

Rivers of Iowa

Iowa River, several miles before it enters the Mississippi, has been mainly supplied by two branches of unequal length and importance. The eastern branch (which is the longer of the two) is called Red Cedar River; and its head-waters are not far from those of the Cannon River, which I have renamed the La Hontan on my map. It so happens, contrary to the received principles of descriptive geography, that Red Cedar River loses its name after emptying into the shorter branch, which maintains that of the Iowa. It is true that these names were established before it was known which of the two was the more important. To Albert M. Lea must be assigned the credit of having first laid down the course of Red Cedar River, the whole length of which is not less than three hundred and fifty miles, and which is probably navigable for one hundred and sixty miles out of these. After quitting the sandy plains of its upper reaches, it pours rapidly over a series of ledges of carboniferous limestone,

[This description of some of the geographical features of the Iowa, Cedar, Des Moines, and Mississippi rivers is adapted for THE PALIMPSEST from J. N. Nicollet's report of his explorations of the basin of the upper Mississippi River between 1838 and 1840. The report, accompanied by a splendid map, was published in 1843 as Senate Document, No. 237, 26th Congress, 2nd Session, and again in 1845 as House Document, No. 52, 28th Congress, 2nd Session.—THE EDITOR]

until it reaches a much lower level, where it deposits many sand-bars, the soil of which is congenial to a vigorous growth of the red cedar, whence the river derives its name.

The Des Moines is one of the most beautiful and important tributaries of the Mississippi north of the Missouri; and the metamorphosis which its name has undergone from its original appellation, is curious enough to be recorded. We are informed that Father Marquette and Louis Joliet, during their voyage in search of the Mississippi, having reached the distance of sixty leagues below the mouth of the Wisconsin, observed the footsteps of men on the right side of the great river, which served as a guide for these two celebrated explorers to the discovery of an Indian trail, or path, leading to an extensive prairie, and which they determined to follow. Having proceeded about two leagues, they saw first one village on the bank of a river, and then two others upon a slope, half a league off from the first. The travellers, having halted within hailing distance, were met by the Indians, who offered them their hospitalities, and represented themselves as belonging to the Illinois nation. The name which they gave to their settlement was Mouin-gouinas, (or Moingona, as laid down in the ancient maps of the country,) and is a corruption of the Algonkin word *Mikonang*, signifying *at the road*; the Indians, by their customary elliptical manner of designating localities, alluding,

in this instance, to the well-known road in this section of country, which they used to follow between the head of the lower rapids and their settlement on the river that empties itself into the Mississippi, so as to avoid the rapids. And this is still the practice of the present inhabitants of the country.

Now, after the French had established themselves on the Mississippi, they adopted this name; but with their custom (to this day, that of the Creoles) of only pronouncing the first syllable, and applying it to the river, as well as to the Indians who dwelt upon it; so that they would say "*la rivière des Moins*" — "the river of the Moins;" "*aller chez les Moins*" — to go to the Moins (people). But, in later times, the inhabitants associated this name with that of the Trappist monks (*moines de la Trappe*) who resided on the Indian mounds of the American bottom. It was then concluded that the true reading of the *rivière des Moins* was the "*rivière des Moines*," or river of the monks, by which name it is designated on all the modern maps.

The Des Moines empties into the Mississippi in $40^{\circ} 22'$ north latitude; and its sources, heretofore supposed to be in 43° , are extended on my map to $44^{\circ} 3'$. It is fed from the beautiful Shetek lakes, towards the middle of the plateau of the Coteau des Prairies, at an elevation of one thousand five hundred and eighty feet above the level of the sea. The waters of these lakes flow from northwest to southeast, swelling themselves by innumerable tributaries

until they enter the Mississippi at an elevation of about four hundred and forty-four feet above the Gulf of Mexico.

The course of the Des Moines cannot be less than four hundred miles; whence it would follow that the average of its descent is nearly three feet to the mile, with a current approaching in velocity that of the Missouri. The river flows constantly in a deep valley, from its sources to within a few miles of its confluence with the Mississippi, where it spreads over low grounds. In its upper part, its bed is upon sand, rolled pebbles, and shingle.

Like most of the rivers in this region, it has its sources in lakes and swampy grounds, and has a tortuous and sluggish course until it reaches a greater declivity at about 43° latitude, where it becomes much more rapid and direct, and frequently pitches impetuously over rocky beds of carboniferous limestone forming frequent bluffs on alternate sides. This rock, which might furnish an abundance of excellent building materials, is overlaid in some places by deposits of coal.

Penned up, as it were, between the valleys of the Mississippi and the Missouri, and those of their adjacent tributary streams, the Des Moines has no large tributary of its own. Flowing through a wide and deep valley, the principal waters which it receives are the drainings through deep and long ravines, intersecting its shores, and rendering travel along them inconvenient and painful. The

only tributary streams of any consequence are Raccoon Fork, and perhaps Lizard and Cedar rivers, on the right side; and Boone River and Moingonan's Brother, on the left. Yet, in the spring of the year, the Des Moines may be navigated by flatboats that would carry the produce of the upper country to the head of steamboat navigation, which may be one hundred and fifty miles from its mouth. But as my assistant, Lieutenant John C. Frémont, has made the surveys to ascertain the spot to which steamboats of different burdens may ascend from the Mississippi, I refer to his report for more ample details.

The Sioux or Ndakotah Indians call the Des Moines *Inyan-sha-sha-watpa*, or Redstone River — from *inyan*, stone; *sha-sha*, reduplication of *sha*, red; and *watpa*, river. They call the upper east fork *Inyan-sha-sha-watpa-sunkaku*, the brother of Redstone River. This is the tributary which I have precedingly called Moingonan's Brother.

The union of the Moingonan with its brother forms what is also called the upper fork. It is in the midst of a fine grove, embracing an area of several miles, with good soil and water-power. This grove will soon be the center of a populous settlement.

Whilst writing these pages, I am informed that all the lands on the Moingonan and its tributaries, below this point, have been purchased from the Sac and Fox Indians, who continue their destined west-

ward progress, closely followed by the white man, eager to possess so beautiful a country.

The hydrographical relations of the Des Moines with the Mankato, St. Peter's, and Mississippi rivers, present a geographical incident of some interest. In latitude $43^{\circ} 45'$, longitude $95^{\circ} 12'$, there is a lake very near the Des Moines River named Tchan-shetcha, or Dry Wood Lake. The Watonwan River, which is a tributary of the Mankato, that empties itself into the St. Peters, has its source in this lake. Now the tongue of land separating the Des Moines from Tchan-shetcha Lake, is not more than a mile to a mile and a half broad; so that, were a canal cut across, the waters of the Des Moines would be made to communicate with those of the St. Peter's.

The importance of this communication may be made sensible by a knowledge of the fact that the Indian traders dependent on the American Fur Company have frequently spent the winter at the headwaters of the Des Moines. On one occasion, Joseph Laframboise, failing in his means of transportation by land, had a large canoe built, which he loaded with his peltries, took water upon the Tchan-shetcha, descended the Watonwan and Mankato, and arrived safely at the St. Peter's station. I mean only to indicate at present, however, what will at a future day form an obvious feature in the system of internal improvement of these regions, so new in the geography of the United States, by which this

extensive and beautiful territory might be rendered circumnavigable. I hasten to get back to the Mississippi.

Ascending the Mississippi, the Lower or Des Moines Rapids are two hundred and four miles above St. Louis, and beyond the mouth of the Des Moines, whence they derive their name, which was given to them by the first French settlers who opened the fur trade in this part of the Mississippi Valley, long before it was known that the Des Moines had any places in its course that could be considered as rapids.

The spot at which the first difficulties in the navigation of the rapids are encountered is about three-quarters of a mile beyond Keokuk and four miles above the mouth of the Des Moines; thence the rapids ascend nearly up to Montrose, where, but a few years back, was situated Fort Des Moines, and opposite to which is Commerce, which has but lately changed its name to Nauvoo and has become a Mormon settlement.

In January, 1838, Congress ordered a survey of the rapids, which was intrusted to Captain R. E. Lee, of the corps of engineers. By his estimate, the length of the rapids is eleven miles, with a fall of twenty-four feet. Here the Mississippi tumbles over ledges of a blue limestone, at all times covered with more or less water, and through which many crooked channels have been worn by the action of the current. During low stages of the water, the

passage of the rapids is very difficult, as well in consequence of the shallowness of the water as the narrowness and tortuousness of the channel; so that the time of practicable steamboat navigation is shortened by nearly three months in the year, which is about the duration of low water in the river.

Captain Lee had commenced a system of improvements, that has, unfortunately, been suspended, to the great detriment of the country; for without the completion of such improvements as had been so judiciously devised and commenced, the immense resources of the beautiful region of country north of the rapids in Illinois, Wisconsin, and Iowa, will remain unavailable. In the winter of 1836-'37, I was a witness that \$15 were paid for flour, and \$25 for barrelled pork, at St. Peter's, which at St. Louis had probably respectively cost but \$5 and \$8, because the steamers loaded with winter provisions had not been able to cross the rapids during the preceding fall.

The uplands that border on the rapids are based upon the mountain or carboniferous limestone, as the contained fossils indicate. The limestone, of a dirty color, and much broken up, is the matrix of numerous siliceous and calcareous geodes. Those fine geodes picked up by all travellers, are found on the banks of the rapids, having fallen from the adjoining bluffs. Within a few years there has been a road opened leading to Warsaw, and, being cut along the bluff, has exposed to view the stratum in

which the geodes occur, and their position therein. They are observed to be slightly compressed, their greater axes being parallel to the stratification of the limestone, which is horizontal.

Directly opposite the mouth of the Des Moines, partly at the foot and partly on the top of the bluff that overlooks the Mississippi, is situated the town of Warsaw. This is a very advantageous position, as it forms a natural depot for the products of the back parts of Illinois and those descending the Des Moines. Moreover, it is at Warsaw that the steamboats which can not cross the rapids stop to discharge their cargoes into keel-boats that transfer them to the steamers at the head of the rapids; the same keel-boats bringing, in return, freight for the steamboats on the descending trade.

Between the lower and upper rapids, a distance of about one hundred and thirty miles, the navigation of the Mississippi is perfectly safe. Its valley swells out considerably, especially about the confluence of the larger rivers coming from the northwest, the entrances to which are concealed by a number of low islands and sloughs, that, at some seasons, affect the salubrity of the surrounding country. Occasionally, however, the highlands approach the river, and emigrants take advantage of such positions to multiply the sites of new villages and towns.

Burlington is one of these newly-built-up towns, beautifully situated on the west bank of the Missis-

ssippi, along the slope of a bluff extending northerly to the Flint River.

Upper or Rock River Rapids are so named from their proximity to the mouth of Rock River. On approaching these rapids, in the ascent of the Mississippi, there is presented to the view as beautiful a prospect as can be met with in the whole west. Rock Island comes into view covered with a most luxuriant vegetation, and made picturesque by the ruins of an old fort; whilst the town of Stephenson, and that of Davenport with the beautiful range of sloping hills in the rear of it, help to form so winning a landscape as alone to account for the rapidity with which settlements multiply in this portion of the Mississippi Valley. Other more substantial inducements, however, are offered to the immigrant in the fertile lands that extend to a considerable distance back on both shores of the river.

The length of the Rock Rapids is from fourteen to fifteen miles from Rock Island to a little below Port Byron, on the left side of the river, and Parkhurst on the right side. According to the surveys of Captain R. E. Lee, the fall of the Mississippi, from the head to the foot of the rapids, is twenty-five and three-quarters feet. The waters roll over a bed of limestone rocks, the ledges of which sometimes reach quite across, so as at low water to be very shallow; or, projecting and interlocking from opposite sides, afford nothing but winding, difficult, and dangerous channels.

The fall of the river is not regular, but, like that over the lower rapids, is, as might be expected, greater over the reefs and less in the channels; so that the velocity of the current, varying with the descent, and being continually checked by the rocky bed of the river, its tortuousness, occasioned by the projecting ledges above referred to, though not so great as the natural fall would predicate, is still rapid, and difficult to overcome. The difficulty consists mainly, however, in the short turns and narrowness of the passes between the reefs, which oblige boats to cross the current in an oblique direction, running the risk of being dashed against the rocks. As a matter of course, the descending boats, being swept along by the current, run the greatest risk. But Captain Lee has shown that it is practicable to remove these obstacles, so as to afford a safe passage up and down both of the rapids.

The general government is certainly interested in hastening these projected improvements, having considerable supplies to send annually to the already established military posts of Prairie du Chien, St. Peter's, and others that will probably soon be required. Improvements in the navigability of the Mississippi will also facilitate future transactions with the Indians, which the onward march of events so plainly indicates must, of necessity, take place before long.

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