primitive mountains, and run almost all from north-west to south-east, they are forced to pierce the secondary mountains at right angles, which forms scissures or defiles, called gaps. In the state of Pennsylvania there are three of these gaps, through which every thing passes which comes from the east and the centre, to reach the States in the west. The first is the most northerly at Cassady, on the Frankstown, (a branch of Juniata river) where all the roads meet that lead from Northumberland to the carrying-place at the sources of the Conomaugh river, the waters of which throw themselves into those of the Allegany, and from thence into the Ohio. The second is at Yellow Creek, through which lies the road which leads from Huntingdon to Bedford. The third is at Hartley's, at the passage made by the Juniata, and a little behind the point where meet all the roads coming from

the lower part of Pennsylvania, and which afterwards form only one great road as far as Bedford.

There is indeed a fourth, but this is situated at Cumberland, in the Potomac, very near the frontier line of Pennsylvania, and serves to convey whatever comes from Maryland and Virginia. These four defiles are, as we have already observed, breaches made by the waters, which have opened to themselves passages across the secondary mountains. The largest of these defiles is not more than one hundred and twenty fathoms from the foot of one cliff to another, comprehending the breadth of the river.*

The spaces between these defiles, from Cassady, on the left of this position, to Cumberland, on the right, are, during the length of sixty miles, crossed by no road; nor is it possible to construct any before an enemy, on account of the steepness of the mountains, and the masses of rocks with which they are covered. In order to cross the Alleghanies with any other troops than light infantry, these defiles must be forced.

Had the chiefs of the insurrection in 1794 been soldiers, or had they possessed any military knowledge of these mountains, they might, with the troops under their

* See the Chart of the Ohio.
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orders,* have blocked up the passage of the Alleghanies against the federal army, by seizing on these defiles, and stationing their principal force at Bedford. Pittsburgh became naturally their place of depôt; by this manœuvre they might for a long while have assured their subsistence; perhaps determined the inhabitants between the Alleghanies and the Susquehannah to take an active part in their resistance, and have embarrassed, for a considerable time, the federalists. Happily, this insurrection, which, had it been prolonged, would probably have caused an unnecessary effusion of blood, was speedily terminated; and I consider it as my duty to add, that from all the information which I could obtain during three weeks residence in this country, which was the real theatre of the insurrection, I am persuaded that the Minister Fauchet had no concern whatever in these disturbances; although the enemies of France have been eager to throw on him an ample share of blame.

* They had more than eight thousand men at their disposal, all excellent light infantry.

CHAPTER II.

Monongahela.—New establishments formed on that river.—Kind of boat used in going down the Ohio.—Proportion of boats with keels.—Price of lands.—Alleghany river.

THE Monongahela is in general bordered by mountains of considerable height, leaving so narrow a space along the banks of the river, that during its whole course, there is very little of what is called flat, or low ground, fit for pasture. As these mountains are almost perpendicular, it will be long before any attempts are made to clear them; since it is only at their extremities, their base and their summit, that they are inhabited or cultivated. The quality of the low lands is good, though light and sandy; but they cannot be considered as lands of the first class, the vegetable earth being but six inches in depth, spread over a pure yellow sand. The layer of earth in the high

lands is not three inches in depth; the soil is also extremely light; and from the mode in which it is cultivated by the Americans, this land will be exhausted in twenty years. The most common trees are the oak, the chesnut, and the maple; they present nothing extraordinary either in size or elevation. The breadth of the Monongahela is from six hundred to six hundred and fifty feet; the river runs over a bed of yellow sand, mixed with an earth of nearly the same color, which renders it generally turbid. Its current is slow and gentle, carrying a boat without sails or oars about a mile and an half an hour; it is easy of ascent, and is navigable above a new establishment, called *New Geneva*, nearly eighty miles from Pittsburg: this space is uninterrupted either by cataracts, falls, or rapids.

The banks of the Monongahela are almost every where inhabited: there are six establishments which bear the name of towns or ports; *New Geneva*, *Frederic's-town*, and *Read's-stone*, have two hundred inhabitants; *Elizabeth's-town* contains twenty, *M'Kees-port* thirty, and *Perry's-town* fifteen.

On the banks of this river is built the greater part of flat-bottomed boats which convey the emigrants to Kentucky, and also the boats with keels for the Mississippi; the first, called Kentucky boats, have the form of a great

oblong, varying in its proportions from thirty to fifty feet in length, and from twelve to twenty in width, but never less than four in depth. These boats are constructed without nails, which renders them very dangerous for the Mississippi, in which great numbers perish by the damage which they receive from the least shock, either against rocks, or great trees with which this river is sometimes choked, as well as by the difficulty of steering.

The most convenient size for boats with keels destined for New Orleans is from forty to forty-five feet long, twelve broad, and four deep; they ought to be strongly built; that is, to have their ribs very close to each other, and the helm of the same form as that of ordinary vessels. The great oar placed at the stern, with which the Americans govern the boat, is extremely dangerous, from the difficulty of making it change its direction with sufficient speed to avoid the great trees and trunks that frequently obstruct the passage, and on which, without great precautions, the boats are driven by the stream.

The ordinary price of these boats is a dollar and a half per foot, including the three oars, two of which serve for rowing, and the other for the helm.

Travellers who have the intention of visiting this part of the continent cannot be too strongly recommended to go to one of the ports of the Monongahela, and not to

Pittsburgh, where neither boat nor men are found, except at exorbitant prices, and an incalculable loss of time. There are two roads, the lower and upper road; after passing Bedford you meet with the upper road, known in the country under the name of the high road; this road is the best, and as it crosses the most inhabited part of the mountains, forage is more easily procured for the horses; but it is about ten miles longer than the other.

Travellers should endeavour if possible to reach the Monongahela before the end of June; because it may happen after this period that there is not sufficient water for the navigation during several weeks; this scarcity of water is, however, rare, and there is always enough for a boat without lading.

The lands on the Monongahela, when somewhat cleared and with a log-house, are worth about four or five pounds the acre; that is, from two pounds to two pounds ten shillings sterling. The general aspect of the country is healthy; there are no stagnant waters or morasses, and though fevers have been prevalent at M'Kees port, they are considered as merely accidental, or as the consequence of new clearings. It is generally remarked throughout almost every part of the continent, that the three first years after new establishments are almost

always feverish;* but when once the lands have been heated by the sun, and the air purified from the moist and noxious particles by which it is vitiated, these spots become as healthy as old establishments; this is the affair of time and circumstances, and no way depends on climate, at least in the northern, eastern, and western States.

Thick fogs arise every morning upon the Monongahela, and which, greater in summer than at any other season, appear to augment in the same proportion with the heat. These fogs are not unwholesome; they seem rather an emanation of the plants and flowers which decorate the banks of the river, than an effect of the water; and the scent exhaled from them, far from being disagreeable, is aromatic and odorous. A short time after the sun has risen and acquired some force, these fogs ascend, and detach themselves from the surface of the water; but the influence of the sun preventing them from attaining any great elevation, they hang suspended some hours over the bed of the river, and in the direction of its course. At the hour of ten or eleven in the morning, the fogs

* The new lands, composed of putrid vegetable substances, and loaded with febrile particles and noxious vapors, are the general causes of maladies to new settlers.

evaporate, but without producing rain, or any unhealthy damp, and are considered as the sign of great summer heats.

The Allegany river, like the Monongahela, is bordered by mountains, with a narrow strip of land on its banks; its current is more rapid, and its waters shallower and clearer. This river has frequent falls, which renders its ascent difficult: with a slight increase of water, it is navigable as far as Venango for boats of about four or five thousand weight. Venango is situated at the mouth of French Creek, where the river is still two hundred fathom in breadth, and is practicable even as far as le Boeuf; from whence is a carrying place of fifteen miles, which leads to the peninsula on the lake Erie. Its banks are in general thinly inhabited, because the Six Nations have hitherto been almost constantly at war with the Americans, and these tribes are masters of the whole course of the river. Since the peace has been signed, they appear to be more tractable, and are forming new establishments: boats are built on this river, but in small numbers. The quality of the soil on its banks, and the species of trees, are precisely the same as on the Monongahela.

CHAPTER III.

*Pittsburgh.—Coal mine.—Carriage.—Forges.—Fort Duquesne.—
Fort La Fayette.—Military position.*

PITTSBURG, formerly called Fort Duquesne, constructed by the French when they were masters of Canada, is situated on a slip of land which separates the waters of the Alleghenies and those of the Monongahela. At this point the Ohio takes its source and its name.

This town contains, at the utmost, one hundred and fifty houses, some of which are built of brick, and the rest of wood. The neighbourhood of the Indians and the difficult communication between this town, Philadelphia, and Baltimore, appear to be the principal causes which have hitherto prevented its increase. Placed at the source of one of the noblest rivers in the world,

navigable as far as the ocean, after flowing eleven hundred miles, through the finest and most beautiful countries on the surface of the globe; this town, when the Indian frontier is thrown back,* and the roads are rendered practicable, will certainly become one of the first inland cities of the United States.

The general aspect of the country is delightful; two chains of festooned mountains line the opposite banks of the river of the Alleghanies, and that of the Monongahela, stretching towards those of the Ohio. If at their junction the Allegany river did not form an acute angle, which, by its projection, intercepts the magnificent prospective of the Ohio, the situation of Pittsburgh at this spot would perhaps be one of the most picturesque on the continent.

A rich vein of coal is found on the summit of one of the mountains which bounds the Ohio on the left. The quality of this coal is equal to the best kind in England; the mine is open, and the coal so cheap, and forming such excellent fuel, that although the inhabitants live in the midst of forests, they prefer it to their best wood. It costs less than four-pence sterling a bushel.

* This has now taken place in consequence of the treaty made between the Indians and General Wayne, in 1797.

It is remarkable, that notwithstanding the difficulty and high price of the carriage of merchandise, this town has made little effort to establish manufactures, even for articles of the first necessity; these are still drawn from Philadelphia or Baltimore, and obtained at exorbitant prices.

The carriage of an hundred weight from Philadelphia to Baltimore is from eight to ten dollars, and from Baltimore seven or eight; notwithstanding this difference, two waggons come from Philadelphia to Pittsburgh against one from Baltimore.

A few iron mines have lately been worked on the Monongahela, where coppers, cauldrons, country ovens, pots, and other utensils of the like kind, are cast; the price of which is from forty-three to forty-five pounds per cwt. Pennsylvania currency; making from one hundred and fourteen to one hundred and twenty dollars.

No traces remain of the old fort Duquesne, built formerly on the most advanced point of the slip of land which divides the Allegany river from the Monongahela, and on which the town of Pittsburgh is situated. The whole has been destroyed by time and the floods.

During the war of 1756, the English constructed another fort, called Fort Pitt, a little behind the former, and of which the traces are yet seen. It is a regular

pentagon, the parapets of which now fill up the ditches, without palisades, and open on every side.

The Americans, less skilled than most other nations in military affairs, have built a new fort on the left of the Alleghanies, at a thousand yards distance from the back of the town, in a marshy situation, much below the level of the town. This fort is commanded at two hundred yards distance by a small ridge of heights, from whence the men may be seen from head to feet; it is called Fort La Fayette.

The reasons which determined Major Craig, who was the planner of this work, to build it in this spot were, that the Indians of the Six Nations, with whom the Americans were then at war, occupied a part of the Alleghany river, which is situated on the right of the town, and that it was therefore necessary to place the fort on the right, and as near as possible to the town, which was punctually executed. He did not reflect, that if, by chance, the Indians should contrive to land two miles above the fort, on the left of the Alleghany, and take possession of the heights, by which manoeuvre they could reach the foot of the town without being seen, they might kill the inhabitants, and burn the place, before any intelligence could reach the spot, or a cannon or musket be fired.

Fort La Fayette is merely a square with four bastions, on the platforms of which are erected-block houses or barracks. In each of these block-houses is an embrasure on the side next the country, on which are placed pieces of cannon; on that which looks towards the town a small powder magazine is built, covered only with planks. Palisades from ten to eleven feet, placed on a kind of parapet, which is only three feet in height, including the depth of the ditch already half filled up, surround this fort, and give it the form of a bullock-pen. In a dark night four grenadiers, with a dozen faggots of dry wood, might burn the fort and all the garrison, and not a single individual escape.

Eight hundred yards behind the town, is a ridge formed by a continued line of protuberances more or less connected with each other, and making opposite angles. This chain begins at the Monongahela, and runs parallel with the Allegany, at the distance of about six hundred yards from this river; it finishes at a small eminence forming a sort of sugar loaf, and which terminates this position.

This ground might contain ten thousand men; and three of these little protuberances, which are the most distinctly marked on the chart, would, if fortified, render this a strong position; the first is on the Monongahela, covering

the left of the post; the second is directly behind the town, and commands the Monongahela, the Allegany, and the whole city, at the distance of only two hundred yards; the third is on the right of the position, which entirely flanks the slope of the mountain on the right of the Allegany in front, and projecting a little more than the others, commands the whole left of the line.

This position would not be tenable against an army advancing on the side of Pennsylvania, because it might be turned and is commanded on all sides. In such a circumstance, therefore, it would be necessary to abandon this situation, and take post on the other side of the Monongahela, where, on the left bank, an excellent position may be found.

At this spot the boat waited for me which I had purchased at Mc.Kees port. I hired two Canadians and three Americans for the whole time my journey should last, paying ten piastres a month to each rower, and fifteen piastres a month to the pilot; on the condition that upon my arrival at New Orleans I should send back the Americans to New York or Philadelphia, and the Canadians to the Illinois, their respective countries, at my own expense.

At the moment of my departure, a young man presented himself, and asked me to give him a passage as far

as Cumberland river,* observing that he had no money to offer me. I complied with his request, on condition that he would take an oar and work for his passage and maintenance. He answered drily, that he only worked for himself and never for any other man; that he had lost his way four months since when hunting, and that he would contrive to return as he came. I mention this slight incident because I shall afterwards have occasion to speak more particularly of this man.

* The distance from Pittsburgh to the Cumberland river by the Ohio, is nine hundred and fifty-three miles.

CHAPTER IV.

Sources of the Ohio.—Hamilton Island.—Seven Mile Island.—Dangerous passage.—Popular opinion.—Legion's-town.—Crow Island.—Great Beaver Creek.—Grant Island.—Little Beaver Creek.—Yellow Creek.—Black Islands.—Judah Campbell.—Brown's Island.—Mingo's Bottom.—Henderson Island.—Mingo Town.—Buffalo Town.—Carpenter's Station.—Short Creek.—Weeling.—Hurricane.

ON the sixth of June, 1794, we began the survey of the Ohio.

The Ohio is formed by the junction of the Monongahela* and the Allegany,§ in latitude thirty-six, and longitude forty-five, at nearly one thousand and ten miles

* The meaning of Monongahela in the language of the Indians is "muddy water."

§ Allegany in the Indian language signifies "clear or limpid river."

from the point where it empties itself into the Mississippi. The bed of the Ohio at the place where it takes this name, is very narrow, being scarcely two hundred fathom broad. The same chain of mountains which borders the Monongahela continues along the left bank of the Ohio; the foot of this chain is bathed by the waters of the *Beautiful* river, and appears like a wall raised by nature on that side, to prevent its wandering from its course. On the right side, but at the distance of one and sometimes of two miles, the chain of mountains that rises from the river Allegany, bounds the horizon. A fertile plain extends from the foot of those mountains to the banks of the river.

At a mile from Pittsburgh is Hamilton Island, which we left on the right, at the distance of a mile and a half. This island is low, and partly covered with water when the river rises. In this place the soundings are from five to five feet and an half.* The swiftness alone of the current carries boats two miles and three quarters an hour without the aid of oars or sails.

After having passed Hamilton Island, the mountains on the left side fall back a mile from the river. The soil

* The whole of the soundings were taken at a time when the waters were at the lowest.

of this small plain is of a yellowish color and of a middling quality.

Whilst the mountains on the left side fall back, those on the right which followed at some distance the course of the river, close in; and their sides, pointed with rocks, hang over the Ohio, which in this place is only three hundred fathoms broad. The depth of water is six feet.

About three miles lower than the head of Hamilton Island, and after passing on the left three small islands and Chartier's Creek, which takes its source near the little town of Washington, we reached Seven Mile or Long Island, which, notwithstanding its name, is only six miles in length. The chain of mountains on the right forms the bank of the river; that on the left approaches it nearly. The soil of this island is poor, and the ground low, but not subject to be overflowed in the season of inundations. We leave the island on the left, and take the channel on the right, where there is depth of water from four to six feet. The left side is impracticable.

A mile below the head of Long Island is a little fall, which is avoided by keeping within thirty fathoms from the right bank, where there is a channel four or five feet deep, on a gravelly bottom.

At the extremity of Long Island is another rapid full of rocks: this is one of the dangerous passages of the Ohio,

on account of the difficulty of keeping the channel. The vessel should be directed upon the point of the island, which must be doubled, keeping as close as possible, and immediately after having passed it the boat must be pushed to the left of the river, within twenty-five fathoms of the bank. Without this manoeuvre, which requires much precision, the boat would be thrown on a bank of gravel or rock that bars the river, and from which it would be very difficult to get off. This channel, which is from four to four feet and an half in depth, contains so great a quantity of fish called perch,* that it is commonly reported they occasion the noise made by the water. Having touched on a bank of gravel in passing the channel, our boat crushed one of those fish. We were told that the noise of these perch prognosticates rain. It is unnecessary to make any comment on the folly of these popular stories.

After passing the island and clearing the rapid, you observe the mountains falling back from the banks, and leaving, between the river and their base, low lands of a bad quality. But at a very little distance from thence, the chain of mountains on the left resumes abruptly its

* This fish is of the size of a large carp of the Rhine; its flesh is white and well tasted, but it is altogether unlike the perch of Europe.

first position, while that on the right continues to fall back.

Four miles below Long Island, we leave a small and very low island on the left. The channel on the right is four or five feet deep. We observed that the river here begins to grow wider, and two miles below the small island makes a bend towards the north. The navigation is on the left side, where there is six feet of water. The mountains during this passage retreat, and leave a valley, the low and fertile lands of which are watered by the Ohio.

Measuring from the bend of the river, we proceeded five miles without meeting with any obstacle, till we reached Legions-town, the former head-quarters of General Wayne, when he was sent against the Miamis in 1795^x. On this spot we observed fallen huts, the remains of an old camp; on the opposite side is a neat farm called Hill's farm.

After passing Legions-town, and sailing down a mile, we reached Crow Island, which lies on the left, and is a mile in length. The mountains on the right side fall farther back, whilst those on the left hang over the river, which in this place is six feet deep.

Four miles below the head of Crow Island is Great Beaver Creek: the land on each side is light. Great

Beaver Creek is scarcely fifty fathoms broad at its mouth; a fall three miles above prevents any further navigation. On the banks of this creek, and on an elevated plain formed by the mountains on the right side of the Ohio, the foundations of a small town are lately laid, called Beaver-town, composed as yet of only four or five houses. On the opposite bank to Beavers-town lies a neat farm called Kerr. The soundings at the mouth of Beaver Creek gave eight, twelve, and thirteen feet of water.

After Beaver-town, the river continues running in its bed without any obstacle: the water is from ten to twelve feet deep, and the soil on either side light.

At the distance of about five miles from Great Beaver Creek, we leave two small low islands on the right. The depth of water in the channel is six feet. Here the two chains of mountains join, and hem in the river. This is the most northern point of the Ohio.

At the distance of about two miles is another island, called Grant's Island, which you leave on the left, keeping to the right. The current here is extremely rapid, and the depth of water in the channel from twelve to fifteen feet; the land is poor, stony, and rocky.

Three miles below Grant's Island, we passed another small island on the right, opposite which is a little town, called Bird's-town, where there are two or

three huts. The river grows wider, and the mountains open, leaving on each side a large stretch of low lands.

Three miles below this last island, on the right, is little Beaver Creek, which is no more than twenty-five fathoms broad at its mouth, and is navigable only for two miles. The lands of Little Beaver Creek are lower, and of a better quality than those of the Great Beaver, which are high and stony.

After passing Little Beaver Creek, we found an assemblage of four or five log-houses, called Little Beavertown; opposite which, we left on the right Beaver Creek Island. The depth of the water is every where from fifteen to seventeen feet; the bottom is gravel, and the land of a middling quality.

Here is the line of separation between the States of Pennsylvania and Virginia: this line runs north and south.

Five miles below Little Beaver Creek we left again, on the right, another small island that has no name. This island greatly narrows the channel of the river which winds for five miles; at the end of its course we perceived two small islands, the names of which are also unknown: leaving these on the left, we reached Yellow Creek on the right, three miles below the head of the first island.

Yellow Creek is at its entrance from fifteen to twenty fathoms broad, but grows wider half a mile up; it rolls

over a bed of rocks, and is navigable only two miles for skiffs, on account of the great number of falls.

This creek no doubt takes its name from the yellow soil on its banks; there are two or three houses on this spot, and two or three acres cleared. The soil is of a light quality, and the vegetable mold in the lower lands not more than a foot in depth.

After passing Yellow Creek, where the river makes a bend of a mile towards the south, is the first of the four islands called Black Islands, distant from each other a mile or a mile and a half: they extend about five miles. The chain of heights on the left for two miles closes on the river; but that on the right falls back and leaves a large extent of low land, which is well inhabited.

The navigation in general is unvaried from Pittsburgh to the Black Islands, and the country presents nothing interesting to the eye; the lands are poor, and the wood of an inferior quality. Three miles below the last of the islands called Black Islands, and on the left side, lies a fine plantation, called Judah Campbell.

The chain of mountains on the left bank closing continually upon the river, and those on the right widening off, the space between is a stretch of low land, the richest we had descried since we left Pittsburgh. The wood is of large dimension, and of an excellent kind, and the

vegetable layer two feet, and of a chocolate color, which is an indication of its fine quality; the depth of water twelve feet, and the navigation good and without any impediment. Two miles below Judah Campbell, we leave King's Creek on the left, and half a mile lower Brown's Islands on the right; the channel is on the left, but these islands must not be approached too nearly, on that side, there being shoals near, and rocks along the bank. In the mid channel is eight or nine feet water. When you have doubled Brown's Islands, the two chains of mountains close in on the river; there are no more low lands, and the chain, sinking on the left, forms a terrace of great extent, the soil of which is of the first quality, the layer of vegetable earth being from four to five feet. Some miles lower, this chain of mountains rises a little on the left, and approaches the borders of the river; that on the right falls back, and leaves a great extent of low grounds. The country is well inhabited.

Five miles from Brown's Island, and on the left bank, are the first houses of a very neat settlement called Mingo's Bottom. The water is here six feet deep, the navigation good, and without any obstacle. Three miles further, we reached Henderson's Island on the left. Low rich lands, almost all inhabited, lie on both sides the river. The island is merely a bank of gravel, on which grow a

few shrubs; the channel is on the right, and gives five or six feet of water : the soil here is less rich, and on a bed of gravel.

Opposite Henderson's Island, and on the right side, are several small huts close to each other, and built on a low land of great extent and entirely open : this place is called Mingo's Town. From thence to Pittsburgh, crossing the country in a right line due east, is a distance of no more than thirty or thirty-one miles; whilst, in following the course of the river, you travel seventy : a road for horse and foot is already made. (See the map of the Ohio.)

At Mingo's Town, all the difficulties of the navigation of the Ohio are considered as vanquished; because from this place to the mouth of the river, there is water enough for boats of one hundred and fifty to two hundred tons, seventy or eighty feet long, from fifteen to eighteen feet broad, and four feet deep, drawing from two to three feet of water. Mingo's Town may therefore be looked upon as the primitive point of the great navigation on the Ohio; and it is therefore probable that this place will become as considerable as its inhabitants presume, and will acquire the whole trade, which now belongs exclusively to Pittsburgh.

Three miles beyond Mingo's Town, on the left, is the little town of Buffalo, composed of twenty-eight or thirty

houses, some of which are built with brick and wood-work. This town is situated at the mouth of Buffalo Creek, and on a beautiful platform, the environs of which are already well cleared. This is the most considerable place in the road from Pittsburgh, and furnishes entertainment for travellers: there are already two stores or warehouses well supplied. Buffalo Town communicates also with Pittsburgh by land; the distance is computed about thirty-five or thirty-six miles; the depth of water opposite Buffalo Town is from seventeen to eighteen feet.

Five miles and an half below Buffalo Creek lies Carpenter's Station, an assemblage of three or four huts built on a low ground of a very good quality. Here the river begins to assume an air of greatness and majesty.

Four miles below Carpenter's Station, two currents of water flow opposite to each other; that on the right is Short's Creek, which is large, deep, and navigable for two miles inland; the other is only a rivulet, and is dry during the summer. In this place, and especially on the right side, and along Short's Creek, the lands are of the finest quality; the vegetable earth is from ten to twelve foot deep; the white oak, the maple tree, and the sweet chesnut tree, are abundant: the depth of the water as far as Short's Creek is every where twelve feet, and seven opposite its mouth.

A mile below Short's Creek, we passed three successive islands which extend four miles : the first is called First Island; the second, Middle Island; the third, Gland's Island: both passes are equally good. In taking the channel on the right, the mariner must be careful not to approach too near the islands, which are surrounded with shoals a foot and half and two feet only below water ; by keeping a little on the right side about two hundred fathom from the bank, six, seven, and eight feet of water are found on a sandy bottom. During this space of five miles, you leave on the right a fine stretch of land called Mc.Coluh Grant's Flat : on this plain there are at least fifteen habitations close to each other; and a mile and an half lower than the last island lies the little town of Weeling.

It was our usual practice to take the skiff to visit the interior of the country, and order our mariners to go gently down the Ohio till we rejoined the boat. We were busy with our survey, when the menace of an approaching storm determined us to regain our large boat with all expedition. The weather had been heavy, and so hot that the thermometer of Reamur was at the twenty-ninth degree. Although the air was perfectly calm, the river was swollen with those heavy waves which rise in the middle, and sink away without reaching the banks, and which are known by sailors under the

name of *houls*. The Canadians from those signs had forewarned us since the morning of a storm. A thick whitish cloud, bordered with a kind of white and black stripe, now hovered over our heads. We reached the boat, which we found moored to a great tree near the bank; we blamed the imprudence of our boatmen, since nothing is more common in these storms than the overthrow of trees, and the falling-in of the earth which separates them from the river, and consequently the loss of the boat, which is crushed to pieces.

But however dangerous our position, there was no time for change. The cloud had already burst, the sky grew dark as night, and it was only four o'clock; the wind began to blow most impetuously, and the thunder rolled with a noise unknown in Europe, and which till now I had never heard. The waters of the river, raised by the force of the wind more than three feet from their bed, overflowed both banks. A dreadful rain fell with incredible violence, and forced by the impetuosity of the wind, scattered itself often in vapor before it reached the earth. The trees were torn up by the roots, broken, and carried away; the thick darkness, which hindered us from distinguishing the nearest objects, was continually interrupted by vivid flashes of lightning, mingling themselves with the bursts of this terrible thunder, which the echoes

of the forests on the banks of the river repeated in doleful and tremendous sounds.

However dangerous our situation, our eyes were not the less fixed on this awful and sublime spectacle; when at the same instant a most violent crash drove us from the strange situation we had taken: the lightning, falling on the tree to which we were moored, rent it, cut the cord which fastened us, and gave up our boat to the mercy of the winds and waves, which carried it away with such violence that in two minutes we were blown almost out of the water, and thrown on the opposite side, having more than half the boat wrecked on the bank. The rapidity of this frightful succession of events preserved us from the apprehensions which the calculation of the dangers with which we were surrounded would have excited. No one placed himself at the helm, nor was it possible to direct the vessel: we should, therefore, according to all probability, have foundered, or have been dashed against the rocks or the high banks, had not chance, or rather the direction of the wind, served us better than the skill of the most experienced pilot, by throwing us on a soft and sandy point, which did very little damage to our boat.

This hurricane lasted seven minutes in its greatest violence, overthrowing every thing it met with on its passage: its direction was from south to north-east.

Notwithstanding its short duration, the rain fell so abundantly that our boat had thirteen inches of water. At length this tremendous shock was succeeded by the deepest silence of nature, and a light breeze cooled the atmosphere. We availed ourselves of these circumstances, to examine and repair our disasters.

On the following day, Mr. Warin and myself took a survey of the ground over which the hurricane had passed: we found every thing levelled for the breadth of about a quarter of a mile; no tree except the white oak remained standing, and its leaves were already of a brown yellow, as if they had been burned.

CHAPTER V.

Weeling.—M' Mann's Creek.—Dely's Station.—Captell Island Creek.—Fish Island.—Fish Creek.—Sun Fish Creek.—Opposum Creek.—Fisher's Creek.—Long Reach.—Isle Déchiquetée.—Middle Island.—French Creek.—Three Brothers Island.—Cow Creek.—Calf Creek.—Bull Creek.—Little Muskingum.—Duval's Island.

THE little town of Weeling is situated on the left side of the river, and at the confluence of a creek which bears its name. It contains from twelve to fifteen habitations, all of which are of wood, or log-houses. In the angle formed by the creek and the river, a small wooden fort is erected; it has four bastions, and two small block-houses are constructed thereon in the usual manner: the whole is surrounded with palisadoes ten or twelve feet high; but there is neither ditch, parapet, nor cannon. The town has two small stores, but scantily furnished; travellers,

nevertheless, may obtain some refreshments there; but they are excessively dear, since there is neither plenty nor concurrence.

Opposite Weeling is a beautiful spot, called Weeling's Island, exactly the form of a triangle: the land is sufficiently high to preserve it from all inundation. The right side of the river opposite Weeling is lined with heights; the left side is intersected with rising grounds and small vallies extremely fertile, where several habitations are already established, which gives the country an interesting and picturesque aspect. The water opposite to Weeling's Creek is ten feet deep.

Two miles below Weeling's Island, which you must leave on the right, you pass a creek on the same side, called M^cMann's Creek, which is seven or eight fathom broad at the mouth, and navigable for skiffs three or four miles inland.

Five miles below M^cMann's Creek we reached Dely's^x Station, where there are five or six log-houses built on a beautiful platform, open, fertile, and watered by a considerable number of small creeks. These kinds of stations have been formed by the union of several families, who were led, from fear of the Indians, to establish themselves near each other, contrary to the usual custom, which leads settlers to place their respective habitations at a distance,

when they can do so without danger. The water opposite to M^cMann's Creek is fifteen feet deep, and the navigation good.

Beyond Dely's Station, the mountains on the right fall back to a great distance, and leave a considerable space of low land, while those on the left continue to close upon the river. Opposite the Station, on the left side, are two creeks, the first is called Little Grave Creek, and the other Great Grave Creek. After four miles of good navigation, we reached Captell's Island: the depth of water, during the whole of this passage, is from fifteen to eighteen and twenty feet: we leave the island on the left; the channel has eight feet of water.

Two miles below Captell's Island, and on the right, is a very fine creek, Captell Island Creek, called erroneously on the map Grapwin's Creek, which name is not known in the country. This creek is about fifty fathoms wide at its mouth, but is navigable only a mile inland, and that only in time of floods: the soil through which it flows is remarkably fertile; the depth opposite to its mouth is six feet, with a muddy bottom.

Three miles lower we reached Fish Island, a mile in length, and which we leave on the left: the channel is from ten to twelve feet deep. The aspect of the country opposite to this island varies: the mountains on the right fall back to a considerable distance, and those on the left

bound the river without leaving a strip of land: they are also nearly perpendicular.

Immediately after passing the island, we found a creek on the left side, called Fish Creek, which is navigable two miles during the floods, but only for barks: it is improperly marked on the maps by the name of Very Large Creek.

A mile lower than Fish Creek are two small islands which almost touch the main land; properly speaking, they are only sand-banks, which are dry when the water is low, and ought at all times to be avoided by steering to the left, where there is fifteen feet of water.

Three miles from Fish Creek, we passed Sun-fish Creek on our right, which is about forty fathom broad, and navigable seven miles for canoes of two thousand weight in time of floods. Low lands of the first quality are bathed by these waters on the left; the right is bounded by steep mountains. The depth of water opposite Sun-fish Creek is twelve feet.

Three miles below Sun-fish Creek we reach Opposum Creek on the right. We continued our route three miles further, leaving on the left a great extent of flat land covered with several new habitations. The river here loses a third of its breadth, but deepens in proportion; at the place where it bends, the depth is from twenty to twenty-five feet.

Eight miles below Opossum Creek, on the left, is Fishing Creek, on both sides of which are very rich low grounds well inhabited: the country which we traversed to reach these establishments had no inhabitants. Fishing Creek is navigable three miles for canoes of every size; the depth of water in the river is from twelve to thirteen feet, the navigation extremely good, and without impediment:

Five miles lower down the river, we leave on the left an island without a name, the first of five which we found in Long Reach, a stretch of twelve miles in which the Ohio makes no bend but flows in a straight channel: this channel is full of islands of different sizes, and crowned by small hillocks of graceful and varied forms. From the beautiful aspect which this country, yet uninhabited, presents, we may judge how lovely it would appear if clothed and animated by cultivation: the extreme fertility of the soil, the advantages of navigation, the abundance of fish and game, and the mildness of the climate, may lead to presume with a kind of certainty that a number of inhabitants will speedily repair thither; and that this fine country, now a desert, and only six months ago occupied by the natives, will soon be enriched by the produce of industry, and inhabited by families who will enjoy in peace the fruit of their labors.

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The navigation of Long Reach, reckoning from the first island, is twelve miles; during which distance we leave the five islands on the left : the depth of the channel is constantly from ten to fifteen and sixteen feet.

At the end of Long Reach, the chain of mountains on the left closes upon the river, and that on the right falls far back, leaving a space of low and very fertile land.

Eight miles and an half from the last island of Long Reach, we found on the left an island hitherto unnamed; the irregular figure of which, formed of long points, led us to give it the name of *Ile Déchiquetée*. The channel is here twelve feet deep.

After passing *Ile Déchiquetée*, at a mile and a half lower on our left, we came Middle Island, marked incorrectly on the map in the same direction as the preceding island; since it is situated on the left side, and close upon the land. This island is about three miles long, and half a mile broad; its site is very elevated, and covered with fine wood : the channel by which it is separated from the left bank is not more than ten or twelve fathom broad, with a depth of nine or ten feet of water. I made the circuit of this island to ascertain its figure, whilst my boat followed the main channel. Nearly opposite the middle of the Island, and on the left side, I found a very fine creek, more than

twenty-five fathoms broad at its mouth, and navigable ten miles for canoes. This creek is altogether omitted in Hutchin's maps: the soil which it waters for three miles is of the first quality, but at a little distance is hemmed in and bounded by high mountains.

Six miles below the head of Middle Island, and on the left, is French Creek; and a mile lower lies the first of the three islands, called Three Brothers Islands. The two first are almost opposite each other, and have nearly an oval figure; the whole form a length of four miles and an half. We passed between the two first, and left the last on the right; the channel here is every where twelve feet deep, and without any obstacle.

Opposite the end of the last of these islands, a little creek on the left called Cow Creek empties itself into the river. A mile and an half below this creek, we found on the left two small sand-banks which are covered in floods; we leave them on our left, and kept the middle of the channel which is every where eight or nine feet deep. Here the two chains of mountains on the right and left suddenly disappear, and leave the river to circulate freely in one of the most noble basins I ever beheld. Though all the lands and woods are of a superior quality, this part of the country is still uninhabited as far as Fishing Creek, which makes a distance of forty miles.

Two miles and an half below the two sandbanks on the left side is a creek called Calf Creek, which is dry during the whole summer; and two miles further down on the left is Bull Creek.

After a safe navigation of five miles, and which yields nine, ten, and twelve feet of water, with a flat country on each side, we reached Little Muskingum, which is nearly ten fathom wide at its mouth. The navigation is intercepted by two falls, and encumbered with drift wood.

A mile lower than little Muskingum we reached Duval's Island; it is two miles and an half long, and follows the same direction as the river. We leave it on the left, and found in the channel from eight to ten feet of water. A creek called Ducks Creek lies on the right, and opposite to the middle of the island.

A mile below Duval's Island, the Muskingum river falls into the Ohio, at the confluence of which is the town of Marietta. Muskingum river is about one hundred and fifty fathom broad at its mouth, and is navigable one hundred miles for boats of four or five thousand weight.

CHAPTER VI.

Description of Marietta.—Observation respecting the Scioto Company.—Little Kanhaway.—Plantation of Bel Pré.—Island of Bel Pré.—Little Hockhocking.—Great Hockhocking.—Lee's Creek.—Belleville Island.—Devil's Hole.—Anderson's Island.—Abraham Burr.—Correction of Hutchin's Map.—Tartt's Fall.—Robertson Island.—Taylor's Island.—Great Kanhaway.—Observation.—Galipolis Island.—Omission.—Galipolis.—Raccoon Creek.—Little Guiandot.—Great Guiandot.—Twelve Poles Creek.—Great Sandy River.—Little Sandy River.—Gervais's Station.—Pine's Creek.—Little Scioto.—Tiger's Creek.—Great Scioto.

THE site of Marietta presents the most agreeable landscapes imaginable. This town is built at the confluence of the Muskingum and the Ohio, the bed of which is filled with beautiful islands: in the back ground of these islands, the view extends over a vast range of hills of different

forms, and covered in several places with a variety of plants which in Europe are collected with so much expense and difficulty. The rude peaks of these hills which bound this delicious valley are decorated with flowers of various kinds, whilst the defiles of the mountains are shaded with a diversity of forest trees, interspersed with the honeysuckle and the magnolia. At the foot of the hills, the acacia spreads its tender branches tufted with flowers, and the tulip tree rears its majestic head towering above the shrubs. Here and there portruding masses of rock, contrasting with the brilliant verdure of the plants, give an air of enchantment to the whole scenery. It was in the middle of June that I visited this delicious abode; at the time when the vegetation was at its height, and when it presented itself with all its luxuriant graces, embalming the air with its various perfumes.

The remains of an old wooden fort with four bastions, which served as a defence against the Indians, may still be seen at Marietta: their present distance and state of tranquillity render this fortification now useless.*

The ground on which the town is built, as well as that which surrounds it, is of a pretty good quality, although light: the inhabitants cultivate maize, rye, and hemp, but

* See their new limits in the Chart, N^o. II.

hitherto no wheat; there are several stores established: the country, nevertheless, is poor, and its progress in resources and in population have been much retarded by the last destructive war of the savages.

The greater part of the population of Marietta is composed of five or six hundred families from New England: a few unfortunate French families have also taken refuge in this place, victims of American land speculators, and of the ignorance or weakness of the chiefs of the Scioto Company.

From the information we obtained on the spot, respecting the causes of the ill success of the Scioto undertaking, of which we have heard so much in France, and of which so many have been the dupes, it appears that the chiefs of the Company were deceived by their first agents, which always happens in America to purchasers who are not themselves acquainted with the situation and quality of lands; that they had not taken sufficient security with respect to the validity of the titles; and that, placing themselves near the Indians, they neither treated with them for the possessions nor the limits, which would have been very easy from the good will which the Indians throughout the whole of these countries bear towards the French; that the leaders in the undertaking, under the influence of terror, took the absurd resolution of stopping at Mus-

kingum, where they were really surrounded by the Indians, and giving up Scioto after proceeding two-thirds of the way. If it be difficult to justify the folly of men, who quitted France to establish a colony on the Scioto without using the least precaution; and who, without the knowledge which was necessary to succeed, charged themselves with the care of three hundred families composed of their countrymen; nothing can ever excuse them for abandoning, in the midst of deserts and dangers, those unhappy families whose confidence they had betrayed, by assuring them they would hasten back from Philadelphia, whither the interests of the Society called them, when they formed the resolution of returning no more. Had these chiefs procured good information respecting the disposition of the Indians, which was very easy, they would have learned that these tribes are invariable in their attachment to the French; and if, instead of flying in panic and terror, they had sent two French deputies to the Indians, who were then at war with the United States; far from being attacked, the French colony would have met with protection and assistance from the savages, on condition that they would not mingle in their disputes with the Americans. But the apprehensions of the new colonists were too powerful, and were strengthened by the Americans, to whom these unfortunate strangers had committed their interests;

from this pusillanimous and hasty conduct, resulted the massacre of many of those families, together with the total ruin of such as escaped the carnage. We learned these details from some of those families, and from two chiefs of the nation of the Miamis.

Three miles below Marietta, we left on the right a small creek: the country on both sides is flat and without mountains; the water is thirteen feet deep.

A mile and an half below the creek, we passed an island on the left; the channel is eight feet deep.

Three miles farther on, we found another island smaller than the first, which we left on our right: the water is here from fifteen to sixteen feet in depth; the country continues to be flat on both sides.

Three miles from the last island, we reached a third on the left: this island is peopled, but the others are uninhabited: they are all high and well wooded, and are not distinguished by any particular name.

At three miles distance from the head of the last of these three islands, and on the left side of the Ohio, we reached the Little Kanhaway.

Mr. Hutchins, in his description, makes no mention of this river; which is, perhaps, among those that flow into the Ohio, the most worthy of observation: it is not less than four hundred and eighty feet wide at its mouth,

and fifteen, sixteen, and seventeen deep; its navigation is perfectly good an hundred miles for a canoe, and fifty for a barge, and its current so gentle that you must examine it attentively to discover its direction. I went ten miles up this river, and my boatman agreed that he found little difference in rowing with or against the stream: a river cannot present a greater advantage either to commerce or agriculture. The Little Kanhaway waters a country extremely fertile, particularly on the right: the land on the left, though more unequal, is not less productive, and is even preferred by the farmers for growing wheat.

A mile below this river, on the right side, is a fine plantation, the first in the county of Bel Pré: this is the oldest establishment on the Ohio; it was cleared and settled when the French had the possession, and extends on the banks of the river seven miles, the whole of which is well cultivated.

In the extent of those seven miles, are several islands; and amongst others, one very considerable and well inhabited, which is called Bel Pré Island, three miles in length. We passed it on the left, and took the channel on the right, which is from ten to fifteen feet; that on the left is obstructed by two small islands, which appear to have been formed of a part of the soil of the great island. At the extremity of the island of Bel Pré, there is a second, very small, which we passed on our left.

Two miles lower than the end of the island of Bel Pré, and on the right side, is Little Hockhocking, which is altogether omitted on Mr. Hutchins's map, in his description of the Ohio: this river is about sixty or seventy feet wide at its mouth, and is navigable for great barges sixty or seventy miles; its banks are sufficiently high to preserve the lands from inundation: the country is hilly, and full of coal mines.

Six miles and an half below Little Hockhocking, is Great Hockhocking: in the course of this navigation, which is excellent, we passed two islands on the left, and found every where fifteen and sixteen feet of water: the left side is uninhabited: here the appearance of the country changes, the right is bounded by heights.

Two miles below Great Hockhocking, and on the left, is a little creek called Lee's Creek, on which is placed the station of Belleville, and which contains four or five huts; the navigation is excellent, with a depth of water of twenty feet.

Two miles below Lee's Creek is an island called Belleville Island, almost closed in by the main land, and which we passed on the left. Leaving on the same side Ford's Creek, we proceeded eight miles, reckoning from Belleville Island; during which the navigation continued to be excellent, furnishing always from twenty to twenty-five feet,

and came to a creek called by the French *Trou de Diable*, and by the Americans Devil's Creek, situated on the left; the country was still uninhabited.

After passing Devil's Creek, we observed that the country on the left rises with a gentle slope, and on the right the heights fall far back, leaving a large extent of low and fine land.

We proceeded six miles, leaving on both sides a number of rivulets which run through a desert country, and in summer are dried up: at the end of these six miles, we reached Anderson's Island on the right. The navigation continues good, with eight to fifteen feet of water, and no obstacle in our course. Anderson's Island is inhabited, and is formed of very fine high lands which are never overflowed.

Seven miles further, we found, exactly in the middle of the river, a small low island covered with willows: the channel is practicable on both sides; that, nevertheless, on the left, is the best when the waters are low, being nearly fifteen feet deep: care must be taken not to approach the island, which is surrounded with shoals: the country continues desert, and offers the same rude aspect.

After passing this last island, at the distance of two miles, we reached on the left Abraham Burr's Farm. Two miles lower, we found two small islands, one of which only

is marked on Hutchins's chart, the other being set (if the expression may be allowed) in the left bank, which probably was the reason that the channel which separates it from the main land was taken for the mouth of a creek. We might also have fallen into the same error, had we not made the tour in order to ascertain the fact: we found a channel more than three hundred feet wide, with about four or five feet water, and the current very strong. This spot we called Discovered Island; it appears to be about a mile and an half long, and is overflowed in high waters.

We passed those two islands on the left, and also a creek called Mile's Creek, situated a mile below Discovered Island; proceeding a mile further, we found two other islands, which we likewise passed on the left; they extend two miles: the navigation is every where good, with a depth of twenty to twenty-five feet; the country is uninhabited, and covered with wood.

Two miles from the two last islands is Tartt's Fall, which is merely a strong current; we kept to the right, at three hundred yards distance: it is easy to distinguish the channel by following the line of water which is the least agitated; that which passes over the breakers being white and foamy: there is eight feet of water in this channel. It was at this fall, that the Indians killed such numbers during the war; the barks being obliged, when

the waters are low, to keep near the right side in order to follow the channel: there the Indians placed themselves in ambush, and inhumanly fired on all who passed in boats, whether friends or enemies.

The river, for nineteen miles, winds across an undulating country: at the end of this passage we reached Robertson's Island, which we passed on the left: the navigation from Tartt's Fall to Robertson's Island is unobstructed, and the water from twelve to fifteen feet; the country is entirely desert.

Immediately after Robertson's Island, and on the left side, is Robertson's Station, which is a very fine and extensive farm, and where all sorts of provisions and refreshments for travellers may be found.

Three miles lower, on the left, is Taylor's Island; the navigation is every where good, and the water from eighteen to twenty feet deep.

Six miles further we reached Pleasant Point, situated at the confluence of the Great Kanhaway. Between Robertson's Island and the Great Kanhaway, are several new establishments on the left side of the Ohio; but this country, the soil of which is of a very fine quality, is unprovided with spring-water, particularly on the right: and to this cause we may probably attribute the state of languor and weakness in which the establishment at Pleasant Point remains, where the whole of the town consists only

of fifteen or twenty wretched logg-houses, inhabited by forty or fifty poor inhabitants.

Great Kanhaway river, like most of those which are tributary to the Ohio, is much larger inland than at its mouth; in many places, it has the same breadth and the same majesty as the Ohio: its source is slow and gentle as far as ten miles from its junction, during which space it waters a very fertile country; from thence the land rises; the current of the river becomes more rapid, and continues so as far up as the fall at the distance of sixty miles from its mouth; the largest boats, however, go up the stream without much difficulty. A carrying place at the fall, across the defiles of the mountains, of five or six miles, practicable for waggons and carts, has lately been discovered: at the end of this place, the goods may be replaced in boats, carrying from two to three thousand weight, which ascend to the very sources of the Great Kanhaway: a communication from hence, to James River in Virginia, has been projected.

After leaving Pleasant Point and the Great Kanhaway, we reached, three miles lower down, Galipolis Island, which we left on the right and took the channel on the left, being every where fourteen or fifteen feet, while that on the right is extremely dangerous and full of shoals. This island has been totally forgotten on Hutchins's map: it is about two

miles long and six hundred yards broad, surrounded with shoals, and for the most part so low as to be overflowed in high waters: a floating mill is erected in the channel which this island forms with the Ohio; a proof that the island has no running water.

Immediately after passing Galipolis Island, we reached the little town of Galipolis on the right: its population may be reckoned at ninety or ninety-five men and from forty to forty-five women,---a community formed of the wreck of the Scioto Company. The Congress granted seven acres of land to each family, which is not sufficient for their subsistence, and therefore they are extremely miserable. The town is situated in a platform covered with stagnant waters, which renders this spot extremely unhealthy: and the quality of the land is bad, being light and sandy. The town is built of small huts or log-houses close to each other, and is flanked by three block-houses; the whole palisadoed with great piquets: the streets are laid out in lines; but the present appearance of the place is dirty, and it seems to be the abode of wretchedness.

The Congress, in 1796, granted to each family two hundred and fifty acres of land near the Little Scioto; to indemnify them for all the sufferings, robberies, and murders, of which they had been the victims, from the carelessness, knavery, and perfidy of its agents.

In quitting Galipolis, we left on our right a small creek which is dry during the summer. Four miles lower is a little island, the name of which is unknown: this island has two channels equally good, but in low waters that on the right is preferable, having fifteen feet. Here the country rises and becomes a little hilly, but is still destitute of springs, which will long prevent it from being inhabited.

After eight miles excellent navigation, across a country which continues to be a desert, we reached a creek situated on the left, called Racoon Creek: we found in every part from fifteen to eighteen feet water: in this space, the two chains of mountains on both sides fall back, and the river runs through a track of low land, which however is not subject to inundations.

All the creeks marked on the map from Tartt's Fall are dry for the most part during the summer; they ought to be considered merely as ravines, which serve for carrying off the waters in great rains.

Seven miles below Racoon Creek, on the left, we reached Little Guiandot: the navigation continues good, and without any impediment: the country is uninhabited, and its appearance is similar to the preceding.

Eight miles and an half lower, and on the same side as the Little Guiandot, is Great Guiandot, which is about one hundred and twenty yards broad at its mouth: its

current is very rapid, but canoes can go up for sixty miles.

Nine miles farther down, we came to Twelve Poles Creek. During the last eight miles, we left on our right two creeks, which are dry during the summer. The country wears the same aspect, and is without inhabitants; the navigation is good, the depth of water being every where from fifteen to eighteen feet.

We passed on our left Great Sandy River, six miles and an half from Twelve Poles Creek. This river is nearly of the same breadth as the Great Guiandot: its course is more gentle, and it is navigable seventy miles for great boats: the lands through which it runs are low and sandy, and often inundated by high waters. Towards its sources, it traverses a country full of rocks and stones, and extremely barren. In this spot, the right side of the Ohio is bounded by a great height, which touches its banks: the heights to the left, on the contrary, fall back, and leave a tract of low lands.

After quitting Great Sandy River, we found, three miles lower down on the right, a creek without a name. The chain of rocky mountains on the right continues to run along the bank: the navigation is good, and free from every obstacle: the depth of water is from ten to sixteen feet: the country is a desert.

A mile lower on the right we found a torrent: the chain of rocks runs still along on the right; the left is a tract of low and sandy ground: the depth of water is fifteen feet, and the navigation good. Two miles below this torrent, we left, at the distance of four hundred yards from the banks of the river on the right, a mass of rocks, extremely high and steep, covered with small firs. The left side continued flat and sandy.

Three miles from the beginning of the rocks, on the left, is Little Sandy River: here the Ohio is considerably augmented, and is not less than from fifteen to twenty feet deep; both banks may be approached without the slightest danger.

In quitting Little Sandy River, we left on the right two new settlements called Gervais's Station: the Congress has just made a concession of several thousand acres of this land to the inhabitants of Galipolis.

We continued our route for thirteen miles, passing on the left a few ravines without water, till we reached Pine's Creek, during which course the navigation continued excellent: the river is bordered on both sides with fine lands, chiefly that on the right, where no mountain is to be seen; but this part of the country is unprovided with spring water, and the little which is found, is brackish.

Two miles from Pine's Creek, on the right, is Little

Scioto, which is about twenty yards wide at the mouth : it is full of currents and falls, and being also encumbered with trunks of trees, is impracticable for canoes : a wretched hut belonging to hunters stands on the right near its mouth.

Six miles lower, leaving three small ravines on the right, we reached Tiger's Creek, which is not navigable, being filled with rocks and encumbered with drift wood : here a chain of high mountains covered with rocks runs along the left side ; the ground on the right continues low, and the soil is fine but without water.

Six miles from Tiger's Creek, leaving on our right a hunter's hut, we reached the Great Scioto.

CHAPTER VII.

*Great Scioto.—Silk Worms.—Colicochee.—Kennekenna's Creek.—
Mitchel's Station.—Salt Works.—Salt Lick Creek.—Graham.—
Middle Creek.—Onalson's Creek.—Manchester.—Character of
Independance.—Brush's Station.*

THE Great Scioto is from two hundred to two hundred and forty yards wide at its mouth; it is bordered by fine natural meadows; and the banks on the right are crowned at four miles distance by a chain of heights which run towards the north. In high waters, a portion of land on each side the river is overflowed; but these inundations reach no farther than fifteen miles from its mouth, the land at this point rising gradually. The Great Scioto is navigable seventy miles for all kinds of barges, and two

hundred miles for canoes : the current is slow, and easy of ascent.*

The lands watered by the Great Scioto are of the first quality; the greater part covered with very fine wood, and particularly with white mulberries, which are found in larger quantities here than in any other spot : there are also here an infinite number of silkworms, that feed on the trees, and make their pods in such extraordinary profusion, that large tracts are whitened by these pods which strew the ground : the inhabitants of the country, however, reap no advantage from thence ; since hands are too scarce, in these regions, to be employed for any other use than the cultivation of an excellent soil.

A great quantity of springs of salt water are found on both sides the Great Scioto, but these springs are in general weak.

Within six months, several American families, coming from Kentucky, have established themselves on the right side of the Great Scioto, and at its mouth. These are

* Mr. Hutchins is wrong in observing that the Great Scioto is navigable as far as a carrying place, which is four miles distant, in order to gain the sources of the river Sandusky ; it is, probably, the river Miami that he means. The carrying place of the Great Scioto to the Sandusky is seventy miles.

the first whites who have dared to meet the fury of the Indians, by whom the country has been defended with firmness and perseverance against the invasions of the Americans: it is at the mouth of the Scioto that the greatest number of massacres have taken place, during the war which was carried on against the Indians by the United States.

Thirty houses are already built, and the plan of a small town is marked out; which, from its position and the richness of the soil, will probably become one of the most pleasant and populous of all the establishments formed on the Ohio. It is chiefly inhabited by Swiss; the land already sells for eight piastres an acre.

Independently of this little establishment, about forty families, since the peace with the Indians, have gone up the Great Scioto an hundred miles from its mouth, have formed settlements, and already began to clear the land.

After passing the mouth of the Great Scioto, the chain of heights which borders the left of the Ohio falls back to the south-west; but two miles lower down, this chain gradually approaches its banks, and returns again to take its first direction, leaving a tract of fine land, which, rising from the Ohio in a kind of amphitheatre, is secure from inundations. The wood along the whole of these heights is generally stunted, and of a bad quality;

and the only good soil to be found, is that situated in the low lands.

At the distance of seven or eight miles from the mouth of the Great Scioto, the two chains of mountains close upon the banks, and run parallel with the river, taking the name of the heights of the Little Miami : the summits of these two chains are sometimes uniform and of an equal height, and sometimes rise in the form of sugar loaves.

After descending the Ohio eleven miles from the Great Scioto, in which space we found from twenty to thirty feet of water, we passed on the left Kennekenna Creek, which is not navigable during the summer. Two miles beyond this creek, and after leaving a small island on the right, we reached a creek called Turkey's Creek, opposite to which is another small island. The chain of heights, of no great elevation on the right side beyond Turkey's Creek, falls off a little from the bank, and leaves a space of a mile and an half covered with fine low grounds which begin to be inhabited.

Four miles distant from Turkey's Creek, and on the right, is Mitchell's Settlement, which is already very considerable. The navigation from Turkey's Creek is excellent : the depth of water is from twenty to twenty-five feet. The heights on the left side from Kennekenna Creek bound the river the length of six miles below

Mitchell's Settlement; the country is undulating and the soil fine, but without springs. The lands on the right are better watered, and there are several small sources in the mountains.

After eight miles of good navigation, we reached on the right a salient point formed by the river, which is an alluvion, covered with small willows. We kept to the left, avoiding carefully this point, towards which we were driven by a very strong current, and the whole of which is surrounded by shoals. The bed of the river is here considerably narrowed by this alluvion; nevertheless, by keeping the channel, we always found during these eight miles from fifteen to eighteen feet of water.

Immediately after passing the point of the alluvion, we found on the right a very strong counter current, the velocity of which may be computed at four miles an hour.

Two miles below this point, and on the left side, we reached Vunce's Burgh, commonly called the Salt Works. This establishment is still in a languishing state; four or five negroes and two whites are the only persons employed in a manufacture which presents such important advantages for this part of the continent. The spring of salt water is very abundant, and is about eight feet in diameter and twelve in depth; we thought it weak to the

taste; but the proprietor assured us, that having been overflowed in the last inundation of the Ohio, it had lost a great part of its force. No chemical experiment has yet been made to discover exactly to what degree this water is impregnated with salt. The computation made on the spot is, that four hundred gallons produce nearly fifty pounds weight of salt.

Four buckets, suspended like those of a gardener's well, are employed in drawing the water, which is emptied into a little reservoir made of the bark of trees, and placed on small rafters, from which the water falls into troughs framed of the trunks of trees, and from thence into boilers. These boilers are of different sizes; and the largest contains about twelve gallons; they are placed parallel to each other on stoves cemented with mud. The whole of this apparatus is so ill combined that each of these boilers requires a separate fire, and after each boiling the stoves must be newly cemented. We may judge from hence how great must be the loss of time and the consumption of fuel.

This place is infected every summer with putrid diseases, occasioned by the marshes which surround it. Five or six log-houses form the whole of this establishment, which offers no accommodation whatever to travellers. The quality of the land is bad; what is not

marsh, is gravel, covered with the finest beech trees which can be found in America; but it is well known that this kind of wood indicates almost always a poor soil.

At half a mile from Vunce's Burgh and on the same side is Salt Lick Creek, which is navigable neither for boats nor canoes.

Having passed the creek, we perceived the heights on the left side falling off towards the south, leaving between them and the river a tract of flat country of nearly three miles, the soil of which is of the richest kind. The heights on the right run close along the river, forming distinct knolls, with gentle declivities. We are led to believe from the form, the aspect, and the soil of these hills, that the kind of wild vine which grows there may one day be cultivated with advantage.

The navigation for nine miles below Salt Lick Creek yields from twenty to twenty-five feet of water, without the slightest obstacle. We passed on the left a farm and small creek without a name, and reached an establishment belonging to Mr. Graham, situated on the left side of the river, and consisting of several beautiful farms, the first depending on the State of Kentucky, and which form an extent of more than six miles. Here the two chains of heights fall back, and leave a stretch of fine low land on both sides.

On the side of the river opposite Graham's farms are several new settlements, which would enjoy all the advantages that nature can yield, if the country were not totally destitute of water.

Three miles below Graham's settlement is an island, called Middle Island, which we left on the right. The water in the channel is from fifteen to twenty-three feet.

Opposite Middle Island, on the right, we passed a creek called Brush's Creek, which, although considerable, is omitted in Hutchins's map. Three miles lower and on the same side is another creek, which is marked in Hutchins's map by the name of the Little Scioto, and known in the country by that of Onalson's Creek. The Little Scioto, as we have observed above, is situated immediately beyond the Great Scioto.

Opposite to ²Onalson's Creek a small creek empties itself, called Sycamore Creek; but this, properly speaking, is only a ravine during the summer. Between Brush's Creek and Onalson's Creek the country continues to be open, and is well inhabited.

After descending five miles from Onalson's Creek, we reached the Three Islands lying across the river. When the waters are high, the channel on the right is practicable; we passed it, however, with great difficulty,

on account of the sinuosities and the trunks of trees with which it is encumbered. The water is every where from nine to ten feet deep. But the best and safest passage is on the left, between the small island and the river, where there is always sufficient water, and the channel is straight: the passage in the middle must always be avoided, being full of shoals.

Two miles below these islands, and on the right, is situated the little town of Manchester, built in a straight line, parallel to the bank of the river, and about a mile in length. The first house was built five years since, and there are already more than an hundred, great and small. The ground on which it is built is in general bad; it is a yellow sandy soil, and the town is surrounded by marshes. This is, however, one of the intermediary points between Pittsburgh and Limestone, where the traveller may hope to find most accommodations: Manchester is a town full of mechanics; such as wheelwrights, carpenters, smiths, shoemakers, and taylor.

At the moment of our departure from this place, we perceived, at a considerable distance, something bulky floating in the midst of the river. Not being able to imagine what it could be, since it had neither the form of a boat, nor of drift wood with which the river is often encumbered, we determined to wait a few minutes in

order to gratify our curiosity, which was strongly excited. In about a quarter of an hour, we clearly distinguished a man with a dog by his side, a gun in his hand, and seated on logs of wood tied together, which floated down the stream. When he drew near, we made towards him; but what was our surprise in accosting him, to find in this man the young hunter we had left at Pittsburgh, and who had refused to work on board our boat with the men we had hired for that purpose.

He told us, that immediately after our departure he had himself constructed this small raft, with the intention of proceeding in this manner as far as Cumberland River, where he lived; that he went on shore every evening, fearful of driving against the trunks of trees which floated in the river; that every morning at day break he hunted to procure himself food; that he had killed a fine buck that morning, of which he offered us half, provided we would give him biscuit in return, not having been able, for want of money, to lay in a sufficient quantity at Pittsburgh. We gave him twenty-five biscuits, but he would not accept them, till we had taken in exchange half of his game; we offered him powder and shot, which he also refused, though his store was much diminished, observing to us that he had nothing to give in return; and then quitted us, letting his raft drive down the stream.

The reader will no doubt be gratified in observing in this young man, that noble character of independence which induced him to reject offers by which he would have incurred obligations. Amidst those vast deserts, on a river which, from his mode of travelling, exposed him to great dangers, with no means of subsistence but such as chance and his courage could procure, he preserved his independence, because he was not degraded by want. Independence is indeed a refuge against a multitude of evils, and the man who is in the enjoyment of that blessing is far beyond the reach of fortune, and is rich in his own resources.

A mile from Manchester, we left on our right a small creek, called Izick's Creek. Both chains of heights at this spot close in upon the river, and no flat lands are to be seen; the left side is, however, well inhabited.

Three miles and an half below Izick's Creek, and after passing, on the left, a very small creek which has no name, we reached Cabin's Creek, which is somewhat considerable, but so full of rocks and falls that it is not navigable. Both chains of heights at this point are extremely elevated, and the bed of the river being hemmed in, the depth of water is consequently greater; from Manchester to Cabin's Creek, the river is from twenty-five to thirty feet deep.

Two miles and an half lower than Cabin's Creek, we came to Brook's station, which is a very fine farm. Here the two chains of heights begin to fall back, but chiefly that on the left. The whole of this side is perfectly well inhabited, though the soil appeared to us yellow and light.

After descending four miles further, we reached Limestone.

CHAPTER VIII.

KENTUCKY.—*Limestone.*—*Washington.*—*North Licking Creek.*—*Lee's Creek.*—*Johnston's Fork.*—*Blue Lick.*—*Licking River.*—*Miller's Burgh.*—*Bourbon.*—*Observations.*—*Lexington.*—*Frankfort.*—*Nature of the Country.*—*Hemp.*—*Population.*—*Emigrants.*—*First Class.*—*Second Class.*—*Third Class.*—*Free Men.*—*Old Forts.*—*Commerce.*—*Comparative Sketch.*

LIMESTONE is a very small town on the left of the Ohio, at the foot of a steep mountain, and which, from the narrow space between the hill and the banks of the river, can never be very populous ; it is, nevertheless, the depôt of whatever goods pass from Baltimore and Philadelphia to Kentucky, as well as the halting-place of all travellers who visit these countries. At Limestone, however, few resources are to be found ; the inns are wretched public houses without provisions, and the little that can be obtained is procured with difficulty and at an exorbitant price.

On quitting this town to visit the inland country, we ascended a very steep and difficult hill, full of large stones, many of which were loose; but this is the only road for waggons and carriages to convey such goods as are brought in boats to Limestone for the stores of Kentucky. When we reached the plain at the top of the hill, we found the road less difficult and stony: after descending one hill which was more gentle, and mounting another, we passed a rivulet near which are three roads: those on the right and left only lead to farms, and to a country that is uninhabited: we followed the middle road across the woods, and at the end of a mile found two roads, the left of which leads to Brook's Town, and the right to Wood's Mill; the last is the road to follow. A mile further the road divides again; that on the right goes to Braken, a small town newly built: we followed the other for a mile and an half, and reached the town of Washington.

Washington is situated in the midst of a vast open plain, which gives it a barren aspect, though the soil is not bad. This town is very regularly built, and contains about two hundred and fifty, or three hundred inhabitants: the houses are almost all of wood; two or three only are built of brick. There is a court-house, and several stores, two or three of which are excellent; the appearance of the country, however, deprived of water, presents a dull sameness.

From Washington to North Licking Creek, we traversed three miles and an half of better road than that we had left behind: at this creek, there is a very good bridge. The river is never fordable in any season; the banks are steep, the bottom muddy, and the land on each side marshy, which in time of war would render this an important defensive position: from this bridge to Lee's Creek, we proceeded three miles across woods that are uninhabited, and a country interspersed with small heights. Lee's Creek is fordable at all times.

After passing Lee's Creek, we came to a flat and level country which is well inhabited, containing fine lands that are plentifully watered; and a mile below Lee's Creek, we reached Mazelack Tavern, which furnishes good accommodation.

Five miles from Mazelack's Tavern is Johnston's Fork: the four first miles lie across a fine plain perfectly well cultivated, and the fifth forms a gentle descent. We forded Johnston's Fork, which is a small branch of Licking River, and then ascended a hill for the space of a mile, that is woody and uninhabited; on reaching the summit, we found a plain five miles in extent, which is also without any habitation: at the end of this plain, we passed a rivulet, and descending two miles a very steep road full of stones, came to Blue Lick.

The whole of the country from the plain is dry and open, strewed with rocks, and consequently barren; the only objects of vegetation we descried were a few small pines peeping above the crevices of the rocks; every thing else around bears the marks of sterility, desolation, and sadness. We found a poor salt manufactory at Blue Lick, which probably has acquired its name from the salt spring, the color of its water being of a very fine blue; on tasting this water, I found it scarcely brackish: it requires a thousand gallons to make a bushel of salt weighing fifty pounds, which sells on the spot for twenty shillings of Virginia (three dollars and an half). We may conceive what must be the consumption of wood to obtain so considerable an evaporation, and thereby judge of the little value of the spring, since the forests around must be speedily wasted: the mode of manufacturing, too, is extremely vicious, and similar to that which I have already described in treating of the salt works at Vunce's Burgh.

At a very small distance from Blue Lick we reached the principal branch of Licking River, which we passed in a ferry. Five hundred yards below this ferry is a bank of calcareous stone, which is dry when the waters are low, and stops the navigation during two or three months of the year. Except in seasons of drought, this river is navigable one hundred and fifty miles for the largest boats.

After passing Licking River, we came to a desert country composed only of masses of rock : we journeyed eight miles along a road which was almost impracticable, from the immense quantity of ravines and enormous stones with which it is encumbered, and found on our way a wretched hut inhabited by woodmen and hunters. Four miles further on, we reached a small town called Miller's Burgh; the country, during these last four miles, is less desert, and contains a few habitations ; but the general aspect, for the space of twelve miles, is bad; the lands are poor, and the wood small and stunted.

Miller's Burgh, marked on the map by the name of Hingston, is agreeably situated on a small creek called Hay's Creek, the waters of which empty themselves into the southern branch of Licking River, which is navigable at all times for boats and barges to the Ohio, beginning five miles lower down than Miller's Burgh. The land four miles on this side of Miller's Burgh is of a better quality; the value of that near the town is from six to eight dollars per acre; a lot of half an acre in the town costs already two hundred pounds, or five hundred piastres.

Leaving Miller's Burgh, we forded the creek, the road from which turns quite short to the left, and that on the right leads only to the woods. Crossing a plain finely cultivated, and proceeding eight miles, we reached Bourbon

Court House, situated between the southern branch and a small arm of Licking River, which forms an island five miles below Cheap's Mill, where that river begins to be navigable. Notwithstanding the inconvenient situation of this town, there are already two hundred houses built in stone, and thirty or forty stores or warehouses.

Though the river is deep, yet its banks in general are low and firm, and its bed excellent; it presents, therefore, in a military point of view, from Cheap's Mill to its source, but very feeble means of defence. Were it not for the facility of passing this river in all seasons with an hostile armament, Bourbon Court House would perhaps be one of the best defensive posts in all the habitable part of Kentucky, being situated on a fine elevated plain, commanding a very considerable distance in all the points of its circumference, and bounded by two branches of the river to its sources: this position seems destined, at a future period, to be the central defensive point of Kentucky.

After travelling nineteen miles from Bourbon Court House, across a great and extensive plain, sometimes grouped with woods, and sometimes interspersed with farms, equal for the construction of the buildings and the cultivation of the land to any in Europe, we reached Lexington. This town is situated in the midst of a vast plain as open as that of Philadelphia, and on which there

is not a tree to be seen four miles around ; a whitish soil without water, and a burning sun in the month of July, are all we found and felt in the neighbourhood of Lexington. The town contains from three to four hundred houses, the greater part built of wood, and arranged regularly in two parallel lines running south-east and north-west: a square is left at the central point, in the midst of which a court house is erected. As this town has no navigation, it is presumed that its increase will not be great, and that Frankfort will be the real place of commerce.

Four miles from Lexington, we forded one of the sources of the River Elk, called Wolf's Run, which is not navigable, being only a rivulet, and throws itself into that of Kentucky. From hence we travelled eighteen miles over a woody and uninhabited country, during which space we crossed three other small rivers, which are also branches of the Elk, but less considerable than the first; and arrived at Frankfort, leaving, at three miles distance, a wretched inn, the only one to be found between this place and Lexington.

Recapitulation of the distances from Limestone to Frankfort :

| | Miles. |
|------------------------------------|------------------|
| From Limestone to Washington . . . | 4 |
| — to North Licking Creek | 5 $\frac{1}{2}$ |
| — to Lee's Creek | 3 |
| — to Mazelaek Tavern | 1 |
| — to Johnston's Fork | 5 |
| — to Blue Lick | 8 |
| — to Miller's Burgh | 12 |
| — to Bourbon | 8 |
| — to Lexington | 19 |
| — to Frankfort | 22 |
| Total | 85 $\frac{1}{2}$ |

Frankfort is situated on the right side of Kentucky River, in a bottom surrounded with heights, across which the waters have opened a passage ; the banks on each side of the river are often bordered with cliffs from two to three hundred feet in height : there are, however, small intervals between the heights, which form vallies. Amidst these irregularities, and in one of the vallies on the right, is the town of Frankfort, which has a very picturesque aspect. Kentucky River is navigable ten months in the year for the largest boats, as far as the Ohio : this

great advantage to trade has already determined a great number of merchants to establish themselves at Frankfort; and it is probable that in ten years this town will have twice the population and wealth of Lexington.

The whole of this part of the State of Kentucky is in general hilly, but without mountains. One peculiarity in the quality of the lands, and which perhaps does not exist in any other part of the United States, is, that those situated on the summits are much better, and have greater depth of loam than these in the vallies: these fine lands have, however, one very bad quality; they produce naturally no herbage, or very little, fit for pasturage; there is not the least appearance of twitch-grass; and clover, so common in every other State, is here very rare: this inconvenience obliges the farmer to form artificial meadows, which is attended with great expense, and a loss of time which is peculiarly precious to new settlers. It must, however, be observed, that when once these artificial meadows are in crop, they produce a third more than others, and those especially which are sown with trefoil are extremely fertile.

Among the agricultural productions, that which engaged our attention, and which undoubtedly is the most interesting, was the article of hemp: in this part of the continent, it appeared to us in general to be badly dressed,

very coarse, of a black color mixed with a grey tint, and moist to the touch: on inquiring the cause of this inferiority, we were informed by the most intelligent farmers that it arose from local circumstances, of which the following is the explanation.

The lands in the Western States are so extremely fertile, and the vegetation so strong, that the stalk of the hemp grows to an extraordinary height and prodigious bulk, and with such astonishing rapidity, that it seldom comes to perfect maturity. On examining the stalks at the harvest, it is found that they remain green more than six inches above the root, though the upper part is yellow; and being pulled in this state, according to the European custom, they preserve their vegetable moisture, which renders them liable to fermentation. The cables manufactured with this kind of hemp, although thickly covered with pitch, constantly swell, rot, and break; and so great are its defects, that notwithstanding the proximity of the Havannah, and the demand of the Spanish marine for this article, orders are given to receive no more of this hemp into the storehouses of His Catholic Majesty.

The State of Kentucky, justly alarmed at the discredit into which so precious a branch of industry had fallen, lately named a commission to inquire into the means best fitted to remedy this great defect. The Commissioners

stated in their report, that until the air and the sun had had time to dry up that excessive moisture which is common to lands newly cleared, and ripen them, it was indispensable, instead of pulling the hemp, to cut it five or six inches above the root, in order to suppress the noxious part. Experience has fully justified this new mode of proceeding ; and the Chamber of Representatives passed a law, declaring *that all hemp, not cut conformably to the new regulation, should neither be reckoned saleable nor be exported.*

The population of Kentucky has not augmented for two or three years past: the dearness of land, and especially the uncertainty of tenures, which keeps purchasers in endless lawsuits, and frequently exposes them to be put out of possession after the expenses they may have incurred in clearing and cultivating, have prevented emigrants from settling in this part of the country, and led them to prefer the north-west territory, where the land is equally good and better watered, and where the titles are indisputable. Several inhabitants of Kentucky have taken this resolution ; and if the federal government do not adopt measures to put an end to this multitude of claims, this State, far from augmenting, will decrease.

The different points to which the emigrants, at present, direct their attention, are---First, the Geneseeys,

situated on the back of the State of New York; Secondly, the Western States, such as Kentucky, the north-west territory, and Tennessee : of these different States, the most in favor at present is the last.

The States which furnish most emigrants are those of the east; some from the centre, such as Jersey and Maryland; and almost all those of the south, in a greater or less degree.

The emigrants of the Eastern States establish themselves in general on the Ohio; but as many in their journey traverse the Genesee, the beauty of that country, and the facility of communicating with the ocean by the inland canals,* lead them to settle there; and this accidental increase of emigrants, together with those who go for the express purpose of forming establishments, makes it probable that the State of New York will be, of all such as have lands in the back settlements, the first peopled; and this period cannot be more distant than ten years.

The emigrants from Jersey and Maryland take their direction also towards the Ohio, but follow the lower roads from Philadelphia and Baltimore, which join both at

* The Mohawk River traverses the Genesee, and throws itself into the Northern River, and this river into the sea.

Pittsburgh and on the Monongahela : they commonly spread themselves on both sides the river, as they descend the Ohio ; but it is observed, for these two years past, that they settle rather on the right than the left, particularly on both the Miamis, the Muskingum, the Great and Little Scioto, the Wabash, etc.

Those who emigrate from Virginia and North Carolina go to Kentucky ; Tenesse is furnished from both the Carolinas and Georgia.

The mass of this population is divided into three classes, each of which, placed in different lines, have their respective departments ; and according to their occupation, fortune, and particular character, may be ranked under the following denominations.

The first class, called *Forest Men*, holds the first line on the side of the Indian nations ; these, properly speaking, are Nomades, who do not cultivate lands, and who have no other employment than hunting, making excursions into the woods, and trafficking with the Indians : they often pass whole years amidst deserts, and have no fixed abode : a hut, covered with the bark of trees, and supported by two poles ; a large fire placed on the side of the opening ; a great blanket, in which they wrap themselves up when they sleep, placing their feet towards the fire and their head in the cabin ; these are all that is necessary

to shelter them from the inclemency of the weather, and to pass the longest and severest nights. When they perceive that the game diminishes, and that the increase of the population requires the establishment of a court house, they retreat forty or fifty miles farther back, to find what they call better means of living and more liberty, "wishing" add they "to have nothing to do with justice."*

The next class to the Forest Men is that termed the *First Settlers*, who form the second line. Although these have much analogy with the first, they are, however, more fixed, depend less on hunting for subsistence, rear cattle, clear certain portions of land, but never more than they need; and as they are less vagrant, they are more careful in the construction of their habitations; their dwellings are a kind of small block-houses, larger at the top than the bottom, with crannies above and below, and surrounded with a great palisado twelve feet in height: these block-houses are built with trunks of trees, the intervals between which are filled up with clay mixed with chopped straw; the roof is covered with bark or boards: the chimney consists of a pile of stones placed at the extremity of the apartment, in the roof of which is a hole for the smoke;

* "There is but one thing I fear on earth," observed one of these wanderers to me, "and that is what men call their laws and their justice."

and another hole is made in one of the sides of the house, which serves for the admission of light, and is of course the window. In winter an immense fire is burning day and night; in summer a continual smoke is necessary, as a defence against the moschettoes, with which the woods are commonly filled: the same precaution is taken for the cattle, by collecting in the pasturages, or some other place that is cleared, branches and dead leaves, which are covered with earth after they are set on fire, and where the animals never fail to go and lie down every evening, in order to keep themselves from the insects. A great quantity of hogs are reared, not only as useful for the wants of the family, but as one of the speediest means of destroying serpents and other reptiles.*

These First Settlers often excite the vengeance or cupidity of the Indians, who sometimes go and attack them in their dwellings. In such rencounters, the American defends himself with courage; his wife does not hesitate to take a musket, and, placed by his side at one of the crannies, fires on the invader; the children also take part

* The hogs are very fond of serpents; they generally catch them by the tail, and eat them successively as far as the head, which they are careful to let drop; meanwhile the serpent twines around the hog, and bites him on the right, the left, and every part of the body, without however doing the least injury to the animal.

in the engagement. As long as the savages fail in surprising these kind of houses, or in setting fire to them,* their attack is in general fruitless, and the American remains unassailable; but he is then condemned to remain shut up for whole months for fear of being surprised, or until by presents and negotiations he has appeased the rage of his enemies and made peace.

These First Settlers remain in general but four or five years on the same spot; after which, the population continually increasing, they make way for the *Great Settlers*, who form the third line and are the real husbandmen; from these they obtain certain indemnities, not for the purchase of the land, which in general does not belong to them, but for the slight clearings which they have made, and also as the price of their friendship.

The Great Settlers are composed of good farmers, emigrating from the different States, as we have already mentioned; and who, having too numerous a family, go back to look out for other lands of greater extent, and at a cheaper rate, in order to settle each child on a different farm. But from the independence which his little fortune

* The Indians set fire to these dwellings, by tying to their arrows a piece of dry bark which they set on fire, and which, shot into the roof, puts it immediately into a flame.

gives him, he is prudent, and looks to his own security as well as to that of his family. He takes care not to settle too close to the Indians, but puts his property under the protection of the laws, and places himself, therefore, in the third line; that is, in a spot where the population is sufficiently great to require a civil organisation.

When the great settler has taken possession of his new lands, the block-house of his predecessor is soon destroyed, and a good wooden house is built in its place. He forms his homestead, clears larger spaces of ground, lays out meadows, plants orchards, and lives in security, plenty, and happiness.

It is easy to conceive that the children of such men, accustomed early to hunting, to distant courses, to felling trees, opening roads, and braving the inclemencies of the seasons, become themselves soon in a state to form establishments, and to acquire that love of liberty, that honorable pride, which belongs to every man who owes his happiness, and that of his family, only to his own industry and labor.

Such men must also be endowed with a considerable portion of courage, be capable of the hardest undertakings, and find no obstacles in deserts or mountains; and if we add to these physical qualities that noble and sublime sentiment of independence with which they are

penetrated, it ought to excite no astonishment, if, in a military point of view, we consider them as the class of men in America best fitted for war. It is, therefore, only among such that we find traces of the austere and simple manners of their ancestors, that hospitality which heretofore formed the ornament of the Old States, and where we might still dare pronounce the name of liberty. Arbitrary laws have no authority over these people; men who can satisfy themselves with the enjoyment of their primitive rights, and with a certain subsistence, have need only of their will and their courage in order to remain free.

Kentucky is filled with old forts, on the origin of which the inhabitants entertain but very vague notions; and as their forms leave no doubt but that they were constructed by Europeans, our astonishment redoubles when we reflect what kind of men must have been those, who penetrated so far inland, amidst desert regions, far from rivers and every kind of navigation, without roads, without means of subsistence, and amongst the most savage nations, such as were the Delawares.

The fort, which we sketched at the time, is situated between Lexington and Frankfort, nine miles distant from this last town, and on a small river, called Elk River.

On examining it with attention, we thought at first that the ditch was the remains of an old channel, opened to bring the water for the use of some mill, at the time the first settlements were made in these countries; and it was only after making the tour that we were convinced of our mistake. The six fronts, which form an irregular hexagon; the parapets behind the ditch, and which, notwithstanding the length of time, are still very easily to be traced on the ground; the entrance which is covered by two small turrets on a little eminence, which commands the fort at a slight distance; a kind of small horn work; and a redoubt placed in front of the fort, are circumstances which leave no doubt that the work was constructed by Europeans, and even by persons well versed in fortification.

The difficulty of explaining how military men could, against all kind of rule, according to the modern principles of fortification, place this fort in a hollow, commanded on all sides, was the most embarrassing circumstance in our hypothesis. But upon reflecting on the kind of war which the Europeans had then to sustain against the natives, unprovided with fire-arms, never warring but by stratagem or surprise, and always in the open field, we thought it probable that the choice of this place had been determined by the river Elk, the fine and healthy

waters of which were made part of the defence, by turning them from their natural bed into the ditches, where the soldiers might daily draw their water without exposing themselves to be massacred, particularly by the natives who surrounded them, in going without the fort. It is certain that the waters of this river entered by one of the extremities of the fort, and emptied themselves by the other; and there are still to be seen the remains of dykes, which were meant to retain the water when it was too low.

We endeavoured to procure some information respecting the nation, which at so remote a period could have erected such works as these. The received opinion in the country is, that they were constructed by the Spanish General De Soto, who made, about two hundred years since, an excursion on the left bank of the Mississippi, and who penetrated so far into the country that he was obliged to winter there with his army; but the Spanish historian who records this fact, states as positively that he never passed the river Tennessee. We are led rather to believe that these forts were built by the French at the time they were in possession of the course of the Ohio, when they penetrated into this part of Kentucky to carry on the fur trade; and that knowing the perfidy of the nations which inhabited this country,

they constructed these forts, to shelter themselves from the attacks of the Indians. We were confirmed in this idea by observing, that from this fort, in a straight line, and across the woods, it is not above sixty miles to the Ohio. These forts, it must be remarked, are constructed only with earth, and without any masonry or stone-work whatever.

A convenient situation for commerce is the principal point on which the riches and happiness of a state depend. A great prejudice, in this respect, exists against the Western States. I own that when I arrived in these countries, I had myself adopted the erroneous opinion, that there is no better way for the conveyance of goods into these states than by Philadelphia and Baltimore to Pittsburgh, and from thence down the Ohio; and that on account of the difficulties and expense attending this conveyance, the goods would be always too dear.

But better informed on this important question by the exact researches which I made on the very spot, I was convinced, as the following table will show, that this opinion was the effect of ignorance, or of the policy of the merchants of Philadelphia or Baltimore, who are interested in the support of this error.

A COMPARATIVE TABLE

*Of the expense of conveying merchandise to Upper Louisiana, and the Western States of America, by following the course of the Mississippi; and of the price of carriage into the same countries, by the way of Philadelphia and Baltimore, as at present practised.**

FIRST COMPARISON.

By Philadelphia or Baltimore to Knoxville, the capital of Tennessee.

From Philadelphia or Baltimore to Pittsburg, situated on the head of the navigation of the Ohio, the distance by land is 320 miles, and requires 60 days for a waggon to go and return. The expense per hundred is 5 dollars, or for 25 tons, doll. 2500

From Pittsburg to Knoxville, the distance by water is calculated at 1300 miles, which requires 130 days for a boat to go and return; which boat, containing 25 tons, has usually 10 men at one dollar each per day, 1300

Total expense for 25 tons by Philadelphia or Baltimore through Pittsburg to Knoxville, going and returning dollars 3800

By New Orleans to Knoxville, the capital of Tennessee.

From New Orleans to the junction of the Ohio with the Mississippi, the distance is estimated at 1200 miles. The time to mount the river and return is 90 days, with a boat, containing 25 tons, and 20 men, whose wages at one dollar each per day is doll. 1800

From the mouth of the Ohio to Knoxville, the distance is 650 miles. The time for a boat to mount and return is 65 days; which boat, containing 25 tons and 10 men, at one dollar each per day, is 650

Total expense for 25 tons by New Orleans to Knoxville, going and returning, dollars 2150

Difference in favor of the transport by New Orleans, 1350 dollars, which is nearly 56 per cent.

Saving of time, 55 days.

* For this purpose let us suppose two vessels of equal tonnage, and the same kind of merchandise, to sail from Bourdeaux or London; the one for

SECOND COMPARISON.

The comparative expense of transporting merchandise by New Orleans or by Philadelphia and Baltimore to Upper Louisiana.

From Philadelphia to St. Louis, the capital of Upper Louisiana.

From Philadelphia to Pittsburgh the transport by land of 25 tons will cost, as before calculated, doll. 2500

From Pittsburgh to the junction of the Ohio with the Mississippi the distance is calculated at 1300 miles, which voyage up and down the river is made in 60 days, by 10 men to the 25 tons, at one dollar each, 600

From the mouth of the Ohio to St. Louis is 120 miles, which requires 15 days to mount and return with a boat of 25 tons and 20 men, at one dollar each, 300

Total to go to St. Louis and return to Philadelphia, dollars 3400

From New Orleans to St. Louis, the capital of Upper Louisiana.

From New Orleans to St. Louis the distance is 1450 miles; a boat with 25 tons and 20 men makes this voyage, mounting and returning, in 100 days, at one dollar each per day, dollars 2000

Economy in favor of transport by New Orleans and the Mississippi, 1400 dollars, which is nearly 45 per cent.

Saving of time, 55 days.

Philadelphia or Baltimore, which are at present the depots for such European goods as pass into the western country, the other for New Orleans: which of these cargoes can be transported the cheapest into the Western States and Upper Louisiana?

In these calculations, the expense of carriage by Philadelphia or Baltimore and Pittsburgh are estimated only at five dollars the hundred weight, but the common price is from seven to ten dollars; we paid ourselves as much as eight dollars, which is still in favor of the Mississippi.*

* While we are employed in detailing circumstances relative to this immense and interesting river, events have taken place which will remove every rivalry to its commerce, and render it one of the most animated scenes of the industry of man. Of these events, the first is the cession of Louisiana to the United States of America, which secures a free and indisputable navigation throughout the whole length of the Mississippi to the gulf of Mexico: this, with the confidence which the free, mild, and equitable government of America inspires, will draw a great mass of population from Europe, and even the northern states of America, to Upper Louisiana and the borders of the Mississippi: with the increase of population, the produce of industry and mercantile enterprise will augment; and a more general and variegated commerce will be introduced into the country than is now practised. Such increase of the articles of trade will stimulate a desire to expedite the transfer from New Orleans to the interior country, and render it less expensive; hence one of the first cares will be to improve the navigation of the river.

The second event is the late successful experiments which have been made for navigating boats by the power of steam engines, and which is particularly advantageous to the Mississippi and other long rivers of America. The length of time and greatness of expense which are required to ascend the Mississippi, is not owing to the rapidity of the stream, but to the necessity of using men to row or haul the boats; that river running through a country

With respect to the difficulties in going up this river, we think we have sufficiently proved that they are chimerical; this passage, moreover, is practicable at all seasons, and without any carrying places with barges of

yet uncultivated, has its margin covered with forests and marshes, or bordered by stupendous rocks and cliffs; so that as yet horse-paths for hauling boats are not made, and perhaps cannot be made for a great number of years: horses, therefore, cannot be used to aid navigation as on the rivers in Europe; hence the work is performed by men, which is the most imperfect mode of navigating rivers, in consequence of the expense of men and their feeble powers, compared to horses. The daily expense of a man is equal and usually more than the daily expense of a horse, while the power of the horse is equal to five men in ordinary labor; but compared to men who row a boat, and take their purchase on the water, while the horse has his purchase on land, one horse is equal to twelve or fifteen men, and two horses would certainly draw a twenty-five ton boat much faster against the current of the Mississippi than such a boat can now be navigated by twenty-five men. Consequently, if horses could be used as in Europe, the expense of transport would be diminished more than one half. But the navigation must continue to be performed by men, and the inhabitants of that beautiful and fertile country must labor under the present heavy and discouraging expense of the navigation, until science produces some better mode. This we feel confident will be effected by the steam boats; the experiments made in the month of July, 1805, on the Seine, near Paris, on a boat containing an engine of eight horses power, has been on a scale sufficiently large to exhibit the powers and expense of such a machine, and reduce them in all cases to mathematical demonstration; and it is found, that on all rivers, such as the Mississippi, where horses cannot be

an hundred and twenty thousand weight; whilst by the way of Philadelphia, the badness of the roads, and the difficulty of crossing the mountains, admit only of four or five horses to a carriage, and of carrying no more

used, and where the expense of fuel is little more than that of cutting or collecting it, the steam boats will diminish the expence of transport at least one half, and economise one third of the time.

Such an improvement of the navigation, and powerful aid to the industry of man, will give vigor to enterprise, and open scenes of activity at present not contemplated, by transporting the ponderous articles whose value is not sufficient to bear the expenses now incurred, and by drawing remote parts into a nearer connexion with each other. Such a facility of transport will present a new inducement to settling in Louisiana, and again add to the produce of labor and commerce of the river. The inhabitants have, therefore, the pleasing perspective of soon seeing their navigation conducted at as cheap a rate as on the rivers in Europe, and the Mississippi, like a liquid highway, carrying down the various produce of the different climates from the fiftieth to the thirtieth degree of northern latitude, and in exchange return the necessities and even luxuries of the Old and New Worlds.

In speaking of the Mississippi there is a good opportunity of making two striking and important comparisons.

First, on the importance of free navigation: in comparing the Mississippi with the Danube, which has its head waters in Suabia, but passes Bavaria, Austria, Hungary, and Turkey, which being rival powers, each one when they think proper can stop the navigation of their neighbour at their boundary; and thus the people on its head waters and Hungary, derive little advantage from its navigation; the inhabitants of Louisiana are much more

than five and twenty hundred weight. At some periods, also, such as the falls of snow, this communication is totally interrupted; and when to these inconveniences are added the still greater of loading and unloading, of warehouse, the expense and loss of time, and the accidents to which goods are more or less liable by way of Pittsburgh; we shall be convinced that the conveyance by New Orleans must obtain a decided superiority.

fortunate by possessing the whole course of the river. Secondly, comparing the Mississippi with the river Amazonas in South America: the Amazonas runs directly from west to east, and gives the same kind of produce throughout the whole of its length, therefore never can have a great interior commerce. On the contrary, the Mississippi runs from north to south, and mingles the tropical productions with the furs of the north; every hundred miles gives new and varied productions, and this circumstance, with a free navigation, will render that river one of the most active scenes on the globe.

*(We are indebted for this Note to Mr. Robert
Fulton, at Paris.)*

CHAPTER IX.

Continuation of the description of the Ohio.—Lawrence's Creek.—Eagle Creek.—Red Oak Creek.—Lee's Creek.—White Oak Creek.—Braking Creek.—Hot Creek.—Well Creek.—Selma Creek.—Observation.—Wild Turkeys.—Little Miami.—Cincinnati.—Licking River.—Fort.—Indian works.—Mill Creek.—Syms's Station.—Observation.

LEAVING Limestone we proceeded four miles, and reached Lawrence's Creek on the left; immediately below which is a sand bank that extends from the mouth of the creek to half the channel of the river. This bank is dangerous only when the waters are neither too high nor too low; being, when too high, covered with a sufficient quantity of water, and when too low, quite bare. By steering to the right, you are sure of finding twelve or thirteen feet of water when it is at the lowest, and twenty when the bank is covered.

Two miles lower, on the opposite bank, is another creek, called Eagle Creek; which having passed, the chain of heights falls off on the right, and that on the left draws nearer; without ceasing, however, to run parallel with each other.

Three miles farther, on the right, another creek empties itself into the river, called Red Oak Creek, which is omitted in every chart.

Two miles and an half below Red Oak Creek, on the left, is Lee's Creek, marked too much to the east on Hutchins's map.

A mile below Lee's Creek is a fine establishment lately formed, called Lee's Station, which contains five or six houses.

Opposite Lee's Station, another small creek empties itself into the Ohio, called Strait Creek. From Red Oak Creek to Strait Creek the water is from eight to twelve feet deep, and the navigation good.

After quitting Lee's Station and descending three miles, we passed, on the right, White Oak Creek. In this passage it is necessary to keep to the right, to avoid a considerable alluvion which is situated on the left, opposite to the mouth of the creek; and which is so much the more dangerous, as it is never uncovered even in low waters; in the channel the depth is ten feet.

About three miles from White Oak Creek we passed, upon the left, Braking Creek. The space on the left between this last and Lee's Creek is much inhabited; but as the heights on the opposite side almost close upon the banks of the river, leaving but a narrow strip of plain ground, this side is literally a desert.

Three miles lower down on the right is Bull's Skin Creek, and three miles farther on the left Locust Creek. Here the heights fall off and diminish; those on the left leave a considerable space of low land between them and the river.

The navigation from White Oak Creek to this point is excellent, and without any embarrassments; the depth of water is constantly twelve feet.

Hot Creek empties itself into the Ohio three miles below Locust Creek.

In the course of the next four miles we found several ravines on both sides, which are dry in summer, and came to a great bend which the river makes towards the north.

After passing this bend, the river takes a straight direction, without any sinuosity, for the space of nearly twelve miles; at the end of which we found two creeks, directly opposite to each other. That on the right is called Twelve Miles Creek, and that on the left Well

Creek. The whole of this space is uninhabited, and without spring water; the left particularly is extremely barren; the greater part of the rivulets marked on the chart being dry during the summer. The navigation continues excellent, and the depth of water is everywhere from ten to fourteen feet.

Three miles and an half below these two creeks, we left on the right a very small creek, called Nine Miles Creek, which is dry during the summer.* Five miles further on the left is Selma Creek.

Excepting a few huts belonging to hunters, from Locust Creek to Selma Creek, the whole distance, which is about thirty miles, was entirely uninhabited. The depth of water is from ten to twelve feet.

In these deserts we saw a multitude of wild turkies, and in such numbers that the trees were literally rendered grey. They are easily to be approached and even killed; but to shoot several, it is necessary to begin with such as are on the lowest branches; the rest do not move, and the whole may be killed in succession by following this method. On the contrary, in firing among those which are at the upper part of the tree, the falling of the birds

* Whenever nothing is said respecting the navigation of creeks, they are always to be considered as not navigable.

through the branches frightens the rest, and makes them take flight. Having, from ignorance, fired into the middle of the tree, I was severely reprimanded by the hunter; but his talent in the art of counterfeiting the voice of every kind of game, soon made amends for my mistake. Placing himself immediately beneath the same tree, he imitated so perfectly the noise of the cocks, that in less than half an hour the tree was covered with turkies, which gave us easily the means, by following his instructions, of killing enough for the whole crew.

This bird, in America, is of a singular size and beauty. Among those we killed we measured some which were three feet from head to feet; the feathers of the body are of a fine ashy grey, and those of the neck and under the wings of a copper color. When exposed to the sun in a certain direction, the plumage is brilliant as gold. Though this bird was excessively lean, it weighed thirty pounds and an half; and I was assured that in the autumn, when they are fattest, some weigh from forty to forty-five pounds. The difference between the turkies of America and Asia, is that the former have longer necks and legs than the latter, and no black feathers on their bodies.

After passing Selma Creek, the aspect of the country changes a little; the heights on the right fall off sufficiently to leave tracts of fine low ground, while those on

the left close upon the river. The country is no longer a desert, and a great number of new settlements are formed on the right.

From Selma Creek to the Little Miami River, at the confluence of which is Columbia, we reckoned four miles.

The spot on which Columbia is situated had been originally destined to form a town; but after having settled several farms, traced the plan of the town, and formed other establishments, so violent an inundation took place in 1794, that notwithstanding the great elevation of the banks, which are more than forty feet above the ordinary level of the river, the water rose six feet higher, entered into the greater part of the houses, and carried several away. The idea of building a town in this place was then abandoned, and the great establishment of Cincinnati was projected nine miles below. Four or five houses are all that now remain of the town of Columbia.

Little Miami River is from sixty to eighty yards wide at its mouth; its banks are extremely steep and almost perpendicular. It runs on a muddy bottom, formed of sand and clay, is navigable only for small boats, and that only in high waters: the navigation in ordinary seasons is intercepted by a multitude of great rocks, which often form strong currents or falls. The lands which this

river waters near its mouth, are subject to inundations for the space of seven miles, when the country becomes hilly, and the soil rocky and stony. The whole of this space is in general without springs, and those which are found near the banks are brackish.

On the same side on which Columbia is built, is a sand-bank adhering to the side of the river, filling up half its bed, and covering nearly forty acres. On reaching Little Miami it is necessary to keep on the left side, at the distance of fifty yards, where there is four or five feet of water; nearer to the left the water becomes deeper, and is from ten to twelve feet, close to the bank.

At some distance from Columbia the river makes a great bend towards the west. The salient point is formed by an alluvion, which it is highly necessary to avoid, by keeping to the right, where the river is nine or ten feet deep. After passing several neat habitations, we reached Washington or Cincinnati.

Cincinnati is situated on one of the finest spots in America; the ground on which this town is built rises gently from the banks of the river. On the opposite shore falls the river Licking, which waters a part of Kentucky; at its mouth a small town has been lately built, called Newport, and which will be the depôt for all goods coming down from Licking. The view of this town and

the course of the river present the most pleasing perspective from Cincinnati.

Behind the town of Cincinnati, and on the height, is an old fort with four bastions, built of wood, which was abandoned and become useless after the treaty of peace made with the Indians; the frontier line having been carried very far back into the country.

At the extremity of the town, in the western part, is an Indian building, having the form of a rotundo. Here the Indians held their councils, made their sacrifices, and celebrated their feasts. If we may judge from the size of the trees which have grown up since its construction, this senate-house must be very ancient.

Had it not been for the persecutions with which we were menaced by General Waine, who had received orders to arrest us, we should have taken a plan of this building; but it was prudent to keep ourselves on our guard, and depart as speedily as possible.

The town of Cincinnati, which was begun only five years since, contains already three hundred families; this sudden increase it owes to the abode of the army.* The spot offers no advantages for commerce; and it is probable

* This army was composed of fifteen hundred men, commanded by General Waine, and destined to act against the Miami Indians.

that when the army shall have left this place, whatever industry it possesses will be carried to the little town of Newport, which, by means of the navigation of the Licking, offers every kind of advantage for trade.

The lands on both sides of the river are of the finest quality, and being more than sixty feet above the ordinary level of the water, are entirely out of the reach of inundation.

From Cincinnati to Mill Creek is two miles and an half. In this space the heights, which generally run along the Ohio, fall off to the north and south, and leave a wide extent of level ground, the fertility of which continually invites emigrants to settle. Both sides of the river are already well inhabited. The navigation from Cincinnati to Mill Creek is excellent, with ten or twelve feet of water.

At Mill Creek the two chains of hills close in again on the banks of the river, and leave but little extent of level ground. After eleven miles of very excellent navigation, with a depth of water from nine to fifteen feet, and passing several ravines which are dry during the summer, we reached Syms's or North Bend Station, situated on the right side.

Colonel Syms is the greatest proprietor of land in the north-west territory, and if the possession of a vast desert

is what constitutes wealth, he is certainly one of the most opulent men in the Union. He has collected on this spot a number of poor families, to whom he has sold lands with reserve,* and has already traced the plan of a town, which is to be called North Bend. The river makes a very considerable curve in this place.

We saw here, for the first time, several small paroquets of the green species, with yellow necks. We were surprised to find this bird in so northern a latitude; but the inhabitants informed us that these paroquets were never seen but during the summer, and that at the approach of autumn they disappeared altogether.

The navigation from Syms's station continues excellent; the depth of the water is from ten to twelve feet during six miles, when we reached the river of the Great Miami, having passed in our course a few habitations on the left. The right bank immediately below Syms's Station is commanded by heights, which at the end of two miles fall back and leave a large tract of level ground extending as far as the river of the Great Miami.

* We shall explain in the chapter which treats of the policy of the Federal Government, the meaning of selling with reserve.

CHAPTER X.

Great Miami.—Tanner's Creek.—Hogann's Creek.—Woolper's Creek.—Omission.—Big-bone Creek.—Observation.—Steel's Creek.—Elk Creek.—Craig's Creek.—Nine Mile Creek.—Error in Hutchins's map.—Kentucky River.—Little Kentucky.—Omission.—Eighteen Mile Island.—Twelve Mile Island.—Harrod's Creek.—Middle Island.—Beautiful prospect.

THE Great Miami is from two hundred to two hundred and forty feet wide at its mouth, from whence, for the space of fifteen or twenty miles, it is obstructed by a multitude of large trees and sand-banks, which render the navigation extremely difficult. It deposits a part of these incumbrancies in the Ohio, which obliges the navigator on that river when he passes before the mouth of the Great Miami, to use great precaution in order to avoid those dan-

gerous shoals. This is effected by steering towards the left before reaching the mouth of the river, where a great sand-bank adheres to the right side, and which is easily recognised by heaps of immense trees piled one upon another, and never entirely covered. The channel during the space of half a mile is in the middle of the bed of the Ohio, after which it is necessary to steer to the right to avoid a bank of clay which joins the land on the left, and extends as far as the middle of the river. This bank is so much the more dangerous, as it can only be discerned in seasons of great drought. By following the track we have indicated, twelve or thirteen feet of water may be found.

After having passed the Great Miami, the country becomes extremely flat, particularly on the right, where the mountains disappear altogether. They lessen also on the left, but are still descried. The quality of the land is extremely variable, sometimes sandy, sometimes mixed with gravel, but generally bad. The trees are small and stunted.

A considerable creek, called Tanner's Creek, discharges itself into the Ohio on the right, three miles and an half lower than the Great Miami. It is marked on Hutchins's map as if it were only a rill; it is nevertheless forty-five fathoms in breadth, and is navigable for canoes

thirty miles above its mouth ; it flows through low lands which are extremely fertile.

A mile and three quarters below Tanner's Creek we left on the right a small creek, called Wilson's Creek ; and another a mile further, omitted altogether on Hutchins's map, called Hogann's Creek.

From the Great Miami to this spot the navigation is every where the same, without impediment, and from twelve to fifteen feet of water. The mountains on the right close in towards the bank, whilst those on the left, which are somewhat higher, fall back.

Opposite Hogann's creek, on the left, are two small sand-banks, which are dry when the waters are low ; these may be easily avoided by steering a little to the right, where the soundings give twelve feet of water.

Immediately after passing these two sand-banks, we reached, on the left, Woolper's Creek, which is navigable ten miles for canoes. On the right side opposite is another small creek, called Lohory's Creek : these two last are three miles from Hogann's Creek.

Three miles below Woolper's Creek we left on the right an island, not noticed in any map, and of which we made the tour, in order to ascertain the fact, and to avoid mistakes. The channel on the right is practicable

only when the waters are high, having a sand bar across it; on the left there is every where twelve feet of water.

We named this island Paroquet Island, on account of the immense number of those birds which are found upon it. Here the Ohio makes considerable windings, and its banks, which strongly hem in the river, are quite uninhabited.

Seven miles below Paroquet Island, and on the left, is Gunpowder Creek; and a mile and a quarter lower, Landing Creek, which we passed on the left, and proceeding two miles further reached Big Bone Creek.

Although this creek appears more considerable than others on the chart, it is only navigable in very great freshes. When the water is at its ordinary height, the rocks with which the bed is filled, form falls and cascades; in summer it is almost dry.

Big Bone Creek is celebrated for the enormous size of the bones found on its banks, which bones must have been those of some animal infinitely greater than any of those known in North America. There is no doubt that such an animal has existed, but we know nothing of its origin, character, or species, respecting which so many fables have been invented by ignorance.

Determined to judge from the evidence of our own

senses, we repaired to the spot where these bones are found in the greatest quantity, accompanied by three men, provided with tools fit for digging.

After traversing the woods six miles, we came to a great salt marsh, near which is a small salt manufactory. We were desirous of seeing the bones, but there were none above ground. Mr. Carnel, proprietor of the manufactory, led us back to the salt marsh, where he assured us we should not fail of finding them. We worked during three days, and obtained twenty-four pieces of bone of different sizes, of part of which the following is a description.

1. A piece of the lower jaw-bone, containing two teeth still well fixed; this piece is one of the most curious which we brought away: the portion of jaw-bone and the teeth weighed sixty-four pounds. One of the teeth was remarkable for six great points, extremely sharp, growing out from the extremity; the other close to it was, on the contrary, extremely flat, resembling those of animals that chew the cud.

2. The extremity of an eye-tooth, and which from its figure and proportions appears to have been the sixth part only of a whole tooth; this seemed to have belonged to a carnivorous animal.

3. A tusk, four feet three inches long, of a flat and crooked figure, and somewhat rounded at the extremity.

4. Three bones making part of a fore leg; the shank; the bone from the knee to the shoulder; and the shoulder blade to the withers; which three pieces joined together were twenty-one feet three inches in length. Supposing this length augmented by the foot and the flesh which covers in general the withers of quadrupeds, we may form an idea of the size of the animal. We could not carry away these three last pieces on account of their weight; the others we carried with us to Philadelphia. No trace or vestige whatever of the foot of this animal remains; these bones were found only in the marshes, and at a depth not exceeding four or five feet.

I shall not here notice all the absurd stories which were related to me respecting the causes of the destruction of this animal; what appeared to me evident was, that neither the whites nor the natives could give any satisfactory account respecting either its existence, or the places where its bones are found.

The only probable conjecture is, that these animals were attracted hither by the salt water; that the Indians, placing themselves in ambush, killed them on these spots, and taking what they thought proper of their flesh, left

their bodies to putrify in the air. The mud and sand having in process of time covered the remains of the animal, the bones were preserved by the salt water. The slight depth at which they are found renders this conjecture highly probable.

A little below Big Bone Creek, and on the opposite side, is a sand-bank, which may be avoided by keeping to the right.

Two miles and a quarter from Big Bone Creek, we passed on the left Steel's Creek; the country on both sides is very flat.

Five miles and an half lower on the left side, and in the hollow of the bend of the river, we found a considerable creek without a name. The navigation from Big Bone Creek to this spot is excellent, and the depth of water every where from thirteen to fifteen feet.

At the bend of the river, immediately after the creek, is a small sand-bank, which is dry; it is but little dangerous, since it does not extend very far into the river, and is very easily discerned when the waters are low. The depth of water opposite the bank is ten feet.

We proceeded seven miles further, during which space the navigation is excellent, with never less than from ten to twelve and twenty feet of water, when we

reached a creek on the right, called Elk Creek. The mountains alternately fall back and close upon the river; the country appeared in general hilly; the lands are poor, and totally uninhabited.

Opposite Elk Creek, on the left bank, is Craig's Creek. After passing this last creek, the mountains disappear, especially on the right side, where none are to be seen. We descended twelve miles along the same desert country, and reached M^cCool's dwelling, which is a small hut, situated on the left side. The navigation continued excellent, and the depth of water invariably from fifteen to twenty feet.

At a small distance on the left, above M^cCool's farm, the land is liable to inundation. Opposite this farm is an island, called Nine Mile Island, at the end of which, on the right, is a creek, named Nine Mile Creek. On this spot two islands are marked in Hutchins's chart; this is a mistake; we can certify that there is but one.

We left the island on the right, as the channel on the left is alone practicable, and in which there is fourteen and fifteen feet of water.

Five miles and an half below Nine Mile Creek, on the right, is Indian Creek. During this space there are a few new clearings on the left, but the right side continues uninhabited.

We passed Indian Creek, leaving on the left a small creek without a name. Six miles lower, and on the same side, is Kentucky River, at the confluence of which is situated Port William. This small town is built on a fine terrace, high enough to be out of the reach of inundations.

The appearance of the country from Indian Creek to Port William changes a little; the right side of the Ohio is lined by a small chain of heights, with gentle slopes; the lands are good, but uninhabited. On the left side the lands are low, and frequently swampy. The navigation from Indian Creek is excellent, with twelve to eighteen feet of water.

Two miles below Port William we passed on the right Little Kentucky, which is a creek navigable for canoes fifteen miles. Here the heights on the right entirely disappear, leaving a vast plain. On the left a number of small hills close upon the banks of the river.

We proceeded six miles, leaving on the left another creek, called Battle Creek, and reached Indian Kentucky Creek, situated on the right; beyond this creek the heights on the right side approach the banks, while those on the left run on at a small distance, but parallel with the river. We descended four miles between these slopes, and found two creeks, which empty themselves into the

Ohio, opposite each other. Three miles and an half below these creeks, we reached another creek, situated on the right, and which forms a kind of torrent. At the mouth of this creek is a sand-bank, which we left on the right.

Ten miles lower another creek empties itself on the left side. In the space of seventeen miles and an half, that is, from Indian Kentucky Creek, we passed on the left three rivulets, of which no mention is made in Hutchins's Chart; the country is altogether uninhabited.

A mile below this last rivulet we passed four creeks on the left, and one on the right, and reached an island, called Eighteen Mile Island. None of these rivulets or creeks, reckoning from Indian Kentucky Creek, are navigable, and they have no particular name.

During this space the country varies extremely; sometimes swampy, sometimes high and rocky, and in general without springs; the right side is destitute of water.

The navigation from Indian Kentucky Creek to Eighteen Mile Island is constantly good, the depth of water being never less than from twelve to thirteen and fifteen feet.

We passed this island on the left, taking care to keep at a small distance, it being surrounded with shoals. We

found in the middle of the channel ten and twelve feet of water.

At the extremity of the island two creeks, neither of which are navigable, empty themselves opposite to each other. We proceeded seven miles between two chains of heights, which line both sides and entirely hem in the river, and reached a creek on the right, which rolls over a bed of rock, and is not navigable. The other creeks marked on the chart are only ravines.

Immediately after passing the creek, the heights disappear; the banks for the space of twenty or twenty-four yards from the river are low and swampy, but the ground rising gradually, secures the inland country from inundations.

Two miles from this creek are two small settlements on each bank, and directly opposite each other. Two miles lower we left two ravines on the right, and reached Twelve Mile Island. From Eighteen Mile Island to this spot the navigation is constantly good, with a depth of water from ten to fifteen feet. We passed Twelve Mile Island on the left; the channel on this side being impracticable, while that on the right uniformly yields eighteen feet of water.

Four miles below Twelve Mile Island, on the left, a very considerable creek empties itself, called Harrod's

Creek, which we ascended twelve miles in the canoe, and found every where two, three, and four feet of water. The country it flows through is low, and liable in freshes to inundations.

A mile and three quarters below Harrod's Creek, and on the same side, is another creek not navigable, called Goose Creek, opposite which is situated Middle Island.

The navigation from Twelve Mile Creek to this spot continues excellent, with a depth of water from twelve to fifteen feet; although both passages are good, that on the left is preferable, having from ten to twelve feet of water, and at the end of the island from fifteen to twenty; that on the right being narrower, is liable at all times to be choked with drift-wood.

After passing the island, a most noble prospect presents itself to the view. The river, which is here considerably broader, winds majestically through an extent of beautiful meadow ground, covered with the softest verdure. These decorated banks are already inhabited by a number of planters; but the gentle current of the river is soon interrupted by the rapids below, which divide it into several branches, and change the soft murmurs of its waters into hoarse and plaintive sounds. These different streams, after freeing the obstacles which divided them, meet again, and separate no more till they reach the ocean.

The mountains now totally disappear, and fine low lands extending from the banks are covered with a multitude of neat habitations. On the right is a fort. On the horizon, and in the prolongation of the course of the river, is situated Louisville, which terminates this fine perspective; but the attention is powerfully seized by the hoarse and majestic noise produced by the rushing of the waters down the cataract. After having enjoyed this great and sublime spectacle for the space of eight miles, we arrived at Louisville.

CHAPTER XI.

*Louisville.—Cassania.—Stuben's Fort.—Clarksville.—Rapid.—
Sublime trait of character.—Temperature.—Salt River,—
Otter Creek.—Whyo-Pio-Mingo.—Falling Spring.—French
Creek.—Buck Creek.—Difficult Passage.—Windot's Creek.
—Blue Creek.—Dangerous Sand-bank.—Vines.—Helm's
Creek.—Dardada Island.—Bad passage.—Little Yellow
Creek.—Harden's Creek.—Error in the American Maps.—
Clover Creek.—Creek omitted.—Slate Bank.—Immense quan-
tity of Game.—Yellow Bank.—Little Pigeon's Creek.—Island
inaccurately marked.*

LOUISVILLE contains about sixty or eighty houses, built for the most part of wood; it is situated on a platform on the left, in the hollow part of the bend of the river, and opposite the fall. Those who laid the foundation of this town consulted rather the beauty

of its situation, which is extremely picturesque, from the prolongation of the course of the Ohio on the one side, and the view of the rapids on the other, than the convenience of travellers; for this town being placed very far below the point where the current begins, and on the opposite side of the channel, all the vessels which touch there to take pilots are obliged to ascend the river more than two miles above Louisville, to gain the current on the opposite side, which leads to a considerable expense and much loss of time. This disadvantage in the situation of Louisville is no doubt the reason which has prevented it from increasing, and which induced Mr. Lachassague, a Frenchman by birth, who perceived this inconvenience, to lay the foundations of another town on the right side of the river, immediately at the head of the fall. All the boats which are to pass the current, commonly touch at Cassania, which is the name of the new town, consisting only of two or three houses, and a store.

A mile below Cassania, and on the right, is Fort Stuben, of the same form and construction as those which we have already described; it is garrisoned by sixty men of the continental troops.

Below the current, and on the same side, is another little town, called Clarksville, still worse situated in every respect than Louisville. The spot on which it is

built is liable to inundations, and as there are many shoals on this side, the boats which intend stopping after passing the fall, are obliged to go on the side opposite to Lower Landing, not being able to approach this place. This town, therefore, is on the decline, and contains at present only five or six huts.

The fall is occasioned by a great bank of calcareous stone. Two miles above, the river widens much, runs gently, and its bed becomes deeper. Its breadth is three quarters of a mile, and its depth from twelve to fifteen feet. Near the fall the islands and rocks by which it is formed take up nearly three quarters of the bed of the river, and fill up and obstruct all the side on the south-east; the waters have no other passage in dry seasons than on the side of the north-west; but as they are much confined, and the plane over which they roll is very shelving, and they have to make their way across every obstacle, they rush along with the greatest impetuosity and violence.

On the side which is obstructed there are only five or six inches of water, and often the bank of stones is dry.* In the channel where the boats pass, the depth of water varies, but is never less than from four to five feet: this

* The greater part of these banks of stones is covered with petrifications.

depth would become more than sufficient to pass at all times with security, if the windings of the channel were not so abrupt and numerous, and the current so strong; but in the present state of the passage, the pilot has scarcely time to steer, or the boat to change its direction. We had ourselves a disagreeable experience of this, since, notwithstanding the skill and attention of our pilot, we touched on one of these points against a rock, which took off three feet of our keel.

In the season of floods these inconveniences disappear, and during eight months in the year there is water enough to pass the double channel with all kinds of boats.

We cannot leave Louisville without relating a circumstance which does honor to the American character, and which would not disgrace the annals of the finest days of Rome.

A person of great military talents, and who had acquired considerable reputation in the war which procured independence to America; who had also gained from the natives almost the whole of that immense country which forms now the Western States; the rival, in short, of General Washington; had retired to Louisville after the peace, either from caprice or discontent against the government at that time, in the hope of ending his days tranquilly in the midst of his family, and on the spot

which had been the scene of his achievements. But unhappily, idleness and listlessness, inseparable companions, followed him in his retreat. He who is conversant only with military affairs, who knows nothing of agriculture or commerce, and has no taste for the charms of nature, is soon wearied of still life. Drinking and intoxication became the sole resource of this officer, and he carried this degrading passion to such an excess, that he was often found lying in a state of stupified drunkenness in the streets. We were the witnesses of a scene the most humiliating for a man who once inspired sentiments of high veneration,* but now excited only those of pity. We returned about seven in the evening from taking a walk in the environs of Louisville, when we perceived, in the midst of the square, a number of persons who were crowding around something that lay extended on the ground, on which a blanket had been thrown, and which a man was about to take up and carry off. Drawing near to satisfy our curiosity, I asked the man, who ap-

* This veneration was so great among the Indians against whom he had made war, that when the peace was concluded, several tribes sent deputations of their young warriors, the object of whose visit was to touch him, and chiefly to cut off some shred of his cloaths. "With this manitou (talisman)," said they, in returning to their families, "we are sure of being always brave and great warriors."

peared to me to be a shoemaker, what was the matter. He turned towards me with a look expressive of sorrow, and said, "Do you not see, Sir, it is that hero, that great man; he has forgotten at this moment the important services which he has rendered us; but it is our duty to remember them: I cover him thus, to preserve him from the contempt of the people." He had, indeed, as soon as he saw him fall, run out of his shop with a woollen blanket, which he threw over him, and carried him into his house, where we were witnesses of the affectionate care with which he treated him.

Inactivity for a military man, or for a man who has no knowledge but that of war, is one of the greatest evils he can experience; not only because he is condemned to idleness, but because in the profession of arms, reputation diminishes the moment it ceases to augment.

The life of a public functionary, to end with glory and dignity, ought to be employed in doing always something better than what he has done before. I know that it may be objected, that adversity destroys energy, and crushes those on whom it weighs. This may be true, but it is true only with ordinary minds: he who possesses fortitude is shielded against misfortune; it is in adversity alone that true dignity of mind is displayed, and it is in that season only that a great man assumes the rank for which he was destined by nature.

During the time we remained at Louisville, the thermometer was constantly at twenty-six, twenty-seven, and twenty-eight degrees, of Reaumur. We observed that during the night it descended from five to six degrees. The winds, of which we took note daily since our departure from Pittsburgh, were always in nearly the same quarter of the circle, from west to south. We have since been assured, that in this season, unless there be storms, the winds never turn to the east; consequently, the navigator may be sure, that from May to October they are always in the same direction.

After passing the fall, we found Sand Island, and a small creek, called Silver Creek, on the right, and opposite the island. The bed of the river below the fall is very narrow: the depth of water is from eight to fourteen feet, the stream very slow, and both sides flat and sandy.

Three miles from Louisville the banks on the right are high and perpendicular like cliffs, but those on the left continue to be flat, and are swampy to a very great distance. We perceived nothing all around us but rocks, and low and sandy ground.

We descended twenty-eight miles without finding a single habitation, leaving on our right several rivulets or ravines, and reached Salt River. In this space almost the

whole of the country on the left side is without springs. The navigation is good; the depth of water is every where from ten to fifteen feet.

The current of Salt River is extremely slow during the space of seventeen miles from its mouth, with from twenty-five to thirty feet of water; but farther up the navigation is stopped by a fall, beyond which it is again navigable twenty miles for canoes. It runs through a very fine country, and high enough two miles from its mouth to be out of the reach of inundations: there are already several settlements three miles from the mouth of this river.

Six miles beyond Salt River is Otter's Creek, which is not navigable. The aspect of the country continues the same, low and swampy. The depth of water from Salt Creek is six, seven, eight, ten, and fifteen feet.

Five miles from Otter's Creek, and on the left side, is Whio-Pio-Mingo's Station, which is as yet composed of only two small huts: these are the only habitations we perceived since we left Louisville. Both sides are here bordered with hills of gentle declivity and of varied beautiful forms; but the soil which covers them is of little value.

Two miles and three quarters lower on the same side, we found Doe's Run Rivulet. The navigation from Otter's Creek continues good: the soundings were from eight to twelve feet.

From Doe's Run to Falling Spring, on the left, is four miles. Falling Spring consists of waters which filter through beds of calcareous stone, on a breadth of twenty-four yards. The volume of water is considerable, and it gushes out with force; these waters are the best, the most limpid, and the freshest we met with in our voyage on the Ohio. The lands opposite Falling Spring are low and liable to inundations. The left side is lined with rocks from twenty to thirty feet high; between which chain the lands are also low and swampy.

We continued our course seven miles further, leaving several ravines on both sides, and reached French Creek, which is dry during the summer, and is never navigable. After passing this creek, we found on the left a chain of lofty heights, composed of great masses of rock. The lands on the opposite side are low and swampy; the soil is sand mixed with gravel.

Six miles lower down is a small creek, called Buck Creek, not navigable. Here a chain of rocks rises on the right, and the Ohio runs between two great cliffs that are often perpendicular. The soundings from Falling Spring never varied between ten and twelve feet.

Four miles lower we reached a small island, very ill described on the map. This is only an alluvion on which were a few willows, and which is covered in high waters.

This island is separated from the right bank by a channel which is fordable during the summer; the channel on the left is from ten to twelve feet deep.

Two miles lower we came to a second island, somewhat distant from the left bank than the other is from the right. It is high out of the water, and covered with very fine wood. We took the channel on the right; that on the left being full of shoals, with only one or two feet of water. The right is every where from nine to ten feet deep, and without any impediments.

As soon as we had passed the point of the island, we were obliged to turn short to the left, to avoid the narrows which are on the right, and which are easily seen by the breakers; and in which there is only two feet water, and sometimes not more than one.

Ignorant of this danger we took the channel on the left, and struck on a sand-bank, from which we should have had great difficulty to have extricated ourselves, but for a violent squall, which filled our sail at the moment, and relieved us from our dangerous position.

In such a circumstance, with a boat as large as ours, the half of our crew sick, and in the midst of a desert, we ought to have waited for the autumnal floods. Without such precautions those who undertake a summer expedition of this kind may perish from want of food, or be

killed by the Indians, examples of which are not unusual.

Opposite to the island and the narrows on the right, is a creek, called Windot's Creek. It is that which forms the narrows which we have just mentioned by the quantity of great stones which it rolls down. This creek takes its source in the heights, is navigable for ten miles, and may become very useful at some future period for the establishment of various kinds of manufactories.

Below this creek the Ohio makes a great bend towards the south-west, taking its course continually between two rocky mountains, high and steep.

Eleven miles below Windot's Creek is Preston's Creek, which is not navigable.

Two miles and an half lower we left on the right a small creek, called Blue Creek, which is fit only to turn mills, and which overflows the low lands.

Both sides of the Ohio begin here to be less hemmed in; the left side is altogether disengaged from every kind of height for two or three miles inland. The depth of water varies from eight to ten, fifteen, and twenty-five feet.

A little lower, and almost opposite the creek, is a sand-bank which stretches far into the river, and which we avoided by steering to the right: the soundings are from

twelve to fifteen feet. On the left are very fine grounds covered with lofty oak and beech; but in the season of floods this ground is under water to the depth of four or five feet.

The right side, on the contrary, is lined with heights, covered with great masses of perpendicular rocks, which assume at times very extraordinary forms, from the united action of the weather, the waters, and the sun. No springs or rivulets water these banks; those described in the charts are only ravines that carry off the rains.

In the different excursions which we made on both sides the river, we found, among other productions, the vine in great abundance, but not of that kind which is common in America, twining around the trees as high as the top. These vines, on the contrary, are low, creeping, and resemble in the leaf those of Madeira. The stalk is not more than from two feet and a half to three feet; it grows in a gravelly and stony soil and always in groups. As it was only the month of July, we could not judge of the quality of its grapes; but we were assured that they were generally black, and of a very fine flavor, which leaves no doubt that if it were cultivated it would become equal to that of Europe. The large raspberry grows also in this place in great abundance.

Although the navigation be in general good at all seasons from Louisville, those who undertake the voyage

without a pilot cannot be too strongly recommended to avoid carefully, when the waters are low, all the points; that is, wherever the river makes a bend, to steer on the opposite side, the angle being in general composed of alluvions or sand-banks.

Seven miles below Blue Creek, on the left side, is Helm's Creek, which is nothing but a deep ravine, and in which during the summer there is not six inches of water. The country through which it flows is low, marshy, and for most part covered with sand and gravel. The depth of water from Blue Creek is from twenty to twenty-five feet.

We proceeded two miles to an island omitted on every chart, but which one of our Canadians called Dardada Island (the Indian name). This island deserves the more to be known, as it is situated exactly in the middle of the river, and is surrounded with a great quantity of sand-banks, which are not always visible. When we were at the distance of half a mile from this island, the depth of water, which was twenty-five feet, suddenly decreased to eight or nine. We steered, therefore, to the right, leaving the island on our left, and followed the channel, which yielded from ten to fourteen feet of water. Had we approached nearer the island we should have found not more than one or two feet. This transition being very abrupt,

we used the precaution of entering the passage with the lead in our hand.

At the extremity of the island we found three sand-banks, which were dry; two on the right, and one at the end of the island: this last sand-bank we passed on our left; the two others on the right. The channel is eight and nine feet deep.

Opposite to the two sand-banks is a small creek, called by the Canadians Mirebelais; it is totally omitted on the chart.

The river makes a bend towards the south; we proceeded eight miles, and found on the left a creek, called Little Yellow Creek.

At day-break we were surprised by a very thick fog, which continued until ten o'clock; the night was so cold, that we were obliged to use our blankets. The weather was perfectly calm.

Four miles lower, after passing on our left three small ravines, we reached on the same side Arden's Creek. This creek is very narrow at its mouth, but there is water the whole year; we ascended five miles in the canoe, when our further progress was interrupted by a slight fall. During the late war with the Indians, the Americans built a small fort at its source, to prevent their incursions into Kentucky, which they usually made by this creek.

Between Yellow Creek and Arden's Creek, there are a great number of sand-banks on the Ohio, which are covered with water. It is always necessary, therefore, to keep in the middle, where there are generally six, seven, and ten feet water. When the soundings pass suddenly from six to three feet, the track of the channel is missed; all the various depths of water in this passage have been scrupulously noted in the new chart.

Below Arden's Creek the bed of the river grows wider, but the aspect of the country continues the same; the lands are low and marshy, sometimes sandy and strewn with great masses of rock, known by the name of millstones.

Two miles and an half below Arden's Creek there is an island described in all the American maps; we looked for it in vain, and are convinced that no such island exists.

Nine miles further down, we passed three small creeks on the left, which have no name; we called that in the middle Bear's Creek, having on this spot killed a bear. The soundings during this passage gave from ten to twelve feet; the navigation is excellent.

Five miles and an half below Bear's Creek, and on the same side, another very considerable creek empties itself, called Clover's Creek. It is very much hemmed in, and

may be about twenty yards wide at its mouth: it would be navigable for many miles at all seasons, but for the immense quantity of trees with which its bed is choked up. The lands through which it flows are extremely fine, but as this part is liable to inundations, the country is a desert.

Six miles from Clover Creek, on the right side, is a very fine creek, entirely forgotten on the charts, and which has water the whole year. The lands through which it flows are of the first quality; we called it Jefferson's Creek.

A few miles below this creek, the river, which had been so long hemmed in, and, as it were, compressed by the rocks, opens suddenly and flows broad with a majestic course. The heights which rose on both sides, are replaced by lands of the first quality, but swampy and devoid of springs.

On the left side is a continued level covered with wood, and intersected by small lakes, the stagnant waters of which will render this part of the country for a long while very unhealthy, and prevent the settlement of emigrants.

We proceeded thirteen miles below Jefferson's Creek, leaving several ravines dry on both sides, with a small pond, and reached Anderson's Creek, situated on the right; it

is pretty large, and navigable at all times to some distance for canoes. The country is still a desert. The soundings for the last fourteen miles were successively ten, fifteen, twenty-five, twelve, and eight feet: the navigation good.

Two miles below Anderson's Creek, on the right side, is a bank of slate of a very fine kind, and which sketches along the river for nearly two miles. The left side continues flat and swampy. We proceeded, reckoning from the slate-bank, eight miles further, sailing between two sand-banks, which are always covered with water, and which we avoided by keeping in the middle of the river till we reached Blackford's Creek. The depth in the channel is six, eight, ten, twelve, and fifteen feet: care must be taken to keep at a distance from the sides, when the soundings are less than six feet.

Two miles below Blackford's Creek a large sand-bank, projecting from the left side, extends itself for nearly three miles: we directed our course to the right, where the soundings gave eight, ten, and twelve feet. The country continued desert and marshy.

In the evening the weather was stormy; the moon appeared pale, with rays diverging like the tail of a peacock. The Canadians predicted a tempest; and about midnight we were awakened by so violent a storm, that it was with difficulty we could fasten our boat so as to

prevent it from striking on the banks. The wind came from the S. S. E. and blew with great impetuosity. It was impossible for us the next day to continue our route; the waves forced back the current with such violence, that it drove our boat up the stream in spite of our oars. Both sides of the river were covered with game, chiefly water fowl, and in such quantities that it seemed scarcely possible to augment the number: geese, ducks, swans, herons, and roebucks, were mingled together, and lined both sides of the Ohio. We took advantage of the delay in our journey, and employed ourselves in hunting. At five in the evening, when the weather became more calm, we proceeded, after having killed more game than our crew could consume in eight days.

We passed several small rivulets on both sides, and at six miles from the end of the sand-bank, reached two islands, the first of which is omitted in every chart, and the second improperly placed: this last is uninhabited. We left them on our right. The channel is from eight to ten, eighteen, and nineteen feet deep.

Opposite to the extremity of the second island, and on the left side, at six miles distance from the head of the first, is Yellow Bank, which is a small settlement, consisting of eight or ten families.

Having doubled the last island, we steered to the right, in order to avoid the shallows which run along the left side. In keeping the middle of the channel we found fifteen and sixteen feet of water.

Three miles farther we reached an island, and three miles lower two others; these last are opposite each other, and intercept almost the whole of the river for the space of a mile and an half. We passed the three islands on the left, steering to the right, and taking care not to approach them, as they are surrounded with sand-banks and shoals. This passage requires the whole attention of the pilot, and in no case should the channel on the left be taken. The soundings gave four, five, seven, and eight feet of water; when it is less than four feet, the direction must be changed to avoid striking. The country is still uninhabited and marshy.

We continued our progress seven miles, with a good navigation, and reached Little Pigeon's Creek, situated on the right side, but which is navigable at no time of the year. It is at this point that a road has just been opened to the post of St. Vincent's, on the Wabash.

Four miles lower is an island which is two miles and an half long. On every chart it is placed too much to the south-west. We left it on the right, and steered to the left between that and a sand-bank, which projects from

the left side into the middle of the river, and which is always covered. The channel in the middle is from ten to eighteen feet, but near the bank it is only three feet. The channel on the right is impracticable when the waters are low.

Three miles and an half below this island, the Green River throws itself into the Ohio.

CHAPTER XII.

Green River.—Islands omitted.—Pigeon's Creek.—Red Bank.—Characteristic Trait.—Diamond's Island.—Great Island.—High Land Creek.—Extraordinary Swell.—Particular description of the River Wabash.—Post St. Vincent's.—High Country.—Vermillion River.—Ouiah Rapid.—Eel River.—Great Rapid.—River of the Great Calumet.—Rapid of St. Cyr.—River Mussissinoec.—L'Hôpital.—Remarkable rock.—River Salaminique.—The little River.—Portage of Miamis.—Wolf Rapid.—General Observations.

GREEN River, one of the great branches of the Ohio, is four hundred yards wide at its mouth, and is navigable one hundred and fifty miles for barges drawing three feet of water. This river traverses a considerable part of Kentucky; but as the lands are very low and often overflowed, there are no habitations on its banks below a

little town, called Vienna, fifty miles above its junction with the Ohio.

It is, however, to be remarked, that the country on the left of this river is somewhat more elevated than that on the right, and even hilly. It is generally thought that this spot will suit well the cultivation of the vine, which is here of a quality, in its wild state, very different from that in other parts of the continent, as we have already explained. The country in this part is a desert.

Immediately after passing Green River we found two islands opposite to each other, one of which was nearly three miles long. One of these islands only is noted in the charts; the other has been entirely forgotten. The channel on the right, between the largest of these islands and the land, is dry during the summer; that in the middle is choked up with drift-wood and sand-banks. We took the channel on the left, and kept as close as possible to the bank, where we found fourteen, fifteen, and eighteen feet of water.

The appearance of the country after passing Green River is the same; low swampy lands, mixed with sand and gravel.

Ten miles below Green River we left on our right a creek, called Pigeon's Creek, which is navigable in high waters for canoes, but only for a few miles.

After passing Pigeon's Creek, the Ohio turns towards the south. We kept near the right bank, in order to avoid a large sand-bank, which extends itself from the left. Having doubled the point and the sand-bank, we found a small island of sand, which we left on our right; and six miles lower, reckoning from Pigeon's Creek, we reached another small island, which is separated from the right side by only a very narrow channel. We left it on the right, taking care immediately after passing it to steer to the right, in order to avoid a very large sand-bank which extends from the left. We continued descending six miles, leaving on the right another sand-bank, which was dry, and which is situated in the midst of the river, and reached Red Bank.

Carefully following the channel from Pigeon's Creek to this point, we found the water never less than from twelve to eighteen feet.

Red Bank is a small establishment recently formed, consisting of thirty or thirty-five families, and is the only spot on the banks of the Ohio, from Louisville, secure from inundation in high waters. It may, therefore, be considered as a valuable position in a military point of view. A fort placed at Red Bank would be extremely useful to stop whatever ascends the Ohio, since the channel

passes at the foot of the left bank, which is a cliff, and by its elevation commands both this and the opposite side.

The inhabitants of Red Bank are only hunters, or what are called foresters. They cultivate no ground, but subsist on the produce of their hunting and fishing, and are almost naked. The following trait may serve to give an idea of their character. At our arrival we found a number of these hunters who had assembled to regale themselves on the banks of the river with the spoils of their chase on the preceding day, when they had killed a very fine buffaloe. They had drunk plentifully of whisky, and though the greater number were intoxicated, they were amusing themselves in firing with carabines against a piece of plank tied to a tree, which is called shooting at a mark. The board, probably ill fastened, fell at each shot; one of the party at length losing patience, took it up, and placing it between his legs, called out to his companions: "Now, fire away!" which they did immediately, and always with the same address; whilst he who held the board exclaimed at each shot: "It is in!" This amusement, which lasted two hours without any accident taking place, may appear incredible to those who are not acquainted with the singular skill of these men; but it is sufficient to observe that they will aim at

the head of a squirrel or a turkey, and very rarely miss. The seeming intrepidity of the man who held the board becomes, therefore, only an ordinary circumstance.

Two miles and an half below Red Bank, we passed an island on our left. The channel on the right is alone practicable; the other side being encumbered with drift-wood and sand. The soundings on the right are from fifteen to eighteen feet.

Two miles below the head of the island we steered to the left, to avoid a sand-bank on the right, and which extends half way across the river. Two miles further the river makes a bend towards the west. Before we reached the point of this turning we steered to the right, to avoid a sand-bank which juts out from the land; and after descending five miles further than the salient point of this bank, that is, fourteen miles from Red Bank, we reached a large island, called Diamond's Island. This island is one of the most considerable, and the most elevated we had seen on the Ohio; it is four miles long, and is situated in the middle of the river, surrounded with a large quantity of sand-banks. The two passages which it forms are equally good: we took that on the left; nevertheless, in ascending the river that on the right is to be preferred, because the stream is much less rapid. The passage on that side is from nine to ten feet deep.

Opposite the middle of the island, on the left, is a small but increasing establishment, consisting of five or six huts.

After passing the point of the island, we found two large sand-banks placed in the same direction, that is, in the middle of the river. We left them on the right, and at the extremity of these two banks, which are three miles long, we found a small island situated near the left side, in a bay: we steered to the right, between the end of the last sand-bank and the island.

Here the river makes a bend towards the south-east. After doubling the point, we found on the left a very considerable island at seven miles distance from Diamond Island. The channel during this passage is nine and ten feet deep: this navigation requires constant attention.

We passed this last island on our left; the channel on the right being the only one navigable.

Ten miles below the head of this last island we reached a creek, called Highland Creek, at the mouth of which is a small settlement, composed of three families. The navigation continues good during these last ten miles, if care be taken to keep the middle of the river, in order to avoid the different sand-banks situated on both sides: the soundings are ten, twelve, and eighteen feet.

The river in this place was agitated by a great swell, which appeared to us very extraordinary, and perfectly

resembling those which take place in the colonies before spring tides; as the swell came from below, we imagined that it was the effect of some violent gust in the Mississippi, and towards the mouth of the Ohio. It was so strong, that our canoe, which was astern, sunk. The wind blew from the south with an excessive rain.

We proceeded seven miles and an half, and reached the mouth of Wabash River, opposite which is situated a great island, called Wabash Island, two miles and an half long, and which is high and well wooded.

Both passages are equally good; we chose that on the right, in order to inspect the mouths of this river. The depth of water in the right channel is from ten to fifteen feet.

The mouth of the Wabash is situated thirty-seven degrees forty-one minutes north. It is about seven hundred yards wide, and continues the same breadth as far as Post St. Vincent's: the distance from the mouth of the Wabash* to Post St. Vincent's is computed at sixty leagues, though in a straight line it is not forty. In the whole of this space there are only two rapids, one twelve leagues from St. Vincent's, and half a mile above White River,

* The following description was given to me by a barge-master, who made this voyage twice every year.

and the other fifteen leagues from the mouth of this last river, called the Great Chain, where may be seen, when the waters are very low, a long line of rocks, which at a certain distance resembles a mill-dyke. This chain of rocks has forced the waters to form a channel on the left side, where boats may pass at all times, excepting the winter and during the ice.

From Post St. Vincent's to the High Land is forty leagues, and the navigation excellent. From the High Land to Vermillion River is reckoned twenty leagues, and the navigation continues good. From thence to Ouiah is twenty leagues, and the navigation improves.

From Ouiah to the river Tipiconow are six leagues* of excellent navigation, and from thence to Pisse Vache two leagues. At this place is a rapid, about ten fathoms in length, and which sometimes has not ten inches of water. This is the first point where the navigation becomes difficult.

Four leagues higher is another rapid from fifteen to twenty fathoms in length, with eight inches of water: the channel is always on the left side in ascending. Six leagues beyond this last rapid is Little Rock River. There is a

* In the course of this description, and in conformity to the terms of distance used in the country, we substitute the word league for that of mile.

rapid at this spot, extremely violent, but with sufficient water. About this place the river is sometimes shallow and sometimes deep, according to the depôt of sand which the waters have left or washed away.

From thence to Eel River are two leagues of good navigation, and a league higher is the Great Rapid; its length is twenty fathom, with six, seven, and eight inches of water at most; and above is a shallow, half a league long, with six inches of water.

Four leagues beyond the Great Rapid is the river of the Great Calumet. Here is another rapid, ten fathoms in length, with a sufficient depth of water.

From the river of the Great Calumet to a small island, without a name, is one league; this island must be left on the right in ascending, and above is a shallow with six inches of water.

From this small island to the rapid St. Cyr is three leagues: this rapid is half a league in length, and with sufficient water.

From this rapid to the river Mussissinoc is two leagues. Here is another rapid, twelve fathoms long, with twelve inches of water.

From hence to l'Hôpital is seven leagues, during which there is very little water; the barks are obliged to unload

during the space of a league. At this spot is a rock of an enormous size, situated on the northern side.

From l'Hôpital to the river Salaminique is three leagues. Here is a small island; the passage is on the southern side, and there is a rapid of three fathoms length, with sufficient water.

From thence to Bended Maple one league. From Bended Maple to the Little River four leagues.

Leaving here the Wabash, we followed the course of the Little River. From its mouth to the village of the Miamis, situated at its source, is twelve leagues: in this place is a portage of three leagues and an half to reach the sources of the river of the Miamis. From thence to Wolf Rapid is fifty-one leagues, during which there are a great number of small rapids, but with sufficient water to leave the navigation free. At Wolf Rapid the boats unload only in dry seasons.

From Wolf Rapid to Roche-de-bout is three leagues: here is another rapid three leagues long, but every where sufficient depth of water.

From Roche-de-bout to Lake Erie is six leagues. From thence to the river Detroit twelve leagues, and to Detroit Fort six leagues.

In the season of the high waters, as in the months of March, April, and May, there is sufficient water at the

portage of the Miamis. It is in this place that the waters divide, and run on one side into Lake Erie, and on the other into the Wabash. It is to be noted that all the depths of the rapids and shallows have been calculated when the waters were at the lowest during the year, none of the rapids being seen or felt when the waters are high.

From the mouth of the Wabash great barges are used, which carry from twenty to thirty thousand weight, as far as St. Vincent's; but from this post barks are employed in carrying four, five, and six thousand weight.

St. Vincent's is a small mean village, containing one hundred families, the greater part French, ruined by General Clark during the last war, as were also the Illinois. A bad wooden fort, in the usual mode of construction, is built here.

The course of the Wabash is in general slow; it traverses a fine country sufficiently elevated, and less liable to inundations than any other parts of this continent. Vast natural meadows form a part of this country. The Wabash rolls over a bed of sand and gravel, in which precious stones are often found: the emerald and topaz have been observed to be of the number. The banks are clothed with fine woods of the same kind as those of the Beautiful River or the Ohio, and the black and white

mulberry grow in the greatest profusion on this spot. Salt springs and coal-mines have also been discovered.

The inhabitants of Post St. Vincent's cultivate in general wheat, maize, and tobacco equal to that of Virginia; but hunting and trading with the Indians are their principal occupations. The exportation of fine furs and skins of roebucks amounts annually, on an average, to one hundred and twenty thousand livres.

Hemp grows naturally, and the vine is also in great abundance, and of a very peculiar kind; the grape is black, small, and the skin extremely delicate. The inhabitants make a kind of wine which is agreeable to the taste, but cannot long be preserved.

One hundred and ten miles above Post St. Vincent's is a small French establishment, called Ouia, or Ouiatanon, containing ten or twelve families, of which the occupations are also hunting, trading, and a little farming; but as this settlement lies further back than that of Post St. Vincent's, trading is the most lucrative employment of the inhabitants. The exportation from Ouiatanon in furs and roebuck skins was estimated upon an average at one hundred and ninety-two thousand francs a year; but this branch of commerce diminishes sensibly; because as the adjacent country becomes populous, the game retreats further back into the country.

At the passage of the Miamis carriages are regularly found to convey the baggage and goods of travellers.

The head of the Wabash, at the place where the waters divide, forms, militarily speaking, a fine position. This point is the key of the whole country watered by the Wabash, and the first which ought to be fortified if the North Western States ever make a schism.

CHAPTER XIII.

Continuation of the Ohio.—Saline Creek.—Trade Creek.—Big Cave.—Bear hunting.—Great Island.—Mistake in the charts.—Omissions.—Other mistakes in the maps.—The Three Great Islands.—Cumberland River.—Tennessee River.—Observation.—Fort Massac.—Military Observation.—Arrest.—Massac Creek.—Cash Island.—Cash Creek.—Mouths of the Ohio.

THE aspect of the country from Red Bank to this point is nearly the same. Both sides of the Ohio are in general low and swampy, a few trifling elevations near Highland Creek excepted.

One mile below the end of Wabash Island we found three small islands on the right; the two first almost joined to each other, the third more distinct. These islands are as yet covered only with young willows, the

tops of which are visible in high waters. We kept on the right to avoid the shallows. These three islands extend four miles, reckoning from Wabash Island.

Four miles below the last of these small islands, we left a fourth on the left, nearly of the same kind as the preceding; that is, very low and covered with young willows.

The depth of water from Wabash is from fifteen to eighteen and twenty feet. The lands continue low and swampy; the country is a desert.

Nine miles below this last island, Saline Creek empties itself into the Ohio. At a mile above this creek, we left on our right a great sand-bank, half dry; taking care to steer very near the left, as this bank occupies a considerable portion of the bed of the river. The soundings are from six to eight feet.

This creek might very properly be called Highland, for at this point ends that long and almost uninterrupted extent of low lands which begins at Louisville.

After passing Saline Creek, chains of heights rise on both sides the river; that on the right is very elevated, covered with great rocks, and often steep.

Eight miles and an half farther we reached Trade Creek, leaving on our right a small dry sand-bank, which joins the land.

We proceeded six miles and an half, passing on our left two great defiles and a small island, and reached Big Cave, situated on the right.

From Saline Creek to Big Cave the navigation is easy: the soundings were from five to ten and twelve feet. This cavern, twenty-two or twenty-three feet deep, and forty feet in height, is filled in high waters: it is an excavation made in the rocks by the continual beatings of the flood. We found a few crystallisations, but no saltpetre, nor any petrifications whatever.

The lands on the left side, opposite Big Cave, are low and swampy: the right side continues bordered with rocky heights. On this spot we killed a bear, which was crossing the Ohio. This mode of hunting is pleasant for those who search for amusement rather than profit, since at this season the prize is of no value. The bear, like most other animals, is fond of bathing during the great heats, as well to cool himself as to get rid of the vermin which infest him. They are often seen, even in broad day, swimming across the largest rivers, and it is while they are on their passage that the hunters attack them. We had observed the bear we killed, bathing with several others on the right side, when he suddenly determined to cross the river, the breadth of which in this place is not less than twenty-four hundred yards. As soon as we

observed that he had made a third of the way, four of us threw ourselves into the little canoe, a hunter, myself, and two Canadians whom I selected as the most expert in guiding the boat, and also in preventing the bear during the attack from overturning it, which is often the case. We rowed towards him, and endeavoured to cut him off from the side of the land whence he had set out. When he saw himself so pressed that he could not go back, instead of crossing the river he followed the stream, and swam with such extraordinary swiftness, that it was half an hour, with all the exertion of our oars, before we came within musket shot. Perceiving that we had gained on him to this point, he turned briskly round, and while he was making this movement, which obliged him to expose his whole side, the hunter and myself fired our carabines: the hunter's bullet passed through his neck, and mine through the withers; but as neither of these wounds were mortal, they served only to irritate him, and he rushed forwards, with redoubled fury, to overturn our canoe, which we avoided by the great dexterity of the boatmen, who kept continually above the current. This combat lasted nearly half an hour, in which space we fired six times without being able to kill him. At every discharge the bear turned upon us, and in spite of the skill of our Canadians, he succeeded at length in passing under

our canoe; but as he had already lost much blood, and was consequently exhausted, he had not strength to overturn it. As soon as he raised his head, the pilot struck him with an axe, which stunned and drowned him.

One of the most extraordinary incidents in this struggle was the courage of a pretty little terrier, which at the beginning of the attack threw himself into the water, and fixed himself on the back of the animal; till the bear, enraged at his worrying and barking, plunged down, and raising himself instantly again, tore him open.

The roebuck, also, during the summer traverses the widest rivers. We often attempted to chase him in the same manner, but his speed is such that no rower whatever can overtake him. We made the trial repeatedly both in going up and down, but always ineffectually; which induces us to think, that of all quadrupeds this is the swiftest.

Leaving Big Cave, and proceeding two miles, we found a large island with two sand-banks, which were dry. Opposite the middle of the island we saw a third jutting out from the right, then a fourth on the same side, and opposite the end of the island. This passage is very difficult. We left the island and the two first sand-banks on our left, and the two others on our right.

It is chiefly between the second and third of these banks that the greatest skill of the mariner is requisite: the channel, in this place, makes several windings, and is not more than three or four feet in its greatest depth.

After passing the island, the heights close upon the banks on the right side; they are no longer rocky, but consist of rich lands covered with very fine wood.

Five miles from the last island, not comprising its length, which is three miles and an half, we found on the left a large creek, delineated too much to the west in the American charts. It is navigable ten miles at all seasons for canoes.

Opposite to this creek is a great sand-bank on the right side, and which is half dry; we avoided it by steering to the left. Care must be taken also not to approach too near to this side, to avoid an eddy which is found immediately after the creek, and which occupies a space of four hundred yards.

A mile and an half lower, on the same side, is a second creek, not described in any chart.

A mile and an half below this last creek we perceived an island, which is separated from the main land only by a small channel. We left this island on our right, and three miles lower, including the length of the island, we reached another, marked five miles too much to the

westward on all the American charts: we took the channel on the right, that on the left being full of sand-banks, and choked by driftwood. In the channel we had taken we found ten, fifteen, and eighteen feet of water: the navigation from the great island to this place is good.

The aspect of the country continues the same; both sides are lined with heights.

At a short distance from this island, we left a defile on the right; and three miles lower, reckoning from the head of this island, we found three others, which follow each other at nearly equal distances. The two first are connected by a great sand-bank, and take up a space of nearly four miles. We passed these three islands on our left, as well as a great sand-bank, which is at the end of the third, and which is a mile in length under water. Opposite to this sand-bank and to the last of these islands, we perceived on the right two creeks, neither of which are navigable. The channel on the left is altogether impracticable; that on the right has from fifteen to twenty feet of water.

Two miles below the sand-bank we found an island, situated in the midst of the river, very high, which we passed on our left; and three miles lower than the head of this island, we found a second of the same elevation; we left it on our right, the channel on the left being the only

practicable. Three miles further down than this last island we found a third, situated exactly opposite Cumberland River; we passed it on the left, the channel between the island and the mouth of Cumberland River being often filled with driftwood, brought down by that river, which renders the passage on that side sometimes difficult.

From the three small islands abovementioned to Cumberland River, which is nearly fifteen miles, the navigation with little attention is every where good. The soundings gave fifteen, eighteen, twenty, and twenty-five feet of water.

After passing the last of these three small islands, the country changes its aspect; the heights on the right side disappear altogether, and we perceived nothing but a vast extent of low and swampy ground.

Cumberland River is from six hundred to seven hundred yards wide at its mouth: it is navigable for boats of all sizes one hundred and eighty miles, and its banks are already inhabited. The mouth of this river is surrounded by small eminences very advantageously situated for protecting the entrance.

Ten miles below Cumberland River, we reached Tennessee River, the entrance of which is marked by two islands, situated so close to each other, that without great

attention we should have passed without perceiving that they were separated.

On the left side, between Cumberland and Tennessee Rivers, we observed a small wooden fort,* the object of which was the protection of the navigation of those two rivers, and also of the Ohio, during the war with the Indians; but the fort is placed at too great a distance to answer this triple view, and is really useful only for the Ohio. From Cumberland River to Tennessee the navigation is excellent; the height of the water is from twelve to sixteen and eighteen feet. The lands are low and swampy on both sides. Tennessee River is nearly of the same breadth as Cumberland River, and is navigable for all kinds of boats as high as Muscle Shoals.

After passing Tennessee River, the bed of the Ohio widens considerably, and at the end of eleven miles, leaving several defiles on both sides, with the navigation uninterrupted, we reached Fort Massac. The depth of water in this distance is sixteen, eighteen, and twenty feet. The lands on both sides are low and swampy.

Fort Massac, so called by the Americans, and Fort Massacre by the Canadians,* is a post anciently established

* The Canadians informed us, that the Indians having one day surprised and massacred all the French who were within the fort, it was on that account called Fort Massac.

by the French, and abandoned at the time of the cession of Louisiana; it has lately been repaired, and has been occupied two years past by the Americans.

This fort is erected on a small promontory; it is built with wood, and has four bastions surrounded with palisades, of the same form and construction as all those mentioned in the course of this work. The garrison is composed of an hundred men, commanded by a captain; the batteries are mounted with eight pieces of twelve. The fault of this position, with respect to the navigation of the Ohio, is, that the channel being on the opposite side, the passage may be effected, especially during the night, without any fear of the batteries.

It is, nevertheless, very important to keep this point, because it communicates by two different roads with the country of the Illinois. One of these, called the lower road, and which is the shortest, is practicable only in very dry seasons, and when the waters are very low; because there are several creeks to pass, which are not fordable in high waters; in this case, the other, called the upper road, must be taken, which is much longer, and which leads along the heights, crossing the creeks or rivers at their sources. This road is passable for carriages, whilst the lower road is practicable only for horse or foot passengers. The distance from hence to Kaskasias by the

lower road is reckoned eighty miles, that by the upper road one hundred and fifty.

The platform, on which the fort is erected, is about seventy feet above the level of low water, and has consequently nothing to fear from inundations. But the bank being perpendicular, and the fort placed very near the precipice, which is daily giving way, two of the bastions that face the river are in danger of being borne off by the first floods; the ditch and palisadoes having already shared that fate.

Near the fort are seven or eight houses or huts inhabited by Canadians, whose sole occupations are hunting, or dragging boats: they appeared poor and miserable.

The commander of this fort was Captain Pike, who treated us with great hospitality during the two days which we spent with him; but at the moment of our departure, whether from reflection, or whether he had received orders to that effect, as he told me verbally, he thought it prudent to arrest us. At five in the morning, Capt. Pike, attended by four fusileers and the whole of his staff, including the surgeon, planted himself in my boat, declaring to me with an air of dignity, that he thought himself obliged in conscience to arrest us, having been informed that I was indefatigable in taking the survey of

the Ohio, and of all the Western States. I immediately showed him the whole of my manuscripts, observing that they contained nothing but geographical notes and a few local remarks, which were more fitted to benefit than injure his fellow-citizens. He advised with his council; but neither any of its members or himself could read French, and there was a moment of suspense with respect to his decision; when an idea, which alarmed me extremely, presented itself to him;—that of sending my papers to Philadelphia, and taking the orders of government. The distance from Fort Massac to Philadelphia is at least a thousand miles. Fortunately, the surgeon, who was a man of sense, observed, that eight months must elapse before we could obtain an answer, and that it would be cruel to detain me and my suite during the whole of the winter, if, as he believed, I had done nothing contrary to the laws of the country; since every one had a right to travel in the United States, and even without a passport. Captain Pike was struck with the wisdom of this observation, and it was unanimously resolved that I might continue my journey, taking, however, on board an officer to attend me as long as I should remain in the territory of the United States; this commission was entrusted to Captain Taylor. Of Captain Pike's conduct we had upon the whole no great reason to complain: he

appeared to be a good man; and this little adventure proceeded rather from the jealous suggestions of some persons who surrounded him, than any hostile intention of his own.

Two miles below Fort Massac, on the left, we found a creek, called Massac's Creek, which is not navigable.

Immediately below Fort Massac the Ohio widens still more, and its course becomes slower, flowing along a low country. On the right we perceived a kind of natural dyke, which runs parallel with the banks of the river, but the lands behind are in general low and swampy.

We proceeded without finding any variation in the soil twenty-three miles. In this space the Ohio, which had run for some time towards the west, takes a sudden bend towards the south. We reached Cash Island, after having passed two creeks on our right and left, neither of which are navigable. The navigation during these twenty-three miles is perfectly good, and the depth of water from fifteen to twenty-five feet.

Passing Cash Island on our left, we took the channel on the right; carefully steering, however, as close as possible to the island, to avoid a sand-bank jutting out from the right.

Three miles below Cash Island, we left on the right Cash Creek, and six miles below this creek we reached

the mouth of the Ohio. The country continues low and swampy; the navigation regularly good, and the depth of the river scarcely ever varies from twenty to twenty-five feet.

The Ohio at its mouth offers nothing remarkable; its breadth is nearly the same as that of the Mississippi, and its banks are low and marshy, as well as the country on each side.

Opposite to its mouth the Ohio has deposited a great quantity of sand, which, forming a very considerable bank, bars a part of the Mississippi, and renders this passage extremely difficult: this we shall explain in the chapter that treats of the navigation of this river.

In general, the distances marked in Hutchins's charts, and others, are too great; particularly from the rapids to the mouth of the Ohio.

CHAPTER XIV.

TABLE

OF THE DISTANCES OF THE COURSE OF THE OHIO, FROM
PITTSBURG TO ITS MOUTH.

| From Pittsburg to | Miles. |
|---------------------------------------|-----------------|
| HAMILTON Island | 1 |
| The length of the island | 1 $\frac{1}{2}$ |
| Long Island | 3 |
| The length | 6 $\frac{1}{2}$ |
| A small rapid | 1 |
| A small and very low island | 3 |
| Its length | 1 |
| | <hr/> |
| | 17 |

| From Pittsburg to | Miles, |
|--|--------|
| Brought over | 17 |
| Logstown | 6 |
| Crow Island | 1 |
| Its length | 1 |
| Big Beaver Creek | 4 |
| A small low island | 5 |
| Its length | 2 |
| Great Island | 2 |
| Its length | 1 |
| Bird Town | 2 |
| Little Beaver Creek | 3½ |
| Island without a name | 5 |
| Two islands without names | 5 |
| Yellow Creek | 3 |
| The head of the first of the Black Islands | 1 |
| Their length | 5½ |
| Judah Campbell | 1½ |
| King's Creek | 2 |
| Brown's Islands | ½ |
| First houses in Mingo's Bottom | 5 |
| Henderson Island | 3 |
| Buffalo Creek | 3 |
| Carpenter's Station | 5½ |
| | <hr/> |
| | 84½ |

| From Pittsburg to | Miles. |
|--|--------|
| Brought forward | 84½ |
| Short's Creek | 4 |
| The head of the first of the Three Islands | 1 |
| Their length | 4 |
| Weeling Creek | 1½ |
| Mc.Mann's Creek | 2 |
| Dely's Station | 5 |
| Captel's Island | 4 |
| Captel Creek | 2 |
| Fish Island | 3 |
| Its length | 1 |
| Two small islands | 1 |
| Sun Fish Creek | 3 |
| Opossum Creek | 3 |
| Fishing Creek | 8½ |
| Long Reach | 5 |
| Its length | 12 |
| Déchiquetée island | 8½ |
| Middle Island | 1½ |
| Its length | 3 |
| French Creek | 3 |
| The first of the Three Brothers Islands | 1 |
| Their length | 4½ |

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| From Pittsburg to | Brought over | Miles, 166 |
|--------------------------|--------------|---------------|
| Two small gravel banks | . | 1½ |
| Calf Creek | . | 2½ |
| Bull Creek | . | 2 |
| Little Muskingum | . | 5 |
| The head of Duval Island | . | 1 |
| Its length | . | 2½ |
| Great Muskingum | . | 1 |
| A small creek | . | 5 |
| A small island | . | 1½ |
| Another small island | . | 5 |
| A third island | . | 5 |
| Port Kanhawa | . | 3 |
| Belpré | . | 1 |
| Little Hock Hocking | . | 7 |
| Great Hock Hocking | . | 6½ |
| Lee's Creek | . | 2½ |
| Belleville Island | . | 2 |
| Devil's Hole | . | 8 |
| Anderson Island | . | 6 |
| A little low island | . | 7 |
| Abraham's farm | . | 2 |
| Two small islands | . | 2 |
| | | <hr/> 259 |

| From Pittsburg to | Miles. |
|---|--------|
| Brought forward | 239 |
| Length of the two small islands | 2½ |
| Mill's Creek | ½ |
| The first island | 1 |
| The second island | 2 |
| Tartt's Fall | 2 |
| Robertson Island | 19 |
| Taylor Island | 3 |
| Point Pleasant | 6 |
| Gallipolis Island | 3 |
| Its length | 2 |
| A small island without a name | 4 |
| Racoon Creek | 8 |
| Little Guiandot | 7 |
| Great Guiandot | 8 |
| Twelve Poles Creek | 9 |
| Great Sandy River | 6½ |
| A creek without a name | 3 |
| A torrent | 12 |
| Little Sandy River | 5½ |
| A creek eight fathoms wide | 13½ |
| Little Scioto | 2 |
| Tiger Creek | 6 |
| | <hr/> |
| | 564½ |

| From Pittsburg to | Miles. |
|------------------------------|--------|
| Brought over | 364½ |
| Great Scioto | 5 |
| Kenekena Creek | 11 |
| Turkey Creek | 2 |
| Michael Settlement | 5 |
| A prominent point | 8 |
| Salt works | 2 |
| Graham | 9 |
| Middle Island | 3 |
| Donaldson Creek | 3 |
| Three islands | 5 |
| Manchester | 2 |
| Izick's Creek | 1 |
| Cabin's Creek | 3 |
| Brush's Station | 2½ |
| Limestone | 4 |
| Lawrence Creek | 4 |
| Eagle Creek | 2 |
| Red Oak Creek | 2½ |
| Lee's Creek | 2½ |
| Lee's Station | 1 |
| White Oak Creek | 3 |
| Bracking Creek | 3 |

| From Pittsburg to | Miles. |
|--------------------------------|------------|
| Brought forward | 447 |
| Bull Skin Creek | 3 |
| Locust Creek | 2½ |
| Hot Creek | 3 |
| A great bend | 4 |
| Twelve Mile Creek | 12 |
| Nine Mile Creek | 3½ |
| Selma Creek. | 5 |
| Little Miami | 3½ |
| Cincinnati | 9 |
| Mill's Creek | 2½ |
| Sym's Station | 11 |
| Great Miami | 5½ |
| Tanner's Creek | 3½ |
| Wilson Creek | 1½ |
| Hogan's Creek | 1 |
| Woolper's Creek | 3 |
| Paroquet Island | 3 |
| Gunpowder Creek | 7 |
| Landing Creek | 1 |
| Big Bone | 2 |
| Steel's Creek | 2½ |
| Creek without a name | 5½ |
| | <hr/> 541½ |

| From Pittsburg to | Miles. |
|--------------------------------|-------------------|
| Brought over | 541 $\frac{1}{4}$ |
| Elk Creek | 7 |
| Cool's Station | 12 |
| Indian Creek | 5 $\frac{1}{2}$ |
| Kentucky River | 5 $\frac{1}{2}$ |
| Little Kentucky | 2 $\frac{1}{2}$ |
| Indian Kentucky | 6 |
| Creek without a name | 4 |
| Another creek | 5 |
| Another creek | 10 $\frac{1}{2}$ |
| Eighteen Mile Island | 12 |
| A creek | 7 |
| Twelve Mile Island | 5 |
| Harrod's Creek | 4 |
| Goose Creek | 11 |
| Louisville | 8 |
| Salt River | 28 |
| Otter Creek | 6 |
| Ohio-Pio-Mingo | 5 |
| Does Run | 5 |
| Falling Spring | 4 |
| French Creek | 7 |
| Buck's Creek | 6 |
| | <hr/> |
| | 695 |

| From Pittsburg to | Miles. |
|------------------------------------|-----------------|
| Brought forward | 693 |
| A small island | 4 |
| Another island | 2 |
| Windot's Creek | 1 |
| Preston Creek | 10 |
| Blue Creek | 2 $\frac{1}{2}$ |
| Helin's Creek | 7 $\frac{1}{2}$ |
| Dardada Island | 2 |
| Little Yellow Creek | 8 |
| Harden's Creek | 4 |
| A third creek. | 9 $\frac{1}{2}$ |
| Clover Creek | 5 |
| Jefferson's Creek | 6 |
| Anderson's Creek | 13 |
| A slate-bank | 2 |
| Its length | 2 |
| Blackford Creek | 8 |
| A great sand-bank | 2 |
| Its length | 3 |
| Two islands | 6 |
| Yellow Bank | 6 |
| An island without a name | 3 |
| Another island | 3 $\frac{1}{2}$ |
| | <hr/> 803 |

| From Pittsburg to | Miles. |
|--|-------------------|
| Brought over | 803 |
| Its length | 1 $\frac{1}{2}$ |
| Little Pigeon Creek | 8 |
| An island without a name | 4 $\frac{1}{2}$ |
| Its length | 2 $\frac{1}{2}$ |
| Green River | 3 |
| Pigeon Creek | 9 |
| A small island | 6 |
| Red Bank | 6 |
| An island | 2 $\frac{1}{2}$ |
| A bend | 9 |
| Diamond Island | 5 $\frac{1}{2}$ |
| Its length | 4 |
| A long island | 7 |
| High Land | 10 |
| River Wabash | 7 $\frac{1}{2}$ |
| The first of three small islands | 2 $\frac{1}{2}$ |
| Their length | 4 |
| A small island | 4 |
| Salt Creek | 9 |
| Trade Creek | 8 |
| The Cavern | 7 |
| A large island | 1 $\frac{1}{2}$ |
| | <hr/> |
| | 925 $\frac{1}{2}$ |

| From Pittsburg to | Miles: |
|--|--------|
| Brought forward | 925½ |
| Its length | 3½ |
| A creek on the left side | 4 |
| Another creek on the left | 1½ |
| A small island | 1½ |
| Another island | 3 |
| The first of three small islands | 3 |
| Their length | 4 |
| A large island | 3 |
| Another island | 3 |
| Cumberland River | 3 |
| Tennessee River | 10 |
| Fort Massac | 11 |
| Massac Creek | 2 |
| Cash Island | 23 |
| Cash Creek | 3 |
| Mouth of the Ohio | 6 |
| Total | 1010 |

CHAPTER XV.

Military description of part of the Mississippi, from the mouth of the Ohio to the Illinois country.—Important remark.—Buffalo Island.—Temperature.—Elk Island.—Pointe à la Perche.—Charpon Islands.—Courcy Islands.—Unlucky accident.—English Islands.—Vines.—Chains of rocks.—Rapidity of the current.—Cape à la Cruche.—Quicksands.—Pelicans.—Cape Girardot.—Observation respecting the beavers.—Du Verrier Islands.—False Bays.—Marl River.—Apple River.—Muddy River.—The Tower.—Wandering Indians.—Necessary precautions.—Winged Islands.—Five Men Cape.—Dung Islands. St. Mary's River.—Recapitulation of the distances.—Reasons why a good map of the course of the river can never be obtained.

BEFORE we speak of the Mississippi, that great artery of North America, it is necessary to make an observation.

Obliged, on leaving the Ohio and entering the Mississippi, to ascend a part of this last river, in order to gain the

Missouri; and anxious to give a successive view of objects such as we beheld them, our account of the Mississippi will necessarily be interrupted; that is to say, we shall first treat of the Mississippi from the Ohio to the Missouri, and shall not resume our account of that river as far as New Orleans, till we have finished our expedition into the country of the Illinois and the Missouri.

We began our course on the Mississippi the second of August. This day was one of the hottest we had felt in North America: Fahrenheit's thermometer had risen to ninety-seven. An hatchet exposed to the sun during an hour had acquired such a degree of heat, that we could not hold it in our hands. The wind was south, and the weather thick and hazy.

Immediately on entering the Mississippi, and after doubling the northern point which separates the waters of this river from those of the Ohio, we passed on the left a great sand-bank, called in the language of the country *batture*, formed by this last river. The sand-bank is long, flat, and covered with young poplars. At this point both sides of the river are low and swampy, and we saw nothing on the horizon which indicated that there were any lands more elevated within a certain distance. For this reason, the right side of the river, opposite to the mouth of the Ohio, will never be proper for the construc-

tion of any works, unless at an expence which would be useless in a country that is yet a desert.

Three miles from the mouth of the Ohio, in ascending the river, is an island on the left, called Buffalo Island, which is about a mile in length, well wooded, and high, with a blackish soil. We observed on both sides of the river, ranks of willows, all of the same height, resembling the finest Lombardy poplars, and arranged with so much symmetry that each tree seemed placed at equal distances, which viewed from the water produced a most beautiful effect.

After doubling Buffalo Point, we reached, at the distance of half a mile, Elk Island, which is newly formed. The willows we saw on this spot were not more than from two to three years growth. Both passages are equally good; nevertheless, when the waters are low, and in going up the river, the right side is to be preferred, leaving the island on the left.

We rowed by Elk Island a mile, and a mile and an half higher we reached on the right Pointe à la Perche, so called on account of the great quantity of willows with which it is bordered; these willows are still loftier than those we have just mentioned, some of them being sixty feet in height.

Between Elk Island and Pointe à la Perche the current is more gentle than from this island to the mouth of the Ohio, where it is so strong that we proceeded scarcely more than a mile in two hours; and this with such difficulty, that the best Canadian rower could not handle his oar more than a quarter of an hour without resting.

Half a mile higher than Pointe à la Perche, we reached on the right Charpon Islands: these are three in number, and they follow each other in succession; each is about a mile long, including the canals by which they are separated. The lands continue low and swampy to a very great distance on both sides, but they are of a fine quality, having from twelve to eighteen feet of vegetable earth.

Three miles above these islands we reached Courcy Islands: these are four in number, and occupy a space of two miles. The towing line is used for these three miles.*

Before we reached Courcy Islands, we passed between two great banks, in order to gain the right side, leaving the islands on the right. This is the only side practicable for the towing line, the other being perpendicular and encumbered with trees, which renders this passage extremely difficult. With a line of fifty fathoms, though the waters are low, we found no bottom.

* The towing line is made use of when the waters are low and the sand-banks dry: in high waters, or when the banks are steep, this mode is impracticable.^{1.}

Immediately after passing the last of Courcy Islands, we steered to the left, in order to avoid a very dangerous sand-bank; there is a passage on the right, but the current is so strong, that it is practicable only in descending the river.

In crossing over, we met with a disagreeable accident: our boatmen, exhausted in striving to master the current, stopped on a sudden, when the boat drove with such violence and with so much force on a stump, which broke in its ribs, that we had only time to throw ourselves on the nearest of one of the islands, where we passed the rest of the day to repair the damage.

We learned with certainty, on leaving the Ohio, that from thence to the Missouri, we could never proceed faster than three leagues in a day, and sometimes only two. Although our boat had twenty oars, the rapidity of the current, the immense quantity of trees heaped together on both sides the river, and which sometimes filled half its bed; the transversal position of these trees, which changes the current of the river, and increases its rapidity, render this navigation very difficult and dangerous: we were continually in the alternative of breaking on the trees, or striking on the sand-banks.

We estimated the current of the river in this place at six or seven miles an hour, and often nine in channels

formed by the islands. The country continues to be low and swampy.

We proceeded nine miles and reached the English Islands, called by the Canadians Great Courcy Islands, and by the Indians Taiouwapeti. These islands occupy a space of six miles, and are twelve in number, ranged in groups of different sizes, and each affording a passage: it is, however, safest to leave them all on the right; not only because the current is less strong, but that nearly six miles are gained by taking the channel on the left. The navigation from Little Courcy Islands hither is good: the banks which are formed between them, and which are dry, make it very easy for towing.

We saw a great quantity of game of every kind on these islands, roebucks, bears, and buffaloes; we killed one of the latter. From the mouth of the Ohio to this spot we found neither creek nor river, nor saw any source whatever.

After passing the English Islands, we perceived that the lands begin to rise, and cease to be swampy; the soil, nevertheless, is poor, being either rocky or gravelly, mixed with reddish earth. At a distance we perceived a chain of heights, called Taiouwapeti Mountain, which runs north and south, parallel to the river.

The whole of this quarter is covered with vines of the large kind, which differs, however, from that which we found in the north, the wood not being so thick; the fruit is less, of a deeper red and sweeter: these vines climb to the tops of the loftiest trees.

At half a mile distance from the last of the English Islands, we found on the left side a chain of rocks, called the Little Chain. We kept to the right, and two miles higher we found a second, called the Great Chain, which extends into the middle of the river, and is a mile in length. The rocks that form this last chain being detached from each other, leave a number of small passages, which, although perilous, may be passed with less danger, aided by a good pilot, than the channel altogether on the right, where there is a current so strong, that it cannot be stemmed without much loss of time and considerable efforts, while amidst the rocks the water is almost stagnant.

After passing the Great Chain of rocks, keeping constantly to the left, the navigation continues gentle and easy. We sometimes proceeded a mile and an half an hour.

Here the ground on both sides rises in gentle slopes, and is no longer swampy; it is a mixture of rocks, gravel, and good soil. We beheld at intervals small rivulets, which take their sources in the heights of Taiouwapeti.

The quality of their waters is very inferior to that of the river.

The banks of the river are extremely dangerous in this place, from the quicksands which often shift, and on which no one can step without the risk of being swallowed up ; our hunter had nearly perished in this manner, and was saved only by placing his fowling piece in a cross direction, when we instantly threw out cords and hawled him on board the vessel. These quicksands may easily be known by their lustre, which have the polish of glass, and by their humidity which resists the hottest beams of the sun.

We proceeded six miles, and reached, on the left side, Cape à la Cruche: it is a very elevated and perpendicular point, in front of which, and level with the water, is a nest of rocks which extends to some distance, and which is very dangerous. These rocks may easily be distinguished by the breakers.

The navigation during these six miles is good, if care be taken to keep on the left side.

Having reached Cape à la Cruche, we crossed a part of the river to gain an island on the opposite side, which is bordered by a great sand-bank, very conveniently situated for towing. We thus avoided a very strong current on the left, and which begins after doubling Cape à la Cruche.

Three miles above Cape à la Cruche, we passed on the left the small island of La Ferrière.

Towards four o'clock in the afternoon, we perceived in the horizon a kind of white riband of great length, which was a flock of pelicans, called by the Canadians *great throats*, coming from the north in their passage to the southward. They begin to arrive in this latitude, in the month of June, as the cold approaches. In the month of December, therefore, an innumerable quantity are seen at New Orleans, where they generally pass the winter, and hatch their young. These birds travel always in flocks; when they reach any great river, they range themselves all in one line, their heads turned against the stream, and thus suffer themselves to be carried down: they swallow all the fish that come in their way, and deposit them in the great bag. When the river is too narrow to contain a whole flock, they place themselves in a line of two deep: they prefer the Mississippi and the Missouri to every other river, on account of their muddy waters.

At the distance of a mile and an half above the island of La Ferrière, we reached Cape Girardot. We kept to the left side, to take advantage of a very strong eddy, that reaches from this last island to Cape Girardot, which is the first military point on the river, from the mouth

of the Ohio;* both sides being either swampy or broken by rocks.

Cape Girardot, on the contrary, is a block of granite, covered with a vegetable earth, about a foot in depth; it commands the whole river, which by means of a point, or very considerable alluvion, on the opposite side, is narrowed to the breadth of a mile at most. In order to avoid the shallows with which this alluvion is surrounded, all vessels that pass are obliged to keep very near the right side, which is within half cannon shot of the Cape.

The upper part of the block or eminence A, is commanded by no height; that part which fronts the river is steep and inaccessible; a large and deep defile surrounds it to the north and east: on the south is a gentle declivity, which finishes in low and sometimes marshy lands. The foot of the cliff affords shelter and excellent mooring for vessels.

Cape Girardot is, therefore, so situated as to supply what is wanting on the right bank of the Mississippi, at the point which corresponds to the mouth of the Ohio. Placed at forty-three miles and an half only above its mouth, this point commands whatever issues from that river, and covers perfectly on this side the place of St. Louis, from

* It will be seen at the end of this survey, that this is also the first point on the western side of the river from New Orleans, which renders it so much the more important.

which it could receive succour in twenty-four hours. This leads us to think that the true station of the gallies is at this spot, where there is a fort respectable enough to protect them.

The importance of this post did not escape M. Laurimier, a Frenchman in the Spanish service, whose military talents and great influence with the Indian nations are very useful to this power. He has established himself there with the Chawanons and the Loups, whom he commands, and has a very fine farm, on which he resides.

The river in great floods rises here as high as seventy feet.

In one of the villages of the Loups which I visited whilst I remained at Cape Girardot, I found a white who had formed an establishment. This planter in clearing had destroyed a settlement of beavers: on examining, with the proprietor, the devastation which had been made in the dwellings and dikes of these industrious animals, we were struck with the appearance of one among those we had killed, the skin of which was totally without hair, and his body covered with scars. I conjectured at first that this was the effect of some malady natural to this species of animal; but my host, to whom I made the remark, informed me, that he was the slave of the family, and that a similar one was found in almost every habitation of the beavers.

“ In each family,” said he, “ there is one, which on his entrance into the world is destined to be the slave. The most servile and laborious occupations are his lot; among which is that of his serving as a traineau for the conveyance of wood. When the beavers have resolved on cutting wood, and it remains only to be carried off, the slave takes the stick between his fore feet; the free beavers, seizing him by the tail, drag him in this manner, nor is he permitted to quit his hold till he reaches home.”

If this be a fact, and I relate it with the same simplicity that it was recounted to me, it is not astonishing that the body of this animal should be scarified and deprived of its hair, by the continued friction he must have undergone, when dragged through briars, over stones and rocks. This at least is certain, that the beaver I saw was without hair, and covered with scars both old and newly made.

At the distance of half a mile from Cape Girardot, and on the left side, is a creek which is almost dry during the summer; and half a mile higher is the island Du Verrier, which we left on the right. The navigation during this mile is easy, but the island being very large, and narrowing the bed of the river, there is a very strong current in both channels. We quitted the left side, and crossed to gain the island, which is sur-

rounded with banks, that facilitate the use of the towing line.* The left side of the river, independently of its extreme rapidity, is also filled with a considerable quantity of drift-wood, which chokes up half the channel; but these kinds of obstacles are but momentary; the next year they may totally disappear, and may probably embarrass some other point of the river.

After rowing by the island Du Verrier, which is two miles long, and proceeding three miles further, we reached False Bays, situated on the right side; we crossed again a part of the river, to gain a great sand-bank which is dry, and where the current is less strong. We left on the right, a mile from False Bays, an island without a name, which has been only formed within these two years. Two miles and an half above this island, we passed another on the right, of which the name is also unknown.

The current during these last two miles and an half is moderate, and the navigation easy; we kept to the right side, which is bordered with flat rocks, and convenient for mooring boats. A mile above this last island, perpendicular rocks rise on the right bank to the height of two hundred feet: the left side, on the contrary, is swampy.

* These crossings are made with extreme difficulty, and however able the rowers, one and two miles are often lost in the passage: they ought, therefore, to be avoided as much as possible.

We rowed the length of a mile along this iron rampart, and reached on the same side Marl River (*Rivière de Glaise*), which is full of a clay of this nature. The river is about forty or fifty yards wide at its mouth, runs through low and swampy lands, and is almost dry during the summer.

Four miles above, and on the same side, Apple River (*Rivière aux Pommes*) empties itself. This river is from eighty to ninety yards in breadth at its mouth, and though its waters are low in dry seasons, there is nevertheless enough for the navigation of canoes.

Directly opposite to Apple River, Mud River (*Rivière aux Vases*) flows into the Mississippi. Its mouth is concealed by a very considerable island, which forms two passages; the first, in ascending the river, is the best. This river is navigable sixty miles for canoes, during the whole year; the country through which it flows is extremely fertile, but swampy to a great distance.

Four miles above Mud River, and on the right side of the Mississippi, is the Tower; a name given to a great mass of rocks, at nearly fifty yards distance from the right bank. Its round form, insulated situation, and lofty height, led the first navigators to give it this appellation. This rock offers nothing curious,* excepting the immense quan-

* If this rock were not commanded by the right bank, it would form a very important military point.

tity of birds of every kind to which it affords an asylum. Six weeks previous to our arrival here, an American family, composed of twelve persons, were all massacred. They had taken their station, at the close of the evening, opposite to the Tower, on the left side of the river. Soon after their landing, two Chickasaws came to visit them with a friendly air, asking them for provisions and rum, which were given to them, and they appeared to go away highly satisfied. But at daybreak a troop of twenty Indians fell upon this unfortunate family, and massacred men, women, and children, without mercy. These murders are very common, and are committed almost always by Indians proscribed and driven from their tribes for robbery or some bad action; the vagabonds then wander through the woods, and rob and kill all they meet. These depredations are in general committed by the Chickasaws; sometimes, however, massacres take place by way of reprisal. If an Indian be killed by a White, as soon as the news reaches the tribe, the whole nation swears vengeance, and that the same quantity of blood which has been taken shall be shed: after which, the first White that presents himself, whether a stranger or no, becomes their victim. When such attacks are to be apprehended, it is prudent to encamp in one of the small islands, after having well examined it; or what is still better, to anchor always at

a little distance from the shore. To this precaution, which we cannot too strongly recommend to those who travel in these deserts, we owe the preservation of our own lives.

Leaving the Tower, we proceeded three miles and an half, and reached Winged Island (Isle aux Ailes), which we left on the right. In this space there are several eddies on the left side, which favor the ascent of the river; the current is very strong on the right.

Four miles and an half above Winged Island is Five Men Cape (Cap des cinq Hommes), situated on the left side. It is known by the long line of rocks which precedes it, and which though joined to the bank, extends far into the river. These rocks form very violent currents, but beyond them the navigation becomes smooth and easy.

Three miles above Five Men Cape are Dung Islands (Isles à la Merde):* these are four in number, and extend nearly three miles. We passed them on the left, and half a mile higher we reached the river St. Mary, situated on the same side. Opposite its mouth is a little island, called Perch Island (Isle à la Perche), which we left on our right.

A mile and an half above Perch Island, we reached the island of Kaskaskias.

* These disgusting appellations seem to characterise the state of the people.

From Five Men Cape the navigation is good, and even easy, but care must be taken when at Perch Island, to cross the river and gain the right side, where the current is much more gentle than on the left.

A mile above the island of Kaskaskias, we reached the mouth of the river which bears this name.

The appearance of the country from Cape Girardot to this place, varies but little; every where we find small rocky heights, intersected by vallies, which are often overflowed. Excepting Cape Girardot, the whole of this country, from the Ohio to Kaskaskias, is uninhabited.

The river Kaskaskias is nearly one hundred and twenty yards broad at its mouth, and affords in every season a gentle and safe navigation for all kinds of boats. The village of Kaskaskias, situated ten miles from the mouth of the river, is the first settlement in the country of the Illinois.

From Kaskaskias to Salt River is reckoned ten miles; from thence to St. Geneviève four; from St. Geneviève to Fort Chartres twenty; to Joachim River eighteen; to Marimeck river fifteen; to the village of Carondelet fifteen; to St. Lewis ten; and to the Missouri four.*

The whole navigation from the river Kaskaskias is excellent, and traverses a country very well inhabited, called the Illinois.

* See the description of the country of the Illinois.

RECAPITULATION OF THE DISTANCES

FROM THE MOUTH OF THE OHIO TO THAT OF THE MISSOURI.

| From the mouth of the Ohio to | Miles. |
|---------------------------------|------------------|
| Buffalo Island | 5 |
| Its length | 1 |
| Elk Island | $\frac{1}{2}$ |
| Its length | 1 |
| Pointe à la Perche | 1 $\frac{1}{2}$ |
| Charpon Islands | $\frac{1}{2}$ |
| Their length | 5 |
| Courcy Islands | 5 |
| Their length | 2 |
| English Islands | 9 |
| Their length | 6 |
| Little chain of rocks | $\frac{1}{2}$ |
| Great chain | 2 |
| Cape à la Cruche | 6 |
| Island à la Ferrière | 3 |
| Cape Girardot | 1 $\frac{1}{2}$ |
| Island du Verrier | 1 |
| | <hr/> |
| | 44 $\frac{1}{2}$ |

| From the mouth of the Ohio to | Miles. |
|-------------------------------------|-------------------|
| Brought over | 44 $\frac{1}{2}$ |
| Its length | 2 |
| False Bays | 3 |
| Marl River | 5 $\frac{1}{2}$ |
| Apple River | 4 |
| The Tower | 4 |
| Winged Island | 3 $\frac{1}{2}$ |
| Five Men Cape | 4 $\frac{1}{2}$ |
| Dung Islands | 3 |
| Their length | 3 |
| River St. Mary | 1 |
| Kaskaskias Island | 1 $\frac{1}{2}$ |
| Salt River | 10 |
| St. Geneviève | 4 |
| Fort Chartres | 20 |
| Joachim River | 18 |
| Marimeck River | 15 |
| Carondelet village | 15 |
| St. Lewis | 10 |
| The Mouth of the Missouri | 5 |
| | <hr/> |
| | 176 $\frac{1}{2}$ |

The most valuable information which we acquired during this short passage, respecting the navigation of this river, as well from our own observations as the different accounts which we could procure, was, that whatever talents, patience, and courage may be exercised in undertaking this expedition, there are obstacles which will for ever render it impossible to obtain either charts or any certain details respecting the course of this river, which can serve either as a guide or instruction to travellers.

The Mississippi has not only the inconvenience of being of an immense extent, of winding in a thousand different directions, and of being intercepted by numberless islands; its current is likewise extremely unequal, sometimes gentle, sometimes rapid; at other times motionless; which circumstances will prevent, as long as both sides remain uninhabited, the possibility of obtaining just data with respect to distances. But an insurmountable obstacle will always be found in the instability of the bed of this river, which changes every year: here a sharp point becomes a bay; there an island disappears altogether. Further on, new islands are formed, sand-banks change their spots and directions, and are replaced by deep channels; the sinuosities of the river are no longer the same: here where it once made a bend it now takes a right direction, and there the straight line becomes a curve: here ravages

and disorders cannot be arrested or mastered by the hand of man, and it would be extreme folly to undertake to describe them, or pretend to give a faithful chart of this vast extent of waters, as we have done of the course of the Ohio, since it would not only be useless but dangerous.

It is for these reasons that we shall confine ourselves, as we proceed, to general ideas with respect to the navigation of this river, and treat in detail only of the most striking military points situated on its current. If from the Ohio to the river Kaskaskias we have deviated from this rule, it is because that part of the river is reckoned the most difficult, and also varies less on account of the two chains of heights which bound its banks, and which fix and master its course.

CHAPTER XV.

Country of the Illinois.—Period at which the French established themselves.—Character of the inhabitants.—Sketch of the country.—Observations on the mountains.—Conjectures.—Objections.—Communications.—Meadow of the Rock.—Fort St. Charles.—St. Philip.—New design.—Hull's Station.—Salt Works.—Bound Station.—Indian tombs.—Meadow of the Bridge.—Observations.—Kaokias.—Singular country.—St. Lewis.—Fort.—Military position of St. Lewis.—Florissant.—Marais des Liards.—St. Geneviève.—Lusière.—Mines.—Water carriage.—Nomenclature of different gramina.—Plan of an intrenched camp.

THE country of the Illinois is situated between the thirty-seventh and forty-fifth degree of northern latitude. The French took possession of this province in 1681, at the same period that William Penn laid the foundation of Pennsylvania.

The settlements on the Spanish side begin from Salt River, and terminate at the Missouri, on the right bank of the Mississippi: those on the American side begin at the river Kaskaskias, and end at Dog's Meadow (Prairie du Chien).

The French settlements which still remain, situated on the Spanish side, are St. Geneviève, St. Lewis, Florissant, and St. Charles. This last is formed on the left side of the Missouri.

On the American side there are still some French at Kaskaskias, the Meadow of the Rock (Prairie du Rocher), St. Philips, Kaokias, Piorias, on the Red River, at Dog's Meadow, near the Oniscousin, Chicagon, on the lake Michigan, and at Post St. Vincent's, on the Wabash.

These people are, for the most part, traffickers, adventurers, hunters, rowers, and warriors; ignorant, superstitious, and obstinate; accustomed to fatigue and privations, and stopped by no sense of danger in the undertakings they form, and which they usually accomplish.

In domestic life, their characters and dispositions are similar to those of the Indians with whom they live; indolent, careless, and addicted to drunkenness, they cultivate little or no ground, speak a French jargon, and have forgotten the division of time and months. If they are asked at what time such an event took place, they answer, "in the time of the great waters, of the straw-

berries, of the maize, of potatoes:" if they are advised to change any practice which is evidently wrong, or if observations are made to them respecting the amelioration of agriculture, or the augmentation of any branch of commerce, the only answer they give is this: "It is the custom; our fathers did so: I have done well; my children will do the same." They love France, and speak of their country with pride.

The province of the Illinois is perhaps the only spot respecting which travellers have given no exaggerated accounts: it is superior to any description which has been made, for local beauty, fertility, climate, and the means of every kind which nature has lavished upon it for the facility of commerce.

This country is a delightful valley, where winds one of the most majestic rivers on the globe, and which, after receiving the vast Missouri, is still augmented by an infinite number of smaller rivers and creeks, all navigable, and fitted for the construction of mills and machinery of almost every kind.

This valley is full of small lakes and villages, and interspersed with woods and natural meadows, strewn with medicinal and odoriferous plants. Across these meadows flow numerous rivulets, sometimes murmuring beneath the flowers, and sometimes displaying their silver

beds and their transparent waters, pure as the air which is breathed amidst those romantic spots. On each side of these vast meadows, which are level as the surface of the calm ocean, rise lofty and venerable forests, which serve as boundaries, while their thick and mysterious shades fill the mind with reverential awe and enthusiastic contemplation.

This valley is bounded on the right and left by two small chains of mountains running parallel with the banks of the river, but never more distant than four or five miles.

The chain on the east begins to be perceived from the mouth of the river Kaskaskias, and runs in the same direction as far as the Dog's Meadow, situated two hundred and forty leagues higher.

The western chain is visible from Cape Girardot, and runs in the same direction, nearly at the same height, and following the same bendings as that of the east.

These small chains rise commonly one hundred and fifty and sometimes two hundred feet above the level of the lands which separate them from the waters of the river. These masses of rock are composed sometimes of greystone, flint, with which the Indians tip their arrows, or millstone, but most frequently of limestone.

The lands which run along between these chains and the bed of the river, form, as I have already observed,

vast meadows intersected with small woods: the whole of these lands are the product of successive depôts, occasioned by the overflowings of the river. Trees half burnt are often found in digging, together with pieces of earthen and iron utensils. The whole is a bed of sand, the surface of which is covered by a vegetable layer, four or five feet in thickness.

It is probable that both these chains have been washed by the river: the different shells which are found incrustated, the constant parallelism of their layers with the horizon, and which is seen marked in the rocks, lying in the same direction, and the correspondent angles of these chains, are indications which support this conjecture. Here, nevertheless, a great difficulty presents itself; which is that of knowing how the river could at once have covered these two chains.

Many persons, and we were of the number, perplexed at the idea of the quantity of water necessary to cover this surface, suppose that the Mississippi may several times have changed its bed, and have flowed at different epochs over certain parts of these two chains; but the correspondence of the angles, the constant opposition of the concave with the convex parts, which so well demonstrate the course of the waters, oppose this hypothesis, and we

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are brought back almost irresistibly to believe that these two chains were once the two banks of the river.

In fact, had not the Mississippi washed at the same time both these chains, they would not always have run parallel and without interruption, and breaks would have been found at intervals, such as are observed in the current of the Ohio.

It may be inquired what is become of all the water which was necessary to fill so broad and deep a bed? The following is the most satisfactory solution which we could find of this difficult question.

When in descending the Mississippi we consider with attention the direction of these two chains of mountains, we observe that the nearer we approach the sea, the further they fall back from each other; till, at length, that on the western side flies off, and disappears altogether towards the Attakapas; whilst that on the east directs itself towards the mountains in the south of Florida.

From the point where these two chains are no longer visible, we find a prodigious extent of productive land, sometimes fifty leagues in breadth.

At thirty leagues from the mouth of the river is situated New Orleans, which is distant from the gulf of Mexico on the right and left, only two leagues. In the midst of

this peninsula runs, in different channels, the Mississippi, by which alone it could have been formed.

We know, also, that formerly this town was very near the mouth of the river, and consequently at a small distance from the sea shore. Admitting this to be the case, if we could carry back in our imaginations, above the Illinois, all the earth which has been washed down and deposited by the current in the stretch of land, which is now below New Orleans, we shall be convinced that the quantity of water necessary to fill and cover the space which then existed between the two chains, could not be immense, and that its volume appears insufficient at present, only from the changes which the water has itself produced. Besides, in the month of April, 1784, when a considerable inundation took place, the river reached from one chain to the other, and carried a barge from Kaskaskias to Kaokia, across the meadows and low lands which were under water. (There are, moreover, strong conjectures that the lakes Michigan and Superior emptied their waters formerly into this river. The evidence for this conjecture is, that when the waters are high, boats carrying from fifteen to twenty thousand weight pass from the Illinois river to the lake Michigan, without portage, by traversing a marsh which joins the sources of the river Illinois with those of the river Chicaco, which now discharges itself

into the lake Michigan. The Ouiscousin affords a similar proof.

No one is ignorant that Canada has suffered very considerable earthquakes; such, for example, as happened in 1663, when in a single night twenty-six shocks took place. The history of this colony informs us, that these earthquakes were felt over an extent of country more than one hundred leagues in breadth, and three hundred in length, from the mouth of the river St. Lawrence running to the West.

It is very probable, therefore, that the bed of granite which forms the cataract of the Niagara has been sunk in one of these violent commotions, and that previous to this convulsion of nature the waters of the lake emptied themselves into the Mississippi; this hypothesis explains easily how the waters of that river might have washed at the same time both the chains which filled the vast void that now exists; since the greater part of these waters at present discharge themselves into the river St. Lawrence,

But I offer this solution as the opinion of an individual little enlightened on a subject so abstruse, and which I leave to the meditation of those who are more conversant than myself with the secrets of nature.

There are two communications by land from Kaskaskias to Kaokia; one called the lower road, the other the upper. The first is practicable only during the summer, the second the whole year.

From Kaskaskias to the Meadow of the Rock^x is reckoned fifty miles, and the road lies across natural meadows and a soil extremely loamy, which renders it impracticable in rainy seasons. The vegetation of this soil is so luxuriant, that a man on horseback is covered by the height of the grass; we measured some stalks, which were twenty-one feet high.

The Meadow of the Rock is a small village situated at the foot of the chain of rocks, of which we have given the description; its population is composed of eighty or an hundred inhabitants at most, and the greater part are the produce of a mixture with the Indians.

At the Meadow of the Rock are two roads; that on the right goes across the heights; the left, which is the continuation of the lower road, traverses the meadows. A mile beyond the Meadow of the Rock, on the left, is a path now covered with grass, the track of which is scarcely to be seen. This path leads to Fort Charles,[†] situated on the banks of the river, at the distance of a mile: its ruins are the only vestiges that remain of the power by which it was erected. This fort was begun by the French India

Company in 1754, and finished in 1762, precisely at the period of the peace by which we lost our territorial possessions on this continent. Its form is square, with four bastions finely proportioned and covered with freestone. A wall surrounds it six feet thick and twenty high, with embrasures and embrasures: opposite and parallel to the curtains are four large and magnificent buildings, one of which was destined for officers, one for the garrison, and the two others for military stores. The whole of these buildings are made of freestone, and raised on arches. This establishment was constructed with so much solidity and care, that in spite of time and the neglect in which it is left, the wall and buildings are still in good preservation: the timber has been taken away.

In front of the curtain which faces the river, are seen the remains of a very fine battery of six pieces of twelve that defended the passage of the river, by means of an island which is opposite, and narrows its bed. At a quarter of a mile from the fort, on the left, are the ruins of Chartres, covered with wild herbs.

Proceeding seven miles by the road on the right, reckoning from the point where it separates, leading to St. Charles, we reached St. Philip, which is a new settlement, and contains seven or eight families, among which are a few Americans. This space is intersected

with woods, with natural meadows, and some marshes, which render St. Philip's unhealthy.

Two miles from thence is another crossway; the road on the right goes to New Design, and meets that which leads to the Meadow of the Rock; the road on the left goes into the valley.

Five miles further we reached Hull's Station, which is agreeably situated at the foot of the chain of mountains, on a small platform, high enough not to be incommoded by the thick and foggy air which spreads over the meadows. This station is composed as yet but of two houses, inhabited by Americans.

Eight miles beyond Hull's Station are the Salt Works: two roads lead to this place; that on the right is the most direct and the best, following the base of the mountain; the left leads through the meadows.

From the Salt Works to Bounds Station is a distance of five miles, which lie across a country alternately wood and meadow ground. On the left is a very considerable pond, filled with an innumerable quantity of water fowl of all kinds; this point is unhealthy during the summer.

A few miles beyond Bound's Station we passed some small huts on the left, newly constructed. Sixteen miles farther, following the course of the meadows, which are of an immense extent, we found several small mounds

regularly ranged in a circular form: these were ancient Indian tombs.

Three miles further we reached the Meadow of the Bridge, leaving on the right a road which leads to the heights. The whole of this space is intersected with large ponds, some of which are three or four miles long, and one broad: these stagnant waters occasion, by their exhalations, many fevers in the autumn, and on this account the Meadow of the Bridge is very little peopled, the greater part of the inhabitants having gone over to the Spanish side.

Observing the level of the waters of the river, when it is low, and that of the waters of the lakes, we perceived that it would be very easy to dry up the latter by means of a few drainings, which might be cut across the meadows; but indolence and the want of population are impediments to this measure, and the inhabitants prefer changing their settlements to the labor of ameliorating those they already occupy.

From the Meadow of the Bridge to Kaokia is only a mile.

Kaokia is situated at the extremity of this immense and beautiful valley; it contains about three hundred families, of which there are an hundred men capable of bearing arms.

RECAPITULATION

OF THE DISTANCES OF THE LOWER ROAD.

| | Miles. |
|---|----------|
| From Kaskaskias to the Meadow of the Rock | 14 |
| To St. Philip | 8 |
| Hull's Station | 7 |
| Salt Works | 7 |
| Bound's Station | 5 |
| Indian Tombs | 16 |
| Meadow of the Bridge | 3 |
| Kaokia | 1 |
| | <hr/> 61 |

Leaving the Meadow of the Rock, the road turns short to the right, passing a hollow which is very narrow, and following on the left a rivulet which is fordable at the distance of two miles. After climbing during a mile a very steep ascent, we reached a platform, which presents the view of a very singular country.

This country can neither be termed wood nor meadow; the trees with which it appears to be covered, are so thinly scattered, that the intervals are so large as not to intercept the light. Neither a thorn nor a shrub are

to be seen, and only one kind of wood, the post oak, the trees of which are all of the same size and height. The ground is covered with grass of an excellent quality for cattle.

The singular aspect of this country can be attributed only to a custom among the Indians of setting fire every autumn to the grass and dead leaves of the forests, which destroys the whole, except this kind of oak.* It is to be observed, also, that this oak is smaller, and not so lofty as those of other forests, where this accident has not taken place, and its bark is almost black. It is clear of branches, both great and small, to the height of twenty or twenty-five feet. The principal use of this timber is for inclosures or barriers, and it is as serviceable as cedar for these purposes.

* When a traveller is surprised by one of these fires, which happens commonly in the autumn, and sees the conflagration advance, which generally spreading over the whole extent of the meadow, runs rapidly on when aided by the wind, the only measure to adopt, in order to preserve himself from a danger so imminent, is to light a fire behind him; by this means, the grass is already burnt when the devouring flame reaches the spot, where finding nothing more to consume, it stops and is necessarily extinguished. For this reason every one who travels in the autumn, amidst these plains, cannot be too strongly recommended to provide himself with a tinder-box, which the inhabitants of the country are careful to do, since their lives are so nearly concerned.

The whole of this country is a gentle undulation; not a single rivulet is to be found, but there are a great number of springs of pure and limpid water.

The quality of the land is excellent; its vegetable layer is about three feet in depth. Great holes of a singular form are frequently seen, which have the figure of a cone reversed, or kind of funnel, the upper part of which is about one hundred yards broad, and thirty, forty, and fifty feet in depth. Several of these have very plentiful springs of water; others are entirely dry during the summer: the issue cannot be traced by which the waters run off.

The same country and the same aspect continues without any variation till within three miles of Kaokia, when the upper road falls into the plain at Pickset's Station, and joins, six miles farther on, the lower road.

The upper road is every where very good, except for carriages; it is military, not only as it holds the summit of the whole country, but that by means of its undulations, every movement may be kept out of sight of the enemy.

DISTANCES OF THE UPPER ROAD.

| | |
|---|-------|
| From Kaskaskias to the Meadow of the Rock | 14 |
| To New Design | 20 |
| Belle Fontaine | 2 |
| Pickset's Station | 16½ |
| Kaokia | 12 |
| | <hr/> |
| | 64½ |

Independently of these two roads, there is another which communicates from Kaskaskias with Post St. Vincent's, and leads almost continually across fine natural meadows. The distance is computed at one hundred and fifty miles, which may be passed in five days on horseback; but this road is impassable for any carriage.

These natural meadows are highly agreeable to the traveller, who passes them without suffering any of the inconveniences which he finds in the forests, such as reptiles and insects; since it is well known that the moschettoes, with which the woods are filled, and which are so troublesome, cannot bear the light; much less the rays of the sun, by which they perish: they can only exist amidst damps and darkness. With respect to reptiles,

they must be extremely rare in these meadows, which are consumed every autumn by the Indians.

Two miles above Kaokia, and on the right bank of the river, is situated the town of St. Lewis, or Pincour, on a platform high enough to be at all times out of the reach of inundations.

The population of this town is estimated at six hundred inhabitants, of whom two hundred, all French,* are

* A circumstance worthy of notice, with respect to our national character, is, that we never incorporate, generally speaking, with any other nation; wherever we go, we wish to plant ourselves, to introduce our own tastes, manners, customs, and language. It is to this generous pride that we must attribute that marked difference which exists in the mode of our forming settlements in foreign countries, from that of other emigrants. The French unite, and form themselves into towns and villages, whilst others disperse and melt into the mass of the people amongst whom they dwell, as may be observed in the United States.

This love of our country, this national prejudice, far from being a subject of ridicule, as it has been treated by some modern writers, ought rather to be regarded as a virtue, of which wise governments know how to take advantage. Who knows if Louisiana and Canada would not have balanced the immense influence which England has obtained in the United States, if France had supported her colonies, as those of the English have been protected by their government. England owes her influence to the introduction of her mariners, her customs, her language, her religion, and her marine; I say, her marine, because to be master of the world, it is necessary to be sovereign of the sea. This political axiom is of ancient date; the Greeks transmitted it

capable of bearing arms. These men are less degenerate than the race which dwell on the American side; we found among them that sentiment of attachment to their country which characterises the French nation; they appeared to be excellent patriots, whose lives and fortunes are devoted to France; families of laborers in easy circumstances, and prosperous merchants. The people in general would be happy, were it not for the viciousness of the administration, which grants exclusive privileges to strangers for the fur trade; privileges always odious to the people and ruinous for the states, since they annihilate industry and destroy emulation.

It might easily be presumed from the situation in which we found the forts, and the weakness of the garrison, which consisted of seventeen men, that Spain had the intention of abandoning Upper Louisiana.

At the time this post was menaced by Genet's expedition, ill combined and still worse directed, a paltry square redoubt was constructed, flanked by four bastions, the sides of which were precisely two feet and an half, (the space of a single man) and surrounded with a ditch

to the Romans, and it has since been adopted by every nation: it is in this sense that one of our tragic writers (Lemierre) says:

“ Le trident de Neptune est le sceptre du monde.”

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two feet deep and six in breadth, with an inclosure of crannied planks. A garrison of seventeen men and the inhabitants, all devoted to France, were charged with the defence of this post.

The order of the commander was the only thing reasonable in this extraordinary defence of Upper Louisiana: it stated in substance, that immediately on the appearance of the enemy, the garrison should retreat to New Madrid. We shall speak of that place at the end of the work.

The position of St. Lewis, five leagues from the mouth of the Missouri, and eight from that of the Illinois, considered in a military point of view, is one of the best on the river Mississippi. If it were put into a respectable state of defence, it would cover Upper Louisiana, and prevent every irruption by the Upper Mississippi, the Illinois, and the Missouri; commanding, at the same time, the Western States and Upper Canada, each of which might be invaded by three different roads: the first in ascending the Mississippi, and the Ouiscousin, from whence a carrying place of three miles leads to Fox River and Green Bay, which makes part of Lake Michigan; the second by ascending the Illinois river, and gaining by Chickago the sources of the river Kennomick, which empties itself likewise into the same lake; this may be effected in high waters without carriage, by traversing

a marsh where there is four or five feet of water; and the third, in proceeding from Kaskaskias, and gaining the post of St. Vincent's by a fine communication of one hundred and fifty or one hundred and sixty miles across a country of natural meadows, and afterwards ascending the Wabash as far as the sources of the river Miamis, the waters of which fall into Lake Erie.*

St. Lewis can also oppose every irruption by the Ohio against New Madrid; that town being situated above the mouth of the river at the distance only of fifty leagues, this space might be run in thirty-six hours with galleys; the advantages of being master of the current, in the navigation of a river, are still more decisive than having the wind at sea.

If we consider St. Lewis in a commercial point of view, we shall find its position still more fortunate. This place will stand in the same relation to New Orleans, as Albany to New York: it is there that will be collected all the produce transported by the great rivers which meet near this point, after traversing such fine and fertile countries. It is there that the traders would bring all the fine furs of the Missouri, and other adjacent rivers;—a source of inexhaustible riches for more than a century.

* See the particular description of each of those rivers.
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It is at St. Lewis that a stop may be put to the invasions and usurpations of England. St. Lewis will become the military point for the defence of the head of the Mississippi, and the mouth of the Missouri, and to support the different posts which might be formed upon this river: it will be the central point for all internal administrations, and from which the traders* will take their departure. Upon the whole, it will be by St. Lewis that the communication will be opened with the Southern Ocean, and its waters connected with those of the Gulf of Mexico; and this may be effected with more facility, more safety, and with more economy for trade and navigation, than in any other given point in North America. §

These considerations, which even the peace cannot annul, decided the French plenipotentiary to propose to the Spanish minister on my return in the month of January, 1797, the plan of defence which will be found at the end of this chapter; a plan which may be considered as only temporary, but which may one day serve as the basis of a plan of defence more mature and complete, when circumstances, time, and experience shall have furnished easier means of examination, and more exact

* These who are here called traders, are persons who traffic with the Indians for furs.

§ See the description of the Missouri,

details than those which could be collected in a situation so delicate as that in which we undertook the survey of this place.

Four leagues to the north of St. Lewis, and a league from the mouth of the Missouri, a new settlement has been formed, called Florissant, which contains already thirty families, the greater part American, and all good farmers.

A mile west of Florissant is another settlement formed by the French, called Marais des Liards, which contains an hundred families. Two leagues and an half farther on towards the north-west, and on the left of the Missouri, is situated the last settlement of civilised men, called St. Charles, containing two hundred families, all traders or hunters.

Twenty-four leagues to the south of St. Lewis, and on the same side, is situated the small town of St. Geneviève, vulgarly called by the people *Misère*. It was originally built on the banks of the river, but the frequency of the inundations forced the inhabitants to transport their settlement two miles back at the foot of a small height: there are still a few huts remaining, inhabited by the traders of the old village.

This little town contains at present twelve hundred inhabitants of both sexes, whites and blacks, slaves and

freemen, of which two hundred and forty bear arms; but out of that number, sixty only can be considered as soldiers.

On the upper part of the platform on which St. Geneviève is situated, stands a small fort, of the same form and constructed with the same kind of materials as that of St. Lewis; that is to say, square, and surrounded with planks to support the earth, and serve at the same time for palisadoes. Two pieces of iron cannon of two pounders, a corporal and two soldiers, were at this time the sole defence of the place.

This position on the whole is extremely bad, being much too distant from the river to protect its navigation. The fort on the south-east side is entirely under the command of the platform on which it is built; the farther you go to the back of this position, the more the ground rises gradually; and these heights being connected with each other a great length of space, and commanding each other successively, it is impossible to occupy them all at once. This situation ought therefore to be abandoned as an intermediary point between St. Lewis and the Ohio, as had been once projected. We shall take occasion to point out another far superior in all respects.

Two miles to the south-east of St. Geneviève, on the height, is an increasing settlement, called Lusiére; this is

a concession which has lately been made by the government to a French refugee of this name, who fled, like many others, from assassins and executioners.

Two leagues from St. Geneviève, towards the sources of a rivulet which empties itself into the Mississippi, is a lead mine and a lime quarry, both of which are at present worked, on the heights of Marimeck. An iron mine, extremely rich, has been lately discovered, but is not worked for want of hands and means. Mr. Burd, an inhabitant of New Jersey, and in partnership with Robert Morris, has visited it and extracted several pieces of ore, which have been found by professional men to be of the first quality: this mine is so much the more precious, as it is the only one of the kind hitherto known in Upper Louisiana. We brought away specimens of these various minerals.

All conveyances from St. Geneviève to St. Lewis are made by water; no communication by land for carriages having yet been opened: the road at present is practicable only for horsemen and foot passengers.

The passage of the river, in the communication of St. Lewis with Kaokia, either from St. Geneviève to Kaskaskias, or across the Missouri from St. Lewis to St. Charles, is made with canoes of different sizes; but these boats are not large enough to carry either horses or

carriages; the horses are commonly made to swim across the stream.

RECAPITULATION OF THE DISTANCES

FROM ST. LEWIS TO THE NEIGHBOURING VILLAGES.

| Spanish side. | Leagues. |
|---|----------|
| From St. Lewis to Florissant . . . | 4 |
| From St. Lewis to Marais des Liards . . . | 4½ |
| From St. Lewis to St. Charles . . . | 6 |
| From St. Lewis to St. Geneviève . . . | 24 |

Independently of the description which we shall give under the article of agriculture, of the vegetation that clothes and the productions that enrich this fine country, we deem it necessary to add, that it abounds in all kinds of gramen, from dog's grass to reeds thirty feet high; the great and lesser kinds of mallows, violets, nettles, dandelions, maiden hair, ferns, horsetail, thistles, briars, squinant, iris, cresses, milfoil, St. John's wort, centaury, hen bane, pellitory of the wall, vervain, mint, thyme, burdock, endive, hops, storksbill, purslain, sowthistle, woodsorrell, melilot, trefoil, luzerne, Venus-navel, ginger, gentian, the second and fourth species of ipecacuanha, the bastard senna, the bastard indigo, three kinds of sensitives,

camomile, bugloss, comfrey, wild marjoram, sage, mother wort, wormwood, poppy, terragon, pumpkin, sorrel, strawberry plant, asparagus, golden rod, scabious, the winter cherry, lilac, palma-christi, Indian fig-tree, rosemary, marjoram, several of the flowers cultivated in Europe, the great blind nettle, blind oats, white root, red root, the spindle tree, the liana, dragon's blood, geranium, and fumitory, friends-root, white meadow wood, the tea-tree of Labrador, and the Obelia.

The trees most common are five or six kinds of walnut-trees and of oaks, the mulberry-tree, apple-tree, pear, plumb, and cherry-trees; the ash, the willow, the elm, the hawthorn,, the poplar, the beech, laurels, acacias, plane trees, pines, firs, red and white cedars, the cypress, peach-trees, fig-trees, and chesnuts; pomegranates, the thorny ash, the small cotton tree, and the little oak. We found, also, the orange, lemon, and lime trees, with every other production of the most favored climes.

Every season presents its peculiar vegetable productions; it would, therefore, be almost impossible for a single individual to examine and give an exact enumeration of the whole. We collected our information on this subject from Mr. Perron, who had resided in Upper Louisiana ten years, and who had been continually employed in the study of natural history.

PLAN

OF AN INTRENCHED CAMP UNDER ST. LEWIS.

St. Lewis is situated on the slope of a curtain D, which descends, by insensible degrees, to the banks of the Mississippi.

This curtain is commanded by the height E, and the small curtain F, which is itself lower than this height.

The space G, at the western part of the town, is a plain accessible on all sides, formed of natural meadows, without trees or any shelter whatever, and which rises by an imperceptible gradation towards the country.

At the south-west is a piece of water B, broad and deep, surrounded by heights and defiles: from this piece of water issues a rivulet, which throws itself into the Mississippi, crossing a defile formed by the two curtains H and I.

The most elevated of these curtains is that of H, on the side of the country.

The side opposite M, to the north of the town, is open and accessible on the whole of its front. The ground is sloping, from the summit of the curtain F to the bank of the river.

Thus, from the west and north side of the piece of water to the bank of the Mississippi, the ground offers no natural impediment to the enemy's penetrating into the town. This space is about a thousand yards.

The roads are easy on all the points surrounding the place, and the only natural obstacle to the movements of the enemy is in the southern part of the town, from the piece of water B to the river.

From this side the heights L and 12 command a part of the curtain, which forms the embankment of the rivulet A.

A bad fort, with four small bastions, narrow and ill-placed, formed by a range of palisadoes to keep up the earth, occupies at present the platform E.

A great detached bastion, No. 2, invested with a wall of freestone twelve feet in height, and two feet and an an half thick, with large embrasures, without ditch or palisadoes, is erected in the northern part of the town, the whole front of which it commands as far as the river.

The face and left flank command also the western part of the town; but left to its own defence, which is null, this display of cannon becomes altogether useless, since the enemy would march directly on its front and right flank, and would carry it sword in hand, before attempting to enter the town.

Their fire then directed on the fort No. 1, would overwhelm it in an instant, and the fort falls of itself.

Thus are these two important points so ill occupied, that they can only be maintained during the time necessary for the enemy to approach the bastion No. 2, and turn the artillery on the fort No. 1.

According to this sketch, different modes of defence present themselves; it remains only to decide on those which are the most speedy and suitable.

FIRST PLAN.

The platform E being of a proper extent to admit a work susceptible of a good defence in itself, having also the advantage, from its position, of commanding the whole town and a great part of the surrounding country, the whole of the defence might be concentrated on this spot, by occupying at the same time the points L and 12, which command it, without any apprehension of leaving the town open.

The fort marked No. 1, on the papillon, would perfectly answer this end; the part Q of the platform should be occupied by a redoubt in front of the glacis, supported by a good communication, in order to take the reverse on a

point of the slope of the platform, and in the front of the fort. A solid work should be made in L, the defence of which should be connected with that of the principal fort; a battery should be raised at point 12, and these works should be surrounded with an abatis 22 and 23.

The battery 2 should be rased, which could only do harm to this plan of defence, without any possibility of advantage.

The importance of the town of St. Louis, situated almost at the mouth of the Missouri, and which may be regarded as the key of Upper Louisiana, will require, perhaps, sooner or later, the adoption of this plan.

SECOND PLAN.

The platform E should be occupied by an earthen fort, conformable to the chief inclosure of the fort No. 1, traced on the papillon; the capacity should be diminished, and the half moon and covered way be suppressed. The fort should be surrounded with a large and deep ditch, invested with a small glacis palisadoed and double: the parapet of the work should be bordered according to the profile opposite.

The battery 2 should be put *à barbette*, surrounded by a good ditch, with a small palisadoed glacis; a small

covered way may be afterwards added, and a few *places d'armes*, indispensable to make cross fires. From its neck, a line à *redans* in the earth should be drawn, marked 8, 8, covered with a ditch and palisadoed glacis to the bank of the Mississippi: the houses 21 behind this line may be placed at the instant of the attack, at small expence and speedily, in a state of defence: if they were constructed of stones or brick, they would powerfully support this line.

In the bastion 2, only six-pounders should be placed; so that if it be carried, its artillery could not resist with advantage that of the fort 1, where should be a few pieces of twenty-four, which would soon silence it.

The mounds 6 and 7 should be rased; it would be useless to think of fortifying them.

The works in earth, 3, 4, and 5, should be erected; and the whole of this system should be covered with posts of a general abatis, 20, 20, etc.

On the southern side, across the embankment of the rivulet A, dikes of earth should be formed, 13, 14, 15, 16, and 17, in order to procure an inundation in the whole length of this embankment; these dikes should be supported by the *flèches* 9, 10, 11, and 12, and the summit should be covered with trees, in the form of an abatis, to prevent them from serving as a passage to the enemy. It

must be observed, that the whole of these works should be in earth.

If the time permitted, the line *à redans* 18 should be drawn, such as it is pointed in the plan, like that on the opposite side of the town, marked 8, 8. The houses 21 on this side should also be put in a state of defence, to stop the enemy, in case he should have passed the inundation.

Examination should be made on the places, whether the works 3, 4, and 5, embrace too great an extent of ground; for the more the defence is parcelled out, the more difficult it is to preserve the order and connexion necessary to render it successful; especially where there are neither disciplined troops, nor officers well skilled in military tactics.

On this hypothesis, these three posts, or at least the Nos. 4 and 5, may be suppressed, and an abatis formed, such as is marked 22, joining the great abatis at the point C, and from thence continuing it, as it is marked, to the banks of the Mississippi. This position would be very respectable under the cross fires of the two forts 1 and 2, supported also by the houses 22, 21, which are themselves protected by the forts.

The construction of two or three works might be avoided; and the men they would require might be

advantageously distributed in the other forts. The No. 5, however, seems indispensable, on account of the great interval between the redoubts 1 and 2.

The fort 1 may be furnished with fifteen pieces of twenty-four, twelve, six, and four pounders.

The bastion 2 should be furnished with eight six pounders; two four pounders would be sufficient in the work 5; two in the *flèche* 5, and three in that marked 4. The two pieces of the *flèche* 5 should be drawn back into the redoubt 3, and the three in the work 4 into the fort 1, as soon as the enemy had forced the abatis.

Two four pounders should be placed in the work 10, and two six pounders in the lunette 12.

Thirty-four pieces of cannon would be sufficient to support all these positions, which would require three hundred cannoneers to man them in case of attack.

Twelve hundred infantry would likewise be necessary to defend the whole of these works; by infantry I mean regular troops, militia, and Indians.

| | |
|-------|-----------------|
| | 300 cannoneers. |
| | 1200 infantry. |
| | <hr/> |
| Total | 1500 men. |
| | <hr/> |

This plan of defence has of late been partly put in execution by M. Finiels, a French engineer, who was immediately dispatched by the Spanish minister at Philadelphia, on the report which I made him of the danger to which this place was exposed.

CHAPTER XVII.

Description of the River of the Illinois.

THE river of the Illinois is situated towards the thirty-ninth degree thirty minutes northern latitude, and six leagues above the Missouri, on the eastern side of the Mississippi. This river is about five hundred yards wide at its mouth.

The chain of rocks and high mornes which begins at the mouth of the Kaskaskias, and which runs parallel with the Mississippi, passing behind the Meadow of the Rock, St. Philips, Kaokia, and de Piasas, turns near the mouth of the river of the Illinois, and keeps at greater or less remote distances, on its eastern side, the same direction as this river.

After ascending the river eighteen miles, on the eastern side, we reached a small river, called Macopin,

which signifies in the Indian language White Yam. This river is about twenty yards broad at its mouth, and is navigable nine miles.

In this space, the maple or sugar tree, the ash, and other wood fit for construction, are very common.

At slight distances on each side of the river, are fine natural meadows: the earth on these banks does not break off like those of the Mississippi. We passed several islands, some of which were from nine to twelve miles long and three miles broad; after which the breadth of the river continues to be about four hundred yards, and runs N. N. W.

Thirty-six miles above the Macopin is the village of the Priorias, situated at one mile distance from the left bank, and behind which are several small lakes, that communicate with each other, and are surrounded with natural meadows of great extent. The passage which these lakes have opened to the river is very narrow, and practicable only for small canoes. The high chain, which follows the river, falls back here to a considerable distance.

Twenty-seven miles farther up the river are several small islands, covered with a great quantity of animals; and eighteen miles beyond is another island of some extent, called Pierre à flèches. Near this island mountains not lofty, border the western side of the river; on those

heights the Indians find the stones with which they point their arrows.

The eastern side is bordered by natural meadows to a great extent: the land is very fertile, and watered by a multitude of small rivulets which are never dry. The heights are covered with the tallest ash trees; the banks of the river are high, its waters are limpid, rolling over a bed of sand and white clay.

Eighteen miles farther up is Mine River, called by the Canadians Bad Land (*Mauvaise Terre*). During this space, the aspect of the country continues the same: on the east lie natural meadows, which are sometimes nine, twelve, and fifteen miles broad; on the west is the chain of small hills, that runs parallel with the course of the river.

Mine River is not more than fifty yards wide at its mouth; its current is very rapid, and its banks on each side are low, but rise afterwards gradually. The lands along this river are of a very fine quality, particularly for corn and pasturage.

Twenty-one miles above Mine River is the Sagamond, situated on the western side, at the extremity of the chain of small mornes. This river is about one hundred yards broad, and is navigable one hundred and eighty miles for small canoes; the right side is very low, and the left

bordered during a space of six or nine miles by small mornes.

Twenty miles from the Sagamond is the river Demi Quian, on the same side. This river is fifty yards broad, and is navigable one hundred and twenty miles.

Nine miles above this river is Demi Quian Lake, situated on the western side. This lake, of a circular form, is at least six miles in diameter, and empties itself into the Illinois river by a small channel, which is always four feet deep. The banks are bordered by natural meadows, especially on the western side, where the view is unbounded. This part of the country has little wood; the lands are fine in every direction, and the waters of the river and lake perfectly limpid. The course of the river, proceeding from the lake, is eastward, and the navigation excellent.

Twelve miles above the lake, and on the same side, is the river of Sesame Quian. This river is forty yards broad, is navigable for canoes sixty miles, and flows through a very fertile country.

Nine miles higher, and on the same side, is the river March, thirty yards broad, and navigable nine miles only for small skiffs. The country here begins to rise gradually towards the west.

Nine miles higher, on the eastern side, is the river Michilimackinac, fifty yards broad, and navigable ninety

miles. There are thirty or forty small islands at its mouth, which at a distance have the appearance of a village. On the banks of this river there is excellent timber; the red and white cedar, the pine, the maple, and walnut tree. The land is high on both sides, and the woods are intersected at certain distances by fine natural meadows, covered with grass of the best quality for cattle.

It is worthy of remark, that in the space of one hundred and fifty miles there is not a single river or rivulet on the eastern side, whilst the western side abounds with both.

The river Michilimackinac forms the line of separation of the counties of St. Clair and Knox from the state of the North-West Territory.

Twelve miles above the Michilimackinac is the village of Pioria, called also by the Canadians the Piss; it is inhabited by fifteen Canadian families, who till the land and trade with the Indians. There is an old fort situated at the southern extremity of a considerable lake, called the Illinois Lake, formed by the river, and which is about twenty-one miles long and three miles broad. In this lake there is neither rock, shoal, nor current. The ruins of the block-house that formed the fort are still seen: the platform on which it was built affords a delightful

prospect. On the north the lake opens in its whole extent; on the west vast natural meadows close the horizon, and towards the east of the lake terminates the chain of rocks, which taking its rise behind the Kaskaskias, the Kaokia, etc. follows constantly the same direction as the Illinois River.

RECAPITULATION OF DISTANCES.

| From the mouth of the Mississippi to | Miles. |
|--------------------------------------|--------|
| The river Macopin | 18 |
| Priorias | 56 |
| Several small islands | 27 |
| Island Pierre à flèche | 18 |
| Mine River | 18 |
| The Sagamond | 21 |
| Demi Quian River | 21 |
| Demi Quian Lake | 9 |
| Semi Quian River | 12 |
| March River | 9 |
| Michilimackinac River | 9 |
| Piss Village | 12 |
| | <hr/> |
| | 210 |

CHAPTER XVIII.

Missouri. — General observations. — St. Charles. — Astonishing prospect. — Miserable state of population. — River Gasconnade. — River Osage. — River à la Mine. — Cheraton River. — The Great River. — Prairie du feu. — Cans River. — Little Plate River. — Nidmaha River. — Nichenanbatonais River. — Plate River. — Otoktata nation. — Great Panis nation. — Wolf River. — Little Sioux River. — Maha nation. — Great Sioux River. — St. James River. — Qui-court River. — Poncas nation. — White River. — Observations. — Oconona nation. — Ricaras nation. — Chaguienne River. — Chaguienne nation. — Nations allies of the Chaguiens. — Padou nation. — Baldhead nation. — Probabilities respecting the distance of the Southern Ocean. — Mandanes nation. — Big-bellied nation. — Observations respecting the forests. — Asseniboine nation.

THE mouth of the Missouri is situated towards the thirty-ninth degree of latitude; its direction is north-west, running east-south-east, and it empties itself into the river Mechacipy, or Mississippi, a word which signifies

in the Indian language Great River, five leagues above St. Lewis of the Illinois.

No one has yet penetrated as far as the spot whence this river takes its source;* but it is highly probable, from the reports of the indigenous nations, and the structure of this part of the continent, that the Missouri flows from the chain of mountains, called by Mackenzie "Stony Mountains," and by the Indians "Yellow Mountains;" and which are only a prolongation of the Cordilleras. It has also been presumed, that this chain of mountains must run parallel with the coast of the Southern or Pacific Ocean, at the distance of an hundred or an hundred and twenty leagues.†

The banks of this river have been explored the length of more than six hundred leagues, without finding any rapid, fall, or cataract. What it has in common with all other rivers, the banks of which are uninhabited, is, that it is sometimes encumbered with drift-wood; but this inconvenience is seldom perceived but near its mouth.

Its current is often divided by islands, which form several channels; this renders its navigation difficult in dry seasons, from the uncertainty of knowing which is

* This journey is now undertaken by order of the President of the United States.

† See the chart of the Upper Missouri.

the channel that contains most water. This river is from three quarters of a mile to a mile and an half broad, and when the passages are known, it has sufficient depth for the largest boats at all seasons.

The river Plate disturbs the waters of the Missouri, and gives them a considerable rapidity, which has, however, been much exaggerated. Its course is gentle above this river, and its waters limpid ; and the further you ascend, the slower is its current.

One of the great obstacles to navigation on this river is the direction of the winds, which blow nearly eleven months in the year from the north-west ; and often with such violence, that it is found necessary to unload the boats, in order to avoid their being sunk, not being able to find a safe shelter. But it is chiefly in dry seasons that this danger is imminent ; for when the waters are high, it is easy to secure the boats or barges, by means of the trees, which almost every where line the banks of this river.

The Missouri, from its mouth to the river Plate, flows through a country extremely diversified : the lands on the left side, towards the north, are of the best quality ; fine plains sufficiently undulated to carry off the water, intersected with woods of a lofty kind, and which bears marks of the greatest fertility : the right side, on the contrary,

is broken by barren heights, and at equal distances by small vallies, which for the most part are covered with sand and gravel.

The river Plate in the whole of its course runs through a country of this nature, the chalky soil of which gives its waters a whitish color.

The river Qui-court and the White River (la Rivière Blanche) traverse countries of similar extent; neither trees nor herb, except wild thyme, are to be seen; and of animals, only the rabbit and the small meadow dog.

Beyond the Plate, as far as the base of the Yellow Mountains, the Missouri flows between two chains, which run parallel with its course, and which are a continuation of steep rocks, covered with fine and short grass. In some places, however, these chains are broken, and the intervals are formed of meadows of large extent, which are frequented by numerous droves of buffaloes and roebucks.

Beyond these chains are vast meadows, which stretch away to the west, without any interruption, towards the Yellow Mountains, and which are intersected only by the rivers, that throw themselves into the Missouri, or interspersed with small clumps of wood of the poplar and willow kind, or white wood of similar growth.

About two leagues from the mouth of the Missouri,

and on the left side, is situated the town of St. Charles, which is the last of the settlements belonging to the Whites to the north-west of the continent; it is also at this point that the lands on that side begin to rise, the country which lies between St. Charles and the Mississippi being low, covered with rushes, and swampy. A mile beyond this town are three beautiful eminences, detached from each other, called the Breasts (*les Mamelles*); from which we beheld a most astonishing prospect.

To the east the view is interrupted by cliffs which are not less than three or four hundred feet high, and bound in this part the left side of the Mississippi. In turning towards the north, the river of the Illinois, flowing from the lakes, runs over a bed of pebbles, and, after a thousand windings, and freeing a number of falls and rapids, joins the Mississippi. Certain portions of this river, descried at intervals, run in nearly the same direction, overhung with dark forests; a gentle slope renders its current slow and easy; and its fertile branches are decorated by cypress trees and lianas of graceful and infinitely varied elegance. In some places, marshy swamps covered with bamboos, in which the most venomous reptiles fix their abode, form a contrast of all that nature can present of beauty and deformity. Towards the north-west the scene changes altogether: here the rapid

Missouri, with tumultuous noise, rolls on its muddy waters; its steep banks, undermined continually by the violence of the current, sometimes fill its bed with the wrecks of trees, and accumulate obstacles that are almost insurmountable. Towards the south, the Mississipi again presents itself, its waters discolored by those of the Missouri, flowing through the fine country of the Illinois, and stretching along till lost in the horizon, after having its course divided and broken by a multitude of charming islands. This view is so highly decorated, that it would seem as if art had lavished all its resources to embellish this part of the continent; and yet these beauties are the workmanship only of nature. It were unjust to assert that these descriptions are the exaggerated tales of travellers; imagination, taken in this sense, does not deserve this reproach, relatively to the beauties of nature; imagination fails when with its most vivid coloring it attempts to vie with nature, and remains far below its model, even in its most eloquent descriptions. What an immense distance between the ideas which are excited in us by the view of the finest paintings, and the spectacle of those magnificent forests, those immense natural meadows, those majestic floods, and stupendous cataracts which astonish us in the new world! The imagination of man can only surpass the works of his own hands, can

only embellish the objects of art; but when we contemplate the sublimity of nature, human conception sinks far below the reality, and the impression made on the mind by such scenery may be felt, but can never adequately be described.

St. Charles contains about an hundred or an hundred and twenty ill-constructed houses: the inhabitants do not till the ground, though it be extremely fertile; their ordinary occupations are hunting and trading with the Indians; a few hire themselves out as rowers; and it would be difficult to find a collection of individuals more ignorant, stupid, ugly, and miserable. Such are the sad effects of extreme poverty, with its train of cares and evils, that it destroys not only the beauty of the person but even the intellectual powers, and blunts all those feelings of delicacy and sensibility which belong to a state of ease, and the advantages of a good education.

Twenty-eight leagues from St. Charles, towards the north, is a river, called Gasconnade, which is about thirty fathoms wide at its mouth: this river is full of rapids, and navigable only in high waters for small boats, during the space of fifty leagues.

Ten leagues higher, and on the same side, the river of the Great Osages empties itself, after flowing sixty leagues, as far as the village of the Great Osages, through

a country extremely fertile, but low and swampy on both sides.* Its navigation is safe at all seasons, as far as the village, for boats and barges.†

Twenty leagues higher, and on the same side, the Mine River empties itself. The country it flows through is barren; it is a continuation of high meadows, on a gravelly soil: the navigation of the river is unknown.

At the distance of five leagues, and on the northern side, is the river Cheraton, navigable only for small hunting boats;§ the meadows through which it flows are high, but fertile.

Nine miles higher, and on the same side, flows the Great River, which is navigable eighty leagues for large barks; it communicates towards its sources by a small

* Among the papers which were taken from us by the governor of Louisiana, composing five chapters relative to the Missouri, was a particular description of the river of the Great Osages, from its mouth to Fort Carondelet, as well as that of the river of the Arkansas. Baron Carondelet, indeed, with a politeness somewhat dilatory, sent them back to me six months after, by the American brig the Betsy, Captain Peter David; but the bearer having thrown them into the sea, they were lost to me as well as to the public.—See Proces-verbal, Appendix, No. 2.

† What follows, after the river of the Osages, are accounts given to us by different travellers, who traded to the Upper Missouri.

§ A kind of canoe, which carries only two men.

carrying place of ten or twelve miles, with the river Dumoins, which falls into the Mississippi.

Twenty-six leagues beyond the Great River, on the southern side, is a vast plain, called Fire Meadow (Prairie du Feu).

Ten leagues higher than Fire Meadow is the mouth of the river des Cans. This river is navigable an hundred leagues for barks and barges of every kind; it runs through very fertile lands, flat, well wooded, and intersected by rich meadows; but the country, such as we have already described, does not extend farther than one or two leagues from the banks. In ascending this river fifty leagues, we find a fortified point, on which is situated the great village of the Cans. The branch which runs to the West is called the River of White Water; on that of the south-west the Indian nation called Republican is established.

Five leagues further up the Missouri, and beyond the mouth of the Cans, is the little river Plate, which is navigable at no season of the year, and is dry during the summer.

Fifty leagues beyond the little river Plate, on the southern side, is the river of the Great Nidmaha, navigable only for hunting boats; it flows through high meadows and lands of a bad quality.

Ten leagues higher, on the same side, is the Little Nidmaha, which is not navigable for any boat, and runs across a country that is high and barren.

Fifteen leagues from the northern side of the Little Nidmaha is the river Nichenanbatonais, navigable an hundred leagues for hunting boats; these lands are bare, and of the same quality as the preceding.

Fifteen leagues higher is the mouth of the river Plate, situated on the western side: this river is as large as the Missouri, and runs with such rapidity, that oars and poles are insufficient to resist the current; the only mode of going up is by towing. But to use the towing-line, the waters must be low; and then this expedient is dangerous, on account of the quicksands, against which boats have sometimes struck, and disappeared with the whole crew. These sands may be distinguished, as we have already observed, at a considerable distance, by their reflecting surface, which is occasioned by the humidity of the soil, and the action of the sun.

This river is shallow, and its bed and sides full of quicksands; its waters are white and of a chalky color; the lands through which it flows are also chalky; its banks are bordered by small bare slopes, and the aspect of the country is in general dry and barren.

At the confluence of the Plate River is situated the

village of the Otoktata nation, which consists of three hundred warriors: this nation is stationary, and is composed of good hunters.

Twelve or thirteen leagues above the village Otoktata, is the village of the Great Panis (Grand Panis), situated on the same side: this nation is settled, and is composed of seven or eight hundred warriors, who are neither brave nor fond of hunting.

Five leagues from the village of the Great Panis, and on the opposite side, is Wolf River (la Rivière des Loups), which flows across low meadows and lands extremely fertile. At its mouth is the nation of the Panimahas, which counts six hundred warriors, who are extremely brave, but bad hunters.

Thirty leagues beyond the Plate River, on the northern side of the Missouri, is the little river of the Sioux, which is navigable only for small hunting canoes.

Twenty leagues above this last river, and on the southern side, is the nation of the Mahas; their village, or their huts, are built in a fine plain, at two leagues distance from the Missouri. This nation is sedentary, and cultivates Indian corn and gourds. In the month of June, these Indians usually set out in considerable bodies to hunt the buffalo, and return in the month of August, to gather in their harvest. At the approach of

autumn, and towards the month of October, they again leave their habitations, but in small bands, at the head of which is always a chief, to hunt the beaver, the otter, the roebuck, and other fur animals; they return towards the end of January. This nation is supposed to consist of eleven or twelve hundred warriors.

Six leagues above the nation of the Mahas, and on the north-east side, the waters of the great river of the Sioux empty themselves. It is on this river that the people of the Sioux, who inhabit the borders of the river of the Moins and St. Peter, come at different seasons of the year to hunt wild bullocks and other animals; having communication with this river by a carrying place of twelve miles.

Forty leagues above this last river that of St. James discharges itself, navigable, according to the report of the Indians, during sixty leagues for great canoes: it flows along very fertile meadows, that are covered with animals. This river abounds particularly in beavers, and receives, a little below its sources, several small rivers, of which one is called Red Stone River (*la Rivière aux Pierres Rouges*), from a quarry of stones of that color which is found on its banks, and which the Indians employ in making pipes and calumets, that are highly esteemed, since none resembling them are found in any part of the

Missouri. This quarry lies four or five feet below the vegetable earth.

At the distance of twenty leagues, on the western side of the Missouri, is the river Qui-court, which takes its source to the west-south-west, and very far above its mouth. According to the Indians, this is, of all the rivers which are frequented, the most abundant in beavers and otters. Its course is so rapid, and broken by so many falls, that it is impossible to navigate it either in canoes or skiffs.

Two leagues above its mouth is situated the village of the Poncas. Their huts are built on a small eminence about a league from the Missouri. Around this hill are fine meadows, watered by a small river which is extremely pure and limpid, and which gives to this site an agreeable aspect.

Although these Indians have their fixed dwelling in this place, they are not sedentary, and do not cultivate the ground, but live by hunting wild bullocks, which abound in these vallies; they kill also great numbers of otters, beavers, and roebucks.

Thirty leagues above the river Qui-court, and on the same side, the White River (la Rivière Blanche) empties itself: the waters are as white as lime water, running

through a country the soil of which is pure chalk. This river is not large, or navigable for any kind of vessels.

Ten leagues higher, the Missouri makes a great bend towards the west, forming a circuit of ten or fifteen leagues, at the end of which it resumes its ordinary direction towards the north-west. The neck of the peninsula, formed by this circuit, is about four or five miles; and as this space is only low land, without mountains or rocks, it will be easy at some future period to make a canal, which would shorten this navigation twelve or fourteen leagues.

Twelve leagues above this bend, and at the place where it finishes towards the west, is a small river, called by the hunters the Little Missouri, and by the Indians Still Water. It is navigable for canoes only in the spring, when the snows melt, or after great falls of rain.

A horde of Sioux, called Oconona, formerly allies of the Ricaras, dwelt habitually on this river; but they have lately been driven away, and it is not known in what latitude they now live.

The nation of the Aricaras were situated ten leagues higher on the western side of the Missouri; they were divided into two villages at half a league distance from each other, and which they have lately forsaken to live near the Mandanes. The Aricaras were formerly very

numerous, consisting of thirty-two villages, now destroyed in part by the Sioux. The small-pox has also made such ravages in this nation, that they are reduced to five hundred warriors at most.

Two leagues above the second village of the Aricaras, on the same side, the river Chaguienne empties itself. This river is rather large at its mouth, but shallow; so that the navigation is made with difficulty, and only in canoes. It rises in the west, in mountains which are very steep and rocky; its banks are covered with fine timber, and, according to the Indians, it is much frequented by beavers.

About forty leagues from its mouth, it divides itself into two branches; the western branch is called Cherry-branch River (*la Rivière aux Cerises à Grappe*). The Chaguienne nation is settled a little above the fork, and cultivate Indian corn and tobacco: the Chaguiennes are divided into three hordes; the first, which is the most considerable, bears the name of Chaguienne; the second that of Vouisy; and the third that of Chouta: they hunt the wild bullock the whole length of this river, from its source to its mouth; traverse even several chains of steep mountains, that separate, as they assert, in several places, this vast country; in the midst of which are a great quantity of lakes and marshes, that, according to

their report, form the place of meeting of the different tribes of beavers. These Indians recount on this subject the most absurd stories, and which are highly characteristic of their ignorance and superstition; we shall cite one of these tales, as an instance of the credulity of this simple people.

One of these lakes, they assert, is much larger than the rest, and which no animal dares approach; there is always a great quantity of wild bullocks in its environs, but every human being dreads its neighbourhood. In the midst of this lake is an habitation of beavers of an extraordinary size and height, surrounded by an infinite number of lesser ones. Every night, even when the weather is calm, a noise, like that of the sea agitated by the wind, is heard on this lake.

Two young warriors, excited by curiosity, once concealed themselves four days and four nights, in order to discover what could occasion this horrible noise, and also to see the spirit king of the beavers, which dwells in this great lodge, as they had been assured by their old men. They saw nothing during three days, but heard in the night a sullen noise in the lake, the waters of which rose high on the bank, and retreated in the morning. The fourth day, towards the evening, they saw, on the summit of this great lodge, a beaver

of an enormous size, whose hair was quite white, and a number of other beavers of less size seated around him. At a certain cry, the whole morass was in motion, and the waters swelled with a noise so dreadful, that the two affrighted Indians fled back to their village, and related what they had seen.

From this ridiculous story, we may draw an inference not totally destitute of probability: it is very possible that there may exist in this part a bay of sufficient extent and depth to reach the base of these mountains; this would explain the noise and motion made by the waters, and which so much astonished and alarmed the two Indians. Chesapeak bay furnishes us with an example.

Independently of these different tribes, this country is overrun by several other wandering nations, such as the Cayovuas, the Tocaninaubiches, the Pitapahats, the Tokiwuakos, friends and allies of the Chaguiennes, but each having a different language? These last are excellent hunters; but as they have yet no communication with the whites, they change their skins and furs for goods which are furnished them by the Sioux, who have been a long while in the dependence of the English.

The nation of the Paduas inhabiting the banks of the river Plate, are distant only ten days march from the

Missouri, which may be computed at sixty or eighty common leagues.

The Hilitanes, or Baldheads, a wandering race, occupy the whole of the great extent from the river Plate to the source of that of the Arkansas, and stretch along the great mountains which separate New Mexico from this continent.

When we interrogate these different nations, and the traders who frequent them, respecting the nature of the country on the other side of these rocky heights, they all agree in their information, that beyond these great mountains, which have two, three, and four chains, and after having travelled several days (six or seven), they reach the banks of a great river, large, deep, and well wooded, the waters of which run, to use their own expressions, to the "setting of the winter." In following the banks of this river for some days, they find several Indian villages of a nation unknown, who make use of utensils of their own invention; their huts are composed of junks and long straw; the wild bullock, the stag, and other large animals, which serve for food and clothing to other Indian nations, are altogether unknown in these countries; their garments and shoes are made of the skins of beavers, otters, foxes, wolves, and hares. Like the Indians they use the bow and arrow pointed

with bones and flints; they cultivate Indian corn, the grain of which, they say, was furnished them by a great Indian nation, who dwell lower down the river, and who sow and reap a vast quantity. The women of this nation wear ear-rings and necklaces of small shells of different forms, strung on slender thongs of leather, and which they procure at the entrance of this great river, where there is a large lake, of which the opposite side is not to be seen, and the water of which rises and falls considerably at certain times both day and night. The nations who reside on the borders of this great lake tie large pieces of meat to the end of a long cord, which they throw into the water when it is high, and drawing it out when the water falls away, often find a great quantity of these little shells sticking to the meat, which they take off, make holes in them, and tie them to their neck and ears. A knife, with the name of Cook marked on it, was found in the hands of one of the chiefs, and sent to the Governor of Louisiana.

Above the mouth of the river of the Chaguiennes, the Missouri turns to the north-east, runs for the space of four or five leagues, and from thence turns to the north-west, as far as the Mandanes. About fifty leagues above the villages of the Aricaras, on the eastern side, is a river

frequented by the Sioux, called Titons. There are several small rivers on the western side, none of which are navigable. The distance from the river of the Chaguiennes to the Mandanes nations is computed at about an hundred leagues. These people were formerly very numerous, but were attacked several times by the nations lying to the north of the Missouri, and were depopulated also by the small-pox. The Mandanes reckon no more than three hundred men capable of bearing arms.

The Big Bellies (Gros Ventres), called by the Indians "the Long-Haired Nation," are more numerous, and can set on foot eight hundred warriors. They are divided into two villages, the distance of half a league from each other, situated on the banks of the Missouri, to the left, in ascending about two leagues above the Mandanes. These last are divided into three villages, the greatest of which is built in a fine country, on the western part of this river; and the two others, which are smaller, on the eastern side, and opposite to each other.

These nations are all settled, and never leave their villages but by brigades, either for war or the hunting of wild bullocks, which are numerous in this part of the country.

Near the villages of the Mandanes and Bigbelled Indians, the forests which border the Missouri are much thicker, the wood larger and more lofty than that on the lower part of this river, that is, from the Great River Plate.

The Asseniboines, a wandering tribe, situated to the north of the Missouri, with whom the English merchants of Canada and Hudson's Bay carry on the fur trade, frequent the Mandanes and the Bigbelled Indians, of whom they purchase horses, Indian corn, and tobacco, in exchange for muskets, iron pots, knives, etc.

A few years since, the English merchants built small forts in several places on a river, called the Red River, which falls into that of the Asseniboines. The sources of this last river begin near the Missouri, towards the Mandanes country. They send their agents by land, either with horses in the autumn or spring, or with great dogs in the winter, which run with light and slender traineaux on the snow, and traffic for bullocks' hides, wolf and fox skins, in exchange for powder, knives, glass beads, and vermilion. The passage from the Missouri to this river is reckoned by travellers who have made it several times, at a hundred of our common leagues.

At fifty leagues above the villages of the Bigbelled

Indians, to the west of the Missouri, a great river discharges itself, called Yellow Rock River by the Indians (*Rivière aux Roches Jaunes*), and by the French, Crow River (*Rivière des Corbéaux*). This great river flows from the rocky mountains on the western side: its banks are well furnished with wood; such as pines, firs, cedars, the beech tree, and several other kinds. Along its banks are likewise found droves of bullocks and other wild beasts. A number of small rivers which flow into it, abound with an almost incredible multitude of beavers. Notwithstanding the concourse of these animals found on this great river, its waters are as pure as chrystal. Its current is not so rapid as that of the Missouri. The Crow nation, a numerous tribe, dwell on its banks, and higher up, towards its source, are a number of other Indian nations as yet unknown. Several Indians assured me that this river is very large and deep to a great distance above its mouth. A Canadian traveller, named Menard, who has resided more than sixteen years among the Mandanes, and who has been several times in quality of calumet to the Crow nation, in company with the Bigbellied Indians, who are his allies, assured us, that this river was navigable in all seasons with great pirogues, for more than an hundred and fifty leagues, and perhaps

two hundred from its mouth. He told us, that it required from fifteen to twenty days march of an Indian going to war,* to travel from the Mandanes to this nation.

A fort built at the entrance of this fine river would be extremely advantageous for opening a considerable commerce, not only with the neighbouring nations, but with those also who inhabit the western part of the Missouri above this river; such as the Chionitanons, and the nation of the Serpent, who dwell among the rocky mountains, respecting which we have as yet but little information.

A great part of the Asseniboine nation, which over-spreads the country north of the Missouri above the Mandanes, would have much more facility, in opening a trade for its skins with this fort, by following the lake Placoty, than by taking them to the forts of the Red River, which belong to the English.

The Sioux, called also Titons, who are divided into four great wandering tribes, frequent the whole of the eastern part of the Missouri, from the White River, thirty leagues above the river Qui-court, as far as the river of the Titons. They traverse, likewise, the western part of this

* There is a difference between the march of Indians going to war and returning; in the first case they march much more slowly than in the second.

river, to hunt the wild bullocks and beavers, which are generally in greater abundance there than in any other part.

The Sioux are accustomed to frequent the Chaguiennes and the Ricaras, and sometimes the Mandanes; from the two first nations, they purchase horses, beaver skins, and dresses suitable to their customs, and deal with the latter for Indian corn and tobacco.

The Sioux nations are those who most frequently hunt beavers, and other animals, which furnish good furs. These hunters overrun and explore rivers and lakes without fear or apprehension, and carry off every spring a great quantity of furs from the territory belonging to His Catholic Majesty, which they exchange for goods with the other nations of the Sioux dwelling on the rivers St. Peter and Moins, and which are frequented by the English dealers in Canada.

It would be easy to establish warehouses on the Missouri, to supply the wants of those Indians; and thus deprive the English of this branch of industry, of which they now have possession.*

The Sioux quit the banks of the Missouri in the beginning of the month of April, and return in the course of

* See the chapter on the fur trade.
American Journeys—www.americanjourneys.org

the months of July and August, where they pursue their occupations of hunting till the spring.

The months of April, May, and June, are the only seasons in which the places frequented by them may be passed with safety; because they either kill or make prisoners of every stranger they can lay hold of.

The whole of the Indian tribes lately known, and of whom we have spoken, that inhabit the western part of the Upper Missouri, except the Sioux nations, are the most mild, humane, and hospitable people on earth; but it must be observed, that none of the nations inhabiting the Missouri are cannibals, while those who live eastward of the Mississippi are almost all addicted to this practice. They have a great respect and veneration for all white men, whom they confound indifferently under this denomination; being incapable of making any distinction between the Spaniards, French, and English. It is important to prevent the latter from obtaining settlements among these people.

When I undertook this expedition, I had determined not to enter into any details respecting the natives, and still less to listen to those marvellous stories which travellers record in their descriptions of distant countries. I am induced, however, to break this resolution, by relating

two facts, which appeared to me so very remarkable, that I thought I might allow myself this exception.

During my abode in the Illinois, I had an opportunity of forming an acquaintance with a young physician, of the name of Rosse, interesting as well for his talents as for the courtesy of his manners. What had most struck him, he often told me, in the different excursions which he had made into the inland countries, was the character of the Indians, who are every where the same with respect to their patience, their indolence, and their insensibility both physical and moral.* He did not think with me, that this indifference of character proceeded from their education, as I had often endeavoured to persuade him, but from the nature of their blood, which was much thicker, and circulated more slowly than in the whites. To prove what he advanced, he engaged me to repeat the same experiments which he had already made; to compare the pulsation of an Indian with that of a white; taking

* An Indian is sometimes seen seated at the foot of a tree, employed a whole day in rubbing two stones, one against the other, and he will begin again the next morning, and continue his task till he has given them the polish he desires. This operation lasts sometimes a month. Every one knows with what indifference Indians support what we civilised nations call horrible pains.

care that the stature, age, and strength of both should be as near as possible the same. This idea seemed so ingenious, that I resolved to put it in execution without delay.

I knew that several bodies of Indians, newly come from the Upper Missouri to purchase articles of traffic for the hunting season of winter, at St. Lewis, had settled near St. Charles. These Indians, perfect children of nature, appeared to me preferable for my experiment to the Kaskaskias or Kiokias, inhabitants of the Illinois, already corrupted by their intercourse with the Whites. For the farther we penetrate into the woods and deserts, the more humane and hospitable we find the Indian; the more distant he is from the Whites, the less is he infected with the vices of society. I went, accompanied by Adjutant Warin, an interpreter, and two of my suite, among the Indians; and by means of a few customary presents, induced a Mandane and a chief of the Great Osages to submit to the experiment I proposed to make. The Mandane was about five feet three inches (French feet), and exactly of the same height and size as one of my suite, who was an American, and born at Pittsburgh. The Osage was five feet ten inches and an half, which was my height; he was somewhat less robust, but of the same age, forty-

five years. Three trials, repeated at the interval of half an hour, and by a stop watch, gave the following results :

The American, 69 pulsations in a minute.

The Mandane, 60 pulsations.

Difference.....9.

The Osage.....62 pulsations.

Myself.....75 pulsations.

Difference.....13.

I repeated the experiment with Adjutant Warin and the Osage, as the Adjutant was nearly of the same stature as myself, but more phlegmatic; the difference was only ten pulsations, that is, Warin 72, the Indian 62.

During the course of my expedition, I had an opportunity of repeating this experiment,* at Cape Girardot, with two Indians of Upper Canada, a Loup and a Chavanon, and also among the Arkansas. The result of these different trials was, that I found the nearest approach

* I am sorry that I had not thought of trying this experiment on children; but I intend to repair this omission, as well as many others, if I again undertake this expedition, which I have much the wish to accomplish.

between an Indian and a White to be nine pulsations, and the most remote sixteen.*

This fact, no doubt, is fitted to excite reflection in persons of observation; but that which I am about to mention, is no less worthy of notice.

In the number of different nations which I found encamped near St. Charles, one in particular drew my attention, from the distinctive mark which ornamented both sexes; the men had great rattlesnakes twined around their necks, and the women also around their arms; they played with these reptiles as others would amuse themselves with a necklace or bracelet. My interpreter, to whom I expressed my astonishment at this singular custom, informed me, that these Indians were of the nation of the Serpent, dwelling near the Yellow Mountains, on the right side of the Missouri; that they bore the name of the reptile, which they had adopted for their *manitou*; as others assumed that of the fox, the wolf, and the hawk. After this explanation, nothing remained but to discover how they had succeeded in rendering these

* I must observe that I had the precaution to put in contrast with these Indians, French, Americans, and Spaniards, without finding any sensible difference.

animals so familiar, and depriving them of their destructive qualities. I thought at first that they had had the precaution of taking out the two incisive teeth, through which the poison distils into the wound which they make by their bite; but I was convinced of the contrary when I was informed of the manner in which these animals were reared, the details of which I obtained from the chiefs, but not without much difficulty, and after many messages, conferences, and, above all, considerable presents.

He told me, that when they were desirous of taming one of these reptiles, they caught it very young, and gained its attachment by the smell, which takes place with many other animals; but that to destroy the venom of its bite, they took care to confine it two or three months, during which time it was fed either with flower of maize, or the juice of very mild plants; and that substituting such aliments to those which nature points out to these animals in the forests, such as vegetables and disgusting insects, it distilled no poison, and its bite became then as harmless as that of the eel.

I was convinced of the truth of what he related by my own personal observation; for by whatever means these animals are thus rendered innoxious, it is certain that they still retain their teeth, and though excited by anger, their bite produced no bad effect.

What a precious discovery were that of a regimen, which should have the faculty of rendering innocent whatever was most hurtful and destructive! and what obligations would mankind owe to the Indians who should transmit to us so precious a secret! But let us not indulge the illusion; the sovereign specific which should have the power of neutralising the most subtle poison, would fail when applied as a remedy for the passions of men.

STATE

OF THE

ANCIENT INDIAN NATIONS,

WITH

THE NUMBER OF THEIR WARRIORS.

| NATIONS. | WARR. | RESIDENCE. |
|--------------------------|-------|--|
| Delaware | 600 | Between the Ohio and Lake Erie. |
| Wayondotts | 300 | Near the river Sandusky. |
| Mohickons | | |
| Cognawagas | | |
| Portion of the Chawanons | 300 | Sioto and Muskingum. |
| Twightwees | 250 | On the Miami River, and near fort Miami. |
| Portion of the Kickapoos | 1000 | On the Wabash, or adjacent branches. |
| Piankas | | |
| Musquitons | | |
| Ouiatanos | | |
| | 2450 | |

| NATIONS. | WARR. | RESIDENCE. |
|----------------------------|-------|--|
| <i>Brought over . . .</i> | 2150 | |
| Kaskaskias | 300 | Near the Illinois, on the American side. |
| Piorias | | |
| Mitchigamas. | | |
| Wigondotts | 250 | Detroit. |
| Portions of the Ottawas | 400 | The same. |
| Putawatimes | 150 | The same. |
| Portion of the Chepawas | 200 | Near Lake Huron. |
| Portion of the Ottawas | | |
| Portion of the Kickappons | 900 | At the entrance of Lake Superior, and near St. Mary. |
| Portion of the Chepawas | 555 | Stinking Bay, near Lake Michigan. |
| Mynomamies | | |
| Sacks | | |
| Portion of the Putawatimes | 200 | Near St. Joseph. |
| Portion of the Ottawas | 150 | Near St. Joseph. |
| Portion of the Kickappons | 4000 | On Lake Michigan, and between the Mississippi. |
| Miscotins | | |
| Outagomies | | |
| Ottamok | | |
| Mascou | | |
| Musquakeys. | | |
| | 9055 | |

| NATIONS. | WARR. | RESIDENCE. |
|---------------------------|-------|--|
| <i>Brought forward.</i> | 9055 | |
| Portion of the Ottawas | 200 | Near Lake Michigan, and within twenty-one miles from Lake Michilimackinac. |
| Portion of the Chipawas | 1000 | The Islands on Lake Superior. |
| Portion of the Chawanons* | 1100 | On the West of the Mississippi, and thirty leagues from Cape Girardot. |
| The Loups | 1500 | The same. |
| The Cadeaux† | 200 | |
| The Arkansas§ | 200 | West of the Mississippi, on the river of the Arkansas. |
| | 13255 | |

* No distinction must be made between the Chawanons and the Loups, who are always allied with each other; both are in general devoted to France.

† A very brave nation, and friendly to the French.

§ The Arkansas are the best warriors that inhabit the banks of the Mississippi.

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| NATIONS. | WARR. | RESIDENCE. |
|------------------------|-------|--|
| <i>Brought over...</i> | 13255 | |
| The Chikasaws* . . . | 8000 | On the river Yazoo. |
| The Chactaws† . . . | | Between the river Yazoo and the Mobile. |
| The Creeks§ . . . | 9000 | Florida, on the river Mobile. |
| The Cherokees . . . | | |
| | 50255 | |

There is a great number of nations dwelling on the west of the Mississippi, between the thirtieth and thirty-fifth degrees of northern latitude; but they are cowardly and degenerated.

* The Chickasaws also are very brave, but perfidious; no dependance is to be placed in their treaties.

† The Chactaws are in general bad warriors, devoted equally to the Spaniards and Americans.

§ The Creeks and Cherokees are entirely devoted to Spain, and are very good warriors.

STATE

OF

THE INDIAN NATIONS

WHO DWELL TO THE WEST AND NORTH-WEST OF THE
MISSISSIPPI, LATELY DISCOVERED.

| NATIONS. | NUMB. | RIVERS NEAR WHICH THEY RESIDE, WITH THEIR LATITUDES. |
|--------------------------------------|-------|---|
| Castor | 600 | The sources of the Sahaskawan, and at the foot of the Yellow Mountains, in the 54th degree of latitude. |
| Black-Foot | 1500 | The same; near lat. 52. |
| Sacué | 400 | Sources of the Daim, and at the foot of the Yellow Mountains; lat. 50. |
| Wandering part of the Asseniboine | 500 | Southern branch of the Sahaskawan; lat. 47, long. 115. |
| Great Nation | | Between the Daim River and the lake Placoté. |
| Great-Foot | 1000 | North-western branch of the Missouri at the foot of the Yellow Mountains, lat. 50. |
| | 4000 | |

| NATIONS. | NUMB. | RIVERS NEAR WHICH THEY RESIDE, WITH THEIR LATITUDES. |
|---|---------|--|
| <i>Brought over .</i> | 4000 | |
| Asseniboine, settled | 1000 | Upper part of the Asseniboine River ; lat. 52, long. 115. |
| The Christinaux . | 500 | South of the Asseniboine, near the Red River; lat. 47, long. 110. |
| Sauteux Nation . . | 1000 | The whole course of the Red River ; between the 46th and 47th degrees of north latitude, and the 100th and 106th of west longitude. |
| Grand division of the Sioux | 1000 | The whole of the river St. Peter, and upon the river St. Lewis. |
| Lesser division of the Sioux | | On the Crow or Yellow Rock River. |
| Crow-Quill | | Crow River, and the bottom of the Yellow Mountains. |
| Red-Bead | | The same. |
| Orignal | | At the fork of the Missouri. |
| Bigbellied | 500 | Fifty leagues above Titon River ; lat. 53, long. 115. |
| Mandane | 1000 | On the banks of the Missouri, ten leagues above the Bigbellied nation. |
| | 9000 | |

| NATIONS. | NUMB. | RIVERS NEAR WHICH THEY RESIDE, WITH THEIR LATITUDES. |
|----------------------------|-------|--|
| <i>Brought forward</i> | 9000 | |
| Pitapahata | | Northern bank of the Cherry-branch River. |
| Tokiwako | | Southern bank of the Cherry-branch River. |
| Kayoha | | The same. |
| Chaguiennes | | Confluence of the above river. |
| Tokaninambich | | South-western branch of the Chagui- enne River. |
| Arricaras | 500 | Western bank of the Missouri, and the mouth of the Chaguienne River. |
| Richaare | | Sources of the Little Missouri. |
| Blue-Bead nation | | Southern bank of the Little Missouri. |
| Poncas | | Western bank of the Missouri, and the mouth of the river Qui-court. |
| Mahas | 1100 | Western bank of the Missouri, oppo- site the Great Sioux river. |
| Panimaha | 600 | Plate River to the confluence of Wolf River. |
| Panis | 800 | Southern bank of Plate River, and op- posite the mouth of Wolf River. |
| | 12000 | |

| NATIONS. | NUMB. | RIVERS NEAR WHICH THEY RESIDE, WITH THEIR LATITUDES. |
|--|-------|--|
| <i>Brought over .</i> | 12000 | |
| Otoktata | 800 | Mouth of Plate River, and upon the western bank of the Missouri. |
| Padou | . . . | Banks of the south-western branch of of Plate River. |
| Cans | . . . | On the river Cans, where it divides, .60 leagues from its mouth. |
| Republican nation | . . . | South-western branch of the river Cans, near its source. |
| Great Osages. | 9000 | Near the sources of the Great Osages, and of the Lead-mine River. |
| TheSerpentand Chi- ouitanon nations | 2000 | Westward of the Yellow Mountains. |
| Maskego | . . . | Eastward of Lake Winipeg; lat. 63, long. 104, W. |
| Bungi | . . . | Northward of York River; lat. 53, long. 97, W. |
| Chipiwan | 800 | Latitude 57; longitude 110. |
| | 24600 | |

END OF THE FIRST VOLUME,