

## Early History of Lead Region of Wisconsin

By Moses Meeker \*

After much delay, I commence to write, at the request of the Historical Society, the early history of the Lead Mining Region of Wisconsin, which will necessarily embrace much of my own history, having been connected with almost all the early transactions in this section of the country.

In the spring of 1822, when residing in Cincinnati, and en-

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\* Dr. Moses Meeker was born in New Jersey, June 17th, 1790. After a common education, he studied and commenced the practice of medicine. In 1817 he settled in Cincinnati, Ohio, where he engaged successfully in the manufacture of white lead, until 1822, when he first visited the lead mines of Galena. He soon returned for his family and supplies, and came out in 1823, and remained permanently in the country. Erecting a furnace for the smelting of lead ore, he commenced the smelting business, and continued with much success until the breaking out of the Black Hawk War, when the work was for a while suspended. "He then turned his attention," writes Nicholas Smith, Esq., "to the general interest of the country; and too much praise cannot be ascribed to him for his benevolence, and his kind and friendly acts towards the needy, and for the manly spirit with which he labored for the safety and welfare of the inhabitants of the country during the Indian disturbance. All those acquainted with his career during the dark days of our Indian troubles, can bear testimony to the fact, that no man worked with a more noble spirit for the welfare of the country than did Dr. Meeker. His hospitalities were bestowed liberally, and he made his house a welcome home for the stranger and the homeless."

At the close of the war, he removed to Iowa county, Wisconsin, and settled on Blue river and was again engaged in smelting for several years. In October, 1836, he was supported, but without success, as delegate to Congress, in opposition to Gen. George W. Jones. In 1842 he was elected to the Wisconsin Territorial Legislature and the next year was a second time chosen to the same position, serving through the session of December, 1843—January, 1844. He was a delegate from Iowa county to the first Constitutional Convention in 1846, to form a State Constitution. He continued his residence in Iowa county until the winter of 1853, when he retired from active life, and settled on his farm at Meeker's Grove, in Benton, Lafayette county, where he continued to reside till the spring of 1863, when he removed to Shullsburg.

He took a deep interest in the State Historical Society, of which he was chosen a corresponding member in 1835. At the instance of the Society he commenced his narrative of the early settlement of the lead region, regretting that he had, unfortunately, his journal burned, which he had kept of the early settlement of the country: thus rendering it necessary for him to draw upon his memory for those early transactions—adding, "the great object with me is to give it correct." Referring to the early times of 1822-23, he said: "I have in my possession some documents, which show the despotism under which we lived." Though his paper covers but a comparatively brief period, yet it is of great value and interest.

Dr. Meeker died at his residence in the village of Shullsburg, July 7th, 1865, at the good old age of 75 years. "But few men," says Nicholas Smith, "possess what harmonized the character of Dr. Meeker—benevolence, amiableness of disposition, honesty of principle, and a true Christian spirit, were his crowning virtues. He lived not for himself, but to do good to others; and in consideration of this harmony of character, his name is engraved in the hearts of the wise and good, and in the records of eternity." When Dr. Meeker died, one of the noblest of the band of Wisconsin pioneers passed to the better world.

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gaged in the manufacture of white lead, it became necessary for me to visit St. Louis, to purchase a stock of pig lead. On arriving there, I learned that Col. James Johnson, of Kentucky, was fitting out an expedition to work the lead mines on Fever river, on the east side of the Mississippi. The day after my arrival at St. Louis, there was a keel-boat loaded with lead, landed from the Dubuque mines, belonging to a man by the name of Anderson, an Indian trader. He informed me that the lead had been smelted on an island in the Mississippi river, opposite the Indian village where his establishment was. The Indians would not permit him to build upon the main land where they had dug and smelted lead for many years. Being in the Indian trade, and seeing a great deal of waste about their furnaces, he conceived the idea of purchasing the waste and smelting it. He erected a log furnace on the island, and purchased the ore and the mineral ashes from their furnaces, which, by paying the Indians in goods, he obtained at a less cost than he could have obtained it by mining. He gave me a very glowing description of the Fever river mines, and also of the mines generally east of the Mississippi.

About this time there appeared an advertisement in the papers, that the President proposed to lease to individuals one-half of a section of land on the Upper Mississippi lead mines. The person giving a bond and security for ten thousand dollars, to be approved by a U. S. District Judge. The individual getting a lease, was to have the use of timber and stone on the half section, for the purposes of smelting; and was to pay the Government one-tenth of all the lead made.

Col. James Johnson and others arrived on the Fever river, (now Galena), about the 5th of July, 1822. Anticipating opposition from the Indians, he had procured an order from the Secretary of War to Col. Morgan,\* commanding the troops on the Upper Mississippi, to meet him with a force sufficient to over-awe the Indians. Detachments of troops

\* Colonel Willoughby Morgan, a native of Virginia, entered the service as captain in 1812, and died at Fort Crawford, Prairie du Chien, April 14, 1832.  
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were ordered from Fort Edwards, Fort Armstrong, on Rock Island, and Fort Crawford, at Prairie du Chien, Col. Morgan's headquarters. The Sac and Fox Indians had determined to resist their landing, but found that resistance would be in vain from the demonstrations made by the Government troops. The Indians afterwards informed me, that they, by virtue of necessity, concluded to let the white men work with them.

During the summer of 1822, there were a great many notices published in the papers of St. Louis, concerning the wealth of the lead mines of the Upper Mississippi. On the first of October in that year, Col. Colo and myself started from Cincinnati on horseback for the lead mines by the way of St. Louis. In St. Louis I met with Captain Bliss, and he proposed for us to remain there for a few days, and he would accompany us. We complied with his proposal, and leaving St. Louis we crossed the Missouri river at St. Charles, and then traveled up on the west side of the Mississippi. The inhabitants were few and far between, till within twenty-five miles of Fort Edwards. We left the last white settlement expecting to arrive opposite the fort in time to swim our horses over the river before night. When about five miles from the house we left, it began to rain very heavily, and continued some time, and then changed to snow.

We lost our way, and in place of striking the fords of the river Des Moines, we struck a slough of the Mississippi; by following that down we found the main river about ten miles below the fort, as we afterwards learned. It being night, and a heavy snow falling, we encamped for the night without food for ourselves or horses. It cleared off in the night, and the next morning there was such a strong wind that we could not hear the bell on our horses. We spent the day in a fruitless search for our horses, and near night we found some Indian canoes; we launched one of them into the water, put our saddles into it, and started for the house that we had left the morning before. After going down the river about three miles,

we saw a keel-boat encamped for the night. They very kindly gave us something to eat, and invited us to spend the night with them. After breakfast in the morning, we started down, and the keel-boat up the river. On arriving at Mr. White's, we hired a man and horses, and we put it upon Col. Cole to go with him to search for the horses, as he refused to hobble his horse.

Soon after he left in search of the horses, a keel-boat came along, and Capt. Bliss and myself got on board of it for Fort Edwards, leaving directions for Cole to come on with the horses; and on arriving at the fort, we heard the call of Cole with our horses, on the opposite side of the river. We got a Frenchman with his canoe, and went and swam our horses across the river beside it. At this fort we procured provisions, and started for Fort Armstrong, at Rock Island, distance 100 miles. The weather became warmer, and the streams we had to cross were very high, but our horses got accustomed to crossing them, and would swim them without difficulty, carrying us and our provisions upon their backs.

Fort Edwards was under the command of Major Marston; from whom and his officers we received very kind and marked attention. I have forgotten the names of all his officers except Lieutenant, afterwards Captain, Low. We arrived in good time at the fort at Rock Island, under the command of Major Burbank, who received us very kindly. We fortunately met with a keel-boat owned by George W. Hynes, who had his family on board moving to the mines. We sent our horses back to the settlement, and took passage on the boat for Fever river. On entering the river, I was astonished at the number of fish as the men were pushing the boat along. I shot a great many as fast as I could load and fire.

We arrived at the village about four o'clock in the afternoon of November 12th, 1822. There were Col. James Johnson's\* company, consisting of eight men, white and black, the

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\* Col. James Johnson, the elder brother of Col. Richard M. Johnson, of Kentucky, was born in Orange county, Virginia, Jan. 1, 1774, and when about five years of age was taken to Kentucky. His father Col. Robert Johnson, located with his family at Bryan's Station, and were still residing there when the men-

Colonel himself having gone to Kentucky for the winter, and to obtain supplies for the next year's operations; Thomas H. January, with two or three men, and a log furnace; John Burrel and Nehemiah Bates, one log furnace, together with Col. Johnson's furnace, making three furnaces; Amos Farrar, an Indian trader doing business for George Davenport, a trader at Rock Island; Capt. David G. Bates and A. P. Vanmetre, at that time trading on the island at Dubuque. Thomas Beuthliert having bought out Anderson† the trader, on a slough of the Mississippi, about three miles west of the settlement on Fever river, known by the name of "the Point"—since Galena—had his trading establishment at that locality. There were about thirty persons to pass the winter, with but a short supply of provisions, unless all the keel-boats on the way should get up, which they failed to do. The scurvy attacked a number of the persons, as I learned the following season, when I returned. I remained eight days, and made what explorations I could in that time, and was satisfied that it was a mineral country, and also having a good soil, and well-watered; but that the ground could not be worked on the terms offered by the Government. The ore would have to be smelted where the timber could be obtained.

I made arrangements for returning the next spring. The

orable attack was made on that fortress in August, 1782, by a strong party of British and Indians, and soon after settled on Elkhorn, in Scott county, where young James grew up (taured to dangers and hardships. The Indians were almost constantly troubling this settlement, and Col. Robert Johnson was a leader among the people in repelling and pursuing the savage foe; and when his son James was but fifteen years of age, and too feeble to undergo the fatigues of the wilderness, he took him to the conflict, with a servant to carry his rifle, and assist him in difficult passages, that he might thus learn from early habit to endure the toils and brave the dangers of war. During the War of 1812, Col. James Johnson served as second in command under his brother, Col. R. M. Johnson, and commanded the right wing in the charge on General Proctor at the battle of the Thames, Oct. 5, 1813. He was a large army contractor during the years 1819-20, and with two steamers conveyed supplies and troops high up Missouri river—one of his steamers was named the "Johnson." Dr. Meeker's narrative shows his early connection with the lead mines in the Galena region and Western Wisconsin. He served a term in Congress in 1825-26; and died of fever, at his residence in Scott county, Ky., Aug. 14th, 1826, in the 62d year of his age. He was a man whom no dangers could dismay nor obstacles discourage, and was guided through life by the strictest principles of Christian virtue and integrity.

† He was an old man at this period, says Charles T. Olmstead, and remained in Galena and died there many years since.

‡ He was universally known as Kentucky Anderson, as he was from Kentucky, sometimes engaged in trading with the Indians, and sometimes employed in mining; he served through the Black Hawk War in Captain Clarke's company; was in the Peckatonica fight; in the affair at Kellogg's Grove and Bartle Creek, and at Wisconsin Heights and Bad Axe; he was a noted bruiser, and it was related of him that he had thirteen National fights in Mineral Point in one day; yet he was naturally kind-hearted and devoted to his friends. He was finally killed in a feud six miles southwest of Dubuque, in or about the fall of 1836—having been shot dead by one whose life he had threatened. So relates Mr. Olmstead who settled in the lead region a youth, in 1836, and knew Anderson well, and speaks kindly of his memory.

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settlement east of the Mississippi in Illinois extended up to Quincy, within fifty miles of Fort Edwards; and on the west side to the residence of a man by the name Edward White, twenty-five miles below the fort. On the 20th of November we left for the settlement in a very heavy snowstorm. By hard labor the men worked the keel-boat in the current of the Mississippi. As we were going out of the mouth of Fever river, we met with a Mackinaw boat, loaded with Indians and goods from Green Bay, which had been sent by Daniel Whitney. A young man by the name of Tuttle had charge of it. Winter had commenced, but we proceeded night and day until we arrived at White's, where our horses were. We were subject to the severe cold, there being no conveniences for fire in the boat.

At White's we mounted our horses, and, after many detentions by ice and stormy weather, arrived in Cincinnati on the 8th of January, 1823, and immediately commenced preparing to return as early in the spring as possible. I entered into correspondence with the Secretary of War, Hon. John C. Calhoun, which has since been lost; but the substance of it was that I wanted some assurance from the Government that I should not be interfered with, either by the Government or by individuals, in my improvements. My letter was submitted to President Monroe, and resulted in an order to Col. Bomford, head of the Ordnance Department, where the business of the lead mines had been placed. I received all the assurance that could be given that I should not be interfered with, until some action of Congress took place upon the subject. At the same time I forwarded an approved bond for ten thousand dollars, as required.

On the 5th day of April, 1823, all things being ready, I cast loose the good keel-boat, "Col. Bomford," with a crew of nineteen men, two of whom had their families with them. The whole number on the boat, consisting of men, women and children, amounted to forty-three, besides three dogs. My outfit was obtained at an expense of seven thousand dollars.

Among the passengers on the boat were the following persons: James Harris, Esq., and son, D. Smith Harris, now Capt. Harris of steamboat notoriety; Benson Hunt, wife and children; Thos. Doyle, wife and children; Maria Rutherford; Maria Bunce, a young woman; Thos. Whittington; John Bunce and brother; Israel Garretson; Thos. Boys; Rich'd Spears, and other names which I have forgotten, all of whom left the country after remaining two or three years, except the Harrises and Hunt.

The Ohio river, at this season of the year, was very high. On arriving at its mouth, we commenced ascending the Mississippi; and in five days thereafter this river also rose very high, the banks overflowing, and for five days we were confined to the boat, not seeing land enough to stand upon. We were twenty-two days in running up to St. Louis, and during the whole time only two days without rain. My men being much exposed to the wet weather, suffered considerably from sickness; we worked the boat along whenever we could make any headway.

About seventy miles above the mouth of the Ohio, in ascending the Mississippi, the steamer "Indiana" or "Virginia," I am not positive which, passed us, loaded with Government stores, destined for the Upper Mississippi. She was the first steamboat that crossed over the Rapids. I called to the Captain, and tried to get him to take me in tow; but he said that he could not do it, as he had hard work to stem the current. In many places he would come to a stand-still. On my arrival at St. Louis, there was a great speculation as to whether the steamboat would ever return again, and also as to the practicability of steamboats crossing the Rapids of the Mississippi. The boat finally returned to St. Louis, re-loaded and made two more trips. The first trip to Prairie du Chien, and the second to St. Peter's. They lost three or four anchors by "warping over." They had not sufficient power of steam to stem the swift current over the bars of rocks on the Rapids. The manner of warping is by sending a yawl-boat ahead with an anchor,

to which a cable is attached. They cast over the anchor, and pay out the cable till they arrive at the boat. On a keel-boat all hands lay hold of the warp, as they term it, and walk back to the stern of the boat, and as each man reaches the stern, he breaks off and travels to the bow, and so on in succession until they arrive at the anchor or tree on the bank of the river, as the case may be. In warping a steamer, the warp was always passed several times around the main paddle wheel shaft, and the steam put on, and the wheels and the warp would force the vessel against the current. At this day there has been so much improvement, that the term warp has almost, if not entirely, become obsolete.

While at St. Louis, I sent two men to Illinois to purchase horses and cattle to be driven to the mines by way of Springfield and Peoria, from which latter place there was no settlement until they reached their destined one at Fever river. After leaving St. Louis, we worked along up the river as our keel-boat was wont to do, sometimes pushing it along with poles, sometimes pulling it along by the brush, called brush-whacking, sometimes by warping, and occasionally by sailing a few miles; but the wind would not shift to suit all the bends of the river. On the day I arrived at Fort Edwards, we had a fair wind, and sailed about twenty miles, owing to a bend in the river. I was obliged to keep along near the opposite bank of the river, and when about one mile above the fort, I saw one of the ports thrown open, and a shot was sent ahead of us. I laid the boat in shore, took the skiff and went down to the fort. I had concerted a signal for the keel to drop down should I require it. On arriving at the landing, Lieut. Low met me with a party of men to escort me into the august presence of the commandant, Major Marston, who I found unable to stand without something to support him. I apologized to him for not landing and paying my respects to him, as was the custom for boats passing up into the Indian country; I had availed myself of the favorable wind, the benefit of which I did not like to lose; but I judged the

quickest and easiest way for me to get along would be to signal the keel-boat to drop down and to invite the Major on board. He enquired whether I had any whisky on board, and answering in the affirmative, he said he would be under the necessity of taking it from me. I remonstrated by saying that I was not going to trade with the Indians, but going to work the lead mines with my own men. That appeared to satisfy him; and, as was the custom of the day, the brandy soothed all difficulties.

We worked up the river near to the foot of the Rapids, and crossed over to be ready to commence the ascent the following morning. During the night a rain storm began, so that we could not proceed. Early in the morning I saw a boat making for us from the fort. On their arrival a letter was handed me, containing a very polite apology for detaining me the day previous, with the mail for upper ports, requesting that I should forward it as far as Prairie du Chien. At that day, and up to the fall of 1828, there was not regular mail above Fort Edwards; each military post was a post-office, and the commandant a postmaster. While the river was open, the mails traveled at the speed of a keel-boat, and as often as opportunities offered. After the closing of the river in the fall, to the opening of the navigation in the spring, there was an express sent through from one post to another, once a month.

We pushed up the river without any annoyance worth noting, and entered Fever river on Sunday, the first day of June, making the trip from St. Louis in thirty-one days, and fifty-eight days from Cincinnati. On arriving, I found that Col. James Johnson had arrived before me, accompanied by Gen. Simrall\* from Kentucky, with a few men; and John S. Miller and family from Hannibal, Missouri, with a drove of cattle. John Kay assisted Miller to drive his cattle through. Duke S. Smith, a brother of Mrs. Miller, and Ebenezer Orne, came that year; John Armstrong, Cuyler Arm-

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\* Lieut. Col. James Simrall commanded the Kentucky Dragoons on the North Western campaigns of 1812-13. L. C. D.

strong, and James Thompson, from Green Bay, with Tuttle, and Daniel Whitney's goods, arrived the fall before. I was at my destined port, and had to live in my boat until I could build houses, which was no small job. I had men and tools, but my oxen had not yet reached me. Fortunately, Miller had oxen, which he kindly gave me the use of, till mine should arrive. When I applied to him to hire them, he said that I was too much of a Yankee for this country, and that he would not hire them; but that I might take and use them as long as I wanted them; and if I wished to insult him, I could not better do so than by again offering to pay him.

The timber was on the opposite side of the river. I had some logs hauled to the bank of the river about half a mile above Galena, which I rolled into the stream to raft down, but they sank. Fortunately the Armstrongs had built a flat-boat which I purchased and went ahead. Soon after I got up my houses and moved into them, there came a thunder storm accompanied with a very strong wind that unroofed one of them, notwithstanding the roof was weighed down with very heavy green oak logs. I spent the first year mostly in building houses, furnaces and stables, and in digging a well. In the month of August I had the census taken; there were seventy-four persons, men, women and children, white and black; my company numbering forty-three of them. Col. Johnson had four black men with him, one of whom was James P. Beckwourth, afterwards a mountaineer notoriety.\*

\* Mr. Beckwourth was born in Fredericksburg, Virginia, April 26th, 1798; and when but seven or eight years of age, his father removed to Missouri, and settled in the forks of the Mississippi and Missouri rivers, 12 miles below St. Charles. Spending his early years on the farm, he was at length apprenticed to learn the trade of a blacksmith. Several years were devoted to this employment, which as he grew to years of manhood, became irksome to him, and he resolved to indulge himself in a growing wish for travel and adventure. His first venture was to join Colonel Johnson in his expedition up to Faver river, to make a treaty with the Sac and Fox Indians, to obtain their consent to working the lead mines, at that time in their possession. The expedition consisted of six or eight boats, conveying probably about one hundred men, as Beckwourth estimated some thirty two or three years afterwards; though the number was very likely considerably less. Beckwourth engaged in the capacity of a hunter to the party. He states that they had a tedious passage of some twenty days from St. Louis to the place of their destination—Galena, of the present day. They found the Sac and Fox Indians in great numbers awaiting their arrival and disembarkation, who were already acquainted with the object of the expedition. They were all armed, and presented a very formidable appearance, yet received Johnson and his party peaceably.

After nine days' parleying, a treaty was effected with them, signed on the part of the Indians by Black Thunder, Yellow Bank and Keokuk—father to the chief of that name who figured in the Black Hawk War; and, on the part of the United States, by Colonel Moxam and Johnson. By this treaty, the lead mines were then first opened for civilized enterprise. During the preliminaries to the treaty, there was great difficulty in preserving peace, as the Indians were well armed,

There were about five hundred Indians; their women quite industrious miners, but the men would not work. They would form an inclined plane where they went deep. I saw one place where they dug forty-five feet deep. Their manner of doing it was by drawing the mineral dirt and rock in what they called a *mocock*, a kind of basket made of birch bark, or dry hide of buckskin, to which they attached a rope made of rawhide. Their tools were a hoe made for the Indian trade, an axe, and a crowbar, made of an old gun barrel flattened at the breach, which they used for removing the rock. Their mode of blasting was rather tedious, to be sure; they got dry wood, kindled a fire along the rock as far as they wished to break it. After getting the rock hot, they poured cold water upon it which so cracked it that they could pry it up. At the old Buck Lead, they had removed many hundred tons of rock in that manner, and had raised many thousand pounds of mineral or lead ore.

The Buck Lead was discovered by an Indian who was called by that name, about one and a half miles from Galena, and had been worked by Old Buck and his wife, and such of his friends as he chose to invite to join him, for some fifteen years, as I was informed by the Indian traders. Old Buck was reputed to be the best miner among the Indians. He had given up hunting some twenty years before the whites took possession of the mines, and made his living by mining. There were many places where the Indians found and worked out mineral, but the principal places were the Buck and Cave leads, the latter five miles from "The Point"—now Galena. Col. J. Johnson purchased the right of working the Buck\* and Cave leads

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and the whites had to keep strict guard; but on the distribution of the presents, which followed the conclusion of the treaty, consisting of casks of whiskey, guns, powder, knives, blankets, etc., there was a general time of rejoicing; pow-wows, drinking and dancing diversified the time, and a few fights were indulged in, as a sequel to the entertainment.

When Colonel Johnson and party finished their business, Beckwourth had so far ingratiated himself into the good graces of the Indians, that he remained and hunted in their country for eighteen months, and learned much of their habits and character. This was the commencement of his eventful career of frontier life and adventure, as mountaineer, scout and pioneer, and chief of the Crow Indians, of which a most interesting volume was published by the Harpers in 1858. He settled in "Beckwourth Valley," California, in 1852, where, we presume, he is still living, as we have not heard of his death. L. C. D.

\* Maj. Charles E. Legate, a pioneer of 1836, states that Colonel Johnson, learning that Old Buck would sell out his lead or diggings for \$300, sent Edward Beochard, with goods to that amount, and consummated the purchase—which has proved a very valuable diggling, as it has been worked ever since. Of Old Buck,

of the Indians in 1822; and the following year, the Indians were at work at different places on the same range. The Indian women proved themselves to be the best as well as the shrewdest miners. While Col. Johnson's men were sinking their holes or shafts, in some instances the squaws would drift under them and take out all the mineral or ore they could find. When the men got down into the drift made by the women, the latter would have a hearty laugh at the white men's expense.

This year the Government had two officers of the Ordnance Department stationed here as surveyors, Major Anderson and Lieutenant Burdine.† There not being any agent sent by the Government this year, the surveyors had nothing to do but eat and drink.

When I arrived, on the first of June, on entering Fever river, I observed the atmosphere to be very chilly; it was occasioned by the immense piles of ice, left by the great freshet in the month of March preceding. These piles of ice upon the bottom opposite the village were from fifteen to twenty feet high. The men that were there told me that the water rose fifteen feet in one hour! The ice being very thick and strong in the short bend of the river, it would gorge up and stop the water until it got high enough to run over, and would very soon wash the ice away.

There were many log furnaces that the smelters had prepared, that were lying upon the banks of the river, that were swept away. There was one large keel-boat that had grounded and was frozen fast to the bottom. The running ice took away all the roof and upper works. The river has not broken up as rapidly since. In the year 1826 or 1827 at the breaking up

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the Winnebago miner, we can add on the authority of Mr. Olmstead, that he was a swarthy, medium-sized Indian, more industrious than his people generally, and had become considerably enlightened, and talked broken English pretty well. The last Mr. Olmstead heard of him, he was engaged with a half-breed named Jonas, prospecting for lead on the Big Ma-co-ketty, in the Dubuque region, in 1838; and as a good many miners died of cholera at that period, he rather thinks Old Buck was among the victims.

† Maj. Jean Anderson, a native of Vermont, became a cadet in 1800, a second lieutenant in 1807; first lieutenant in 1812; captain and topographical engineer, with the rank of major, in 1813; brevet lieutenant colonel in 1823, and died at Detroit, Sept. 14, 1834.

Lieut. Clark Burdine, a native of Georgia, became a cadet in 1817; acting assistant professor of mathematics at West Point in 1820-21; second lieutenant of artillery in 1821, and resigned in 1825.

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of Fever river, the water was eight feet deep in the bottom at Galena. What has occurred once may occur again.

There was a great deal of sickness in the settlement this year; various complaints, bilious fever, typhoid fever, and fever and ague. Gen. Simrall, of Kentucky, and Mr. Tuttle, from Green Bay, both died of typhoid fever.

An occurrence took place this season, originating in a drunken frolic, that placed us in a rather dangerous situation with the Indians. Three men of my company one Sunday went to Col. Johnson's establishment, and got drunk, and in the night went into an Indian lodge on their way home, and, for their improper conduct, the Indian took his gun to drive them away. The men snatched the gun from him, and broke it over his head and shoulders, and then beat his aged father shamefully. Their cries brought a number of Indians sufficient to drive them away. The men came home between eleven and twelve o'clock at night, swearing vengeance against the Indians; clamoring for arms and ammunition to exterminate the Indians, and swore that they would have them. I had provided a full supply of both arms and ammunition. The guns were placed on a rack over my bed, all well charged, and my gun always standing at the head of my bed, and a pair of pistols under my pillow. I was sick at the time. As they came into the house, I presented my gun at the leader of them, and made them get into their beds. They were soon asleep. I then called one of my interpreters (having employed two as laborers, one a half-breed Indian, and the other a white man named Curtiss), and gave him directions to prepare a boat and provisions, and to take the three men, who had caused the disturbance, down to an island in the Mississippi, and conceal them until I had settled the difficulty with the Indians. About one hour before daylight the report was made that the Indians were all quiet in their lodges. I started the men with the half-breed interpreter, who worked the canoe past the Indians without being discovered.

Before the sun was up, I sent the other interpreter out to re-

connoitre; who returned and reported, that the house was surrounded, and that the Indians were determined to have revenge by killing the white transgressors. I immediately sent Curtiss, the interpreter, to Cattue, the Indian chief, to request him to come and see me, as I was sick and not able to go out; he came very promptly, and I informed him that the men who had done the mischief were gone away, and would not return, unless I could amicably arrange the matter with the injured persons. I also spoke of the house being surrounded by his people to revenge the injury. I proposed to hold a talk with the injured parties, and to pay them some equivalent for the damages done. He appeared well pleased with the proposition that I made; and said that he would use his influence in getting the difficulty settled, and would return before the sun went down. He went around in the brush where the Indians were concealed, and induced them to leave. My men went to their work and were not disturbed.

It became necessary to send our only team out north of the Point, four or five miles; and as the driver usually employed was one of the men engaged in the row, and he being absent, another man was selected to take his place; who went out, got his load, and when returning, about three miles from home, he heard the Indians whoop, and in looking in the direction of the noise, saw a number, as he supposed about fifty, approaching him at a full run. The driver took to his heels, left his team, and ran home. A more frightened person I never saw. Curtiss, the interpreter, at once said that some of the young Indians had done it in sport, and to see how fast he could run, and proposed to go with him after the team, but the man could not be induced to attempt it. Curtiss went alone; he met the Indians, six or seven in number. He asked them why they had driven the driver from the team. They answered that they wanted to see him run, and as soon as the driver left the team, they stopped running. They said that the man ran like a turkey. He was so much alarmed that he did not stop to see whether they were still following him or not.

When the sun was about one hour high in the evening, the Indians, to the number of about one hundred and fifty, came to my house headed by their chief, Cattue. I had prepared flour, pork, tobacco, and a new gun, and some powder and lead. When all things were ready, I inquired of the men the extent of their injuries. They stated their grievances in a simple manner, and acknowledged that whisky had done it. I showed them what I was willing to give them to settle the matter. After a few minutes' consideration, they proposed that I should add a keg of whisky to what I had offered. That I peremptorily refused. Whisky had caused the difficulty, and whisky should not add to the mischief already done. When I stopped speaking, Cattue presented the pipe of peace to the elder injured Indian, who lit it, took a whiff, and then presented it to me; and I having smoked, presented it to Cattue, and he to the young Indian, and from him it passed around to all present, each making one draw of the smoke. The next proceeding was, each one offered his hand to me for a friendly shake. This being over, Cattue stated that the hatchet was buried, and cautioned all present against digging it up. He then proposed to me to give them a keg of whisky to take over on the west side of the Mississippi river to drink my health, and he pledged himself that none of it should be used until they got over the river. As he had never told me an untruth, I told him that he should have it the next day. He also promised me that my men might come back in perfect safety. Accordingly, the following morning I sent for the concealed men; they soon returned, and the Indians never afterwards referred to the matter.

I might as well here give a description of the mode of smelting lead up to the year 1830 or 1831. The smelting was done in log and ash furnaces. The log furnace was built upon a bank or side hill so as to have a descent of forty-five degrees. They were built on two or four eyes. In the first place there was a strong wall built parallel with the bank, connected with walls at right angles, four feet apart. After the walls were up,

there was a hearth laid, made of one flag-stone having the proper inclination so that the lead would flow down into the basin in front of the furnace. The hearth being made, there were side walls placed upon the hearth, nine inches high, and from nine to twelve inches wide. As burners for the logs, stoke-holes were left in the front wall, ten inches wide by twenty inches high. Logs were cut of a proper length, say three feet ten inches long, and from fourteen inches to two feet in diameter. The large logs were first rolled in upon the side walls, which raised them from the hearth to leave room for air and wood. After the logs were properly placed, the barking was set; that is, wood set upon the end around against the walls. That being set, it was ready for the mineral. Each eye would receive from three to four thousand pounds. The furnace being charged, a slow fire was kindled under the logs, and continued to burn until it arrived at a dull red heat. The fire was then drawn from below to give time for the sulphur to pass off. The sulphur, logs, and barking would keep up a moderate combustion, which was left about six hours. It was then ready to have a fire kindled again in the eye under the logs. A brisk fire being kept up, the lead would flow down into the basin, which was kept hot by a fire upon it until the lead was cast into pigs.

The whole operation of charging and smelting occupied about twenty-four hours. The next process, when there was a sufficient quantity of ashes accumulated, was to wash them clean from extraneous matter, that they could be fused by a higher degree of heat in a furnace called an ash furnace. The ashes when clean were composed of small pieces of mineral, and the gray oxide of lead. The ash furnace was likewise built upon the side of a hill, but entirely different in construction from the log furnace. There were walls raised about three feet high, and eighteen inches apart, and five feet long for the ash pit. The original mode of making the grate was by laying rocks transversely. The fire-place was constructed so that the blaze was thrown upon the basin. The basin was constructed

in an oval shape, and so that it could be tapped on both sides of it, one side for the slag and the other for the lead and zane. Zane was a term made use of to designate lead that was not deprived of its mineralizer, sulphur, which had to be passed again through the log furnace; it was then a fine lead. From the basin there was a flue, somewhat funnel shaped, at an inclination of forty-five degrees, with a flat hearth, and at the top was a place to put the ashes upon to be smelted, which was pushed into the flue as it melted off the bottom and ran down into the basin. The ash furnace was kept going day and night until the bottoms of the flue and basin were cut out by the action of the sulphurate of lead combined with heat. When I came to the mines it was considered a good ash furnace that would run fifty thousand pounds of lead; but they were subsequently so much improved, that a hundred and sixty thousand pounds were made by one furnace before it went into disuse.

There was a great waste of lead made by both the log and ash furnaces. They were said to have been introduced by the Spaniards. Seeing the log furnace in use in 1822, I concluded not to make use of it, and accordingly I brought a man with me to make brick; and I found some clay at Rock Island that I supposed would make a good article. I took some with me to Cincinnati and tested it, and found it to be as good as I wanted. I sent and got a boat load. I had 60,000 brick put in the kiln. All was very well done so far, but I soon found that the man was a good moulder, and set them in the kiln well; but when he came to burn them, he knew nothing about that part of the process, and spoiled the most of them. I selected the best of them, and proceeded to build a furnace on the English plan of a cupola. My fire brick were good, but I had not enough of the common brick to make it strong enough to resist the pressure of the heat. I learned that I must creep before I could walk. I had always before done business where I could obtain anything I wanted by paying for it. But here I had to make everything with my own means. I accordingly went to work and built a log furnace.

During the latter part of this summer, a party of about twenty Winnebago Indians came in to trade their furs and peltries. They arrived in the afternoon and deposited their packs with Amos Farrar, their trader. Amongst the company was an Indian that had acquired the name of John, who could speak English tolerably well. He had got whisky enough to make him very talkative. He came to my house and told me that he was a brave man, that he had killed an Indian of his own tribe two years before; that Col. Morgan had kept him at the garrison for one year, and that he had been out one year. He added that the friends of the deceased were cowards, and that although he had been one year with them, they had failed to take vengeance upon him, according to the Indian custom. I enquired of him if any of the friends of the deceased were in the company. He answered that there were four or five, but they were cowards and dare not attack him. I urged him to stay all night, that it was dark and that they would kill him. I kept him until ten o'clock when he went out, and was stabbed in the heart within an hour after leaving, as was judged by Mr. Farrar the next morning; who related that at eleven o'clock on the night previous, there was a great commotion among the Indians. Those who committed the act were in so much of a hurry that they left the knife sticking in their victim, and immediately disappeared. The rest of the Indians started away in the morning as soon as they could find their horses. By the time the sun was up the Indians were all gone, except the mother of the murdered one. Col. Johnson and myself had a coffin made, and had him buried. The mother stayed for eleven days, and built a fire at the head of the grave about half an hour before the sun went down, and mourned most bitterly till it was set. She then left and did not return.

The Winnebago Indians were so much afraid that they would be apprehended by the whites, and punished for the murder, that they felt it unsafe to come and trade, and staid away for a long time, until at length Farrar, their trader,

sent for them, and then two or three only at first came in; they being assured that the whites would let them settle the matter of John's murder in their own way, in a short time after their return to their people, a very large trading party came in. Whenever the Winnebagoes came in to trade, the Sacs and Foxes would leave and cross over the Mississippi, and remain until the Winnebagoes were all gone. I charged them with being afraid of the Winnebagoes and running away. It was to an Indian Chief, named Black Tobacco,\* that I made the charge of cowardice. He said, neither he nor his tribe were cowards, and if I did not believe him, to go and ask Governor Clark, at St. Louis, who had made him a chief for his bravery, and for his friendship to the Americans in the War of 1812, and that he had always been the friend of the white man from the time he was old enough to judge of their numbers; and, in their Indian councils, he had always, even at the risk of his life, opposed those that were for war against the United States. He said that Black Hawk was a bad Indian, and went yearly to get presents from the English at Drummond's Island. That the reason they went away from the Winnebagoes was, that they were friends, and that it was better to keep so. That some of his young men were hot-headed, and if the Winnebagoes got some whisky, when they came to trade, quarrels might arise which would not be as easy to stop, as to avoid them by keeping out of their way.

He then said that I had charged him with being a coward, and to prove that he was not, he proposed that he would himself stay and go amongst them every day while they remained, to do their trading the next time the Winnebagoes came in for that purpose. Accordingly when they made their next visit, he came and told me that he had sent all his people away as usual and he was going to stay and see how they did their trading. The traders had urged him to go; he told them that he wanted to see how they traded with his friends the Winneba-

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\* Mock-to-back-sa-gum, or Black Tobacco, signed the Prairie du Chien treaty of 1826. L. C. D.

goes. He did not tell the traders why he remained, nor did he wish the Winnebagoes to know until after they had left. He would come to me two or three times a day to convince me that he was not afraid of them. He was not only a brave Indian, but full of humor, and was always pleased when he could get the laugh upon a white man or an Indian.

The Indians generally were very fond of whisky, and as fruitful of their resources to procure it as the white man. One of their modes was to promise to show, for a given number of bottles of whisky, where mineral could be found. By this plan they procured a great deal. Another mode was to offer lewd women to the whites for whisky, which too many of the young men accepted to their sorrow.

Toward the close of the year, Col. Johnson finding that he could not make business profitable, concluded to close up his business and quit the country and advised me to do so too. I had spent the greater part of the season in preparing for business, and being fully satisfied of the fertility of the soil, and its vast mineral resources, I concluded to go on with what I had hardly made a beginning. Col. Johnson smelted this year, about sixty thousand pounds of lead; I smelted about one hundred and seventy thousand pounds; Thos. H. January about forty-five thousand; Bates and Barrel about fifty thousand; and David G. Bates and A. P. Vanmetre, on an island in the Mississippi, opposite Dubuque, of mineral and ashes purchased of the Indians one hundred thousand pounds—making the total product of lead shipped for the year 1823, four hundred and twenty-five thousand pounds.

During the winter of 1823-24, I think, early in the month of January, the first marriage contract was consummated by white persons, both in my employment. There being no one authorized by law to perform the marriage ceremony, I recommended a marriage contract to be drawn up, signed by the contracting parties, binding them to each other, also binding them to have the ceremony performed as soon as they should arrive where it could be legally done. The name of the

young man was William Hynes and that of the young woman Maria Rutherford. Some time during the winter, A. P. Vanmetre received a commission as justice of the peace, from Governor Cass. The young couple went to him, and had him perform the marriage ceremony. The following spring they went down to Clarksville, Missouri, and there had the ceremony performed by a clergyman as they informed me afterwards.

In the month of January, 1824, David G. Bates and myself set off together, he for Missouri, and I for Cincinnati, Ohio, for my family and another year's supply of goods and provisions. We started with jumpers on the ice and after proceeding about twenty-five miles, we found it unsafe to continue on the river, and went upon the land; abandoning our jumpers, we saddled our horses, and traveled by land to Rock Island. We got into the old Indian village at nine o'clock at night. The wind blowing fresh we could not be heard at the fort. We built a fire in one of the Indian houses, at the expense of another house. The light of the fire was seen at the fort, but they supposed some Indians had come in. Early in the morning a boat was sent for us in time to give us a good warm breakfast.

The river being opened, we left our horses, and purchased a canoe, in which we proceeded down the river to White's, in Missouri, twenty-five miles below Fort Edwards. The weather changing very cold in the afternoon, by the next morning the river was frozen hard enough for a horse to travel upon it. I purchased a horse and started for St. Louis. For three days the weather was so cold that I could not ride longer than twenty or thirty minutes before I had to get off and run, in order to keep from freezing. On arriving at St. Charles, on the Missouri river, I was again detained by the running ice in the stream. I spent my time very pleasantly. The Legislature being in session, there was assembled all the variety of personages usually found in a body of that kind in a frontier State, some men of the most brilliant talent, grading thence all the

way down to zero. Gov. McNair was a fine specimen of a western hunter.

After several days detention I was ferried over the Missouri, and arrived at St. Louis, where I found the Mississippi running so full of ice that neither the mails nor travelers could get over, and many persons arriving daily upon each side of the river. The ice began to slacken some. Wiggin, the owner of the horse-boat, agreed to try crossing if eight hundred dollars should be made up for him for the round trip, by persons on both sides of the river. It was very soon raised, and we got over, but not without much peril to the boat and passengers. Before we landed on the Illinois side there was but one bucket left on the paddle-wheel, and that was stopped by a cake of ice. When within two rods of the shore, the boat was drifted rapidly down stream upon a snag or large tree, with one end imbedded in the mud, and the other end projecting above the water and floating ice; twenty feet more and all would have been lost. The ice was cleared from the wheel, and the eight horses put to their utmost speed, and the boat went ahead and was landed safely, with about two hundred passengers and about forty horses. It is astonishing how many people there are in times of danger that give up in despair. There were many that could do nothing but mourn their untimely fate as they imagined and made offers of money, from one dollar to five hundred, to be put on the shore safely. But the instant the boat landed, those that were most frightened were the first to leave her, without stopping to make the least acknowledgment of thanks and gratitude to those who had exerted themselves to extricate the boat from the floating ice. Mr. Wiggin, the owner of the boat, was on board, and made use of every exertion that was possible for a man to make to save the boat, and when we landed, he generously called upon all of us who had assisted him in working the boat, offering to refund the money we had paid him; but all were satisfied with him, and with themselves, that they had got over safely, and that we had only done our duty, and further that we did not wish him to pay us for it.

I proceeded on to Cincinnati, where I arrived in good time, in the latter part of February. I got my business done, and was ready to leave again for the mines by the eighth of April. I left Cincinnati on board a flat-boat, and ran over the Falls at Louisville to Shipping Port, and there put my goods and people on board a steamboat for St. Louis. Our company was composed of myself and family, James Smith and family, and the family of James Harris, who went with me the year before, and in whose hands I placed my business during my absence from the mines. At St. Louis my keel-boat was in waiting had been sour flour and condemned army pork, which prothe mines with a load of lead. As soon as my boat was loaded, we started for the mines, where we arrived in as good time as was usual with keel-boats, traveling with the faces of the men working the boat, towards the port we had left. On arriving, I found the people that had remained, with the exception of A. Farrar,\* the Indian trader, and my company, had suffered severely for the want of good provisions. Their living had been sour flour and condemned army pork, which produced a number of cases of scurvy, and some of them quite severe; two of them had lost the use of their legs. I directed their limbs to be buried in the ground six hours a day for three days, with the use of vegetable aid externally. They recovered immediately.

The business of mining and smelting went on about as last season, until the fall of the year, when John Bonner went out where Hazel Green now is, in search of old Indian diggings. He found a place that suited him, and commenced sinking a shaft by himself. At four and a half feet he found block mineral extending over all the bottom of his hole. He went to work and cut out steps on the side of the hole, to be ready for the next day's operation. Accordingly the next morning he commenced operations. The result of his day's work was seventeen thousand pounds of mineral upon the bank at night. This, I do not think, has been equaled since by

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\* Amos Farrar, says Mr. Olmsted, settled permanently at Galena, died there, and has descendants still residing at that place. L. C. D.

one man. He went on working until he raised about one hundred thousand pounds, and then abandoned it, thinking that he had got all the mineral that was there, the opening being closed up. The following year I laid a Government survey to include the same diggings, and built the first cabin or log house that was built north of the old Cave Diggings. From Bonner's discovery I raised over one hundred and fifty thousand pounds. My men made several other discoveries of mineral, all of which were worked down to the water level.

Mr. Jefferson Crawford, after I had abandoned the survey, settled upon it, and has realized a handsome fortune from it. John Edwards has also realized considerable wealth from a part of the old survey, and from the land adjoining it on the west. Mr. Crawford has, with considerable zeal, expended a large amount in erecting pumps to free the mines from water. First he put on a pump which he worked with oxen upon an inclined plane. Since he has put up a water wheel which is worked by the water, raised by the oxen running on a wheel thirty feet in diameter. Last year, 1856, he put up a water wheel fifty feet in diameter, on which he takes water raised by the other pumps, with the addition of that obtained from a branch of water, thus obtaining an immense power for working his pumps, which are worked by long wooden rods. He deserves a great deal of mineral, and I am of the opinion that he will be well paid for his enterprise in pushing it forward; for I think the best deposits of mineral have not yet been reached.

The same year, 1824, that the Hazel Green mines were discovered, Duke L. Smith, George Ferguson, and five or six others, started out prospecting, and found the New Diggings, which have produced immense quantities of mineral. In the Spring of 1826, I went to New Diggings for the first time. Ferguson's Diggings were then very good; he had gone down to the water. John and Cuyler Armstrong had struck a sheet of mineral immediately south, and higher up the hill than Ferguson's, which they wanted to sell to me for three

hundred dollars. I went to Ferguson to learn whether or not he would join me in running a level from the main branch, which I estimated would lower the water one hundred and fifty feet. The level would necessarily run through his lot; but he would not do anything, nor would he sell his lot. I then got the Armstrongs to give me the refusal for two weeks, as I was expecting a man to return from the State of Delaware, that had gone home on a visit. He did not return in time, and I was obliged to abandon the project, not being able to get a man to take charge of it that was temperate. There have been many millions of pounds of mineral taken from that lot.

The Ferguson lot has proved to be immensely rich, and neither of them are yet worked out; and I am of the opinion that the richest of the mines are yet to be worked by machinery, and by companies judiciously managed. Steam at present is too expensive, on account of the scarcity of fuel, and will continue to be so until coal can be obtained at a reasonable rate. With the competition of railroads in this quarter, together with the aid of the river navigation, and when the demand is sufficient to open a regular trade, we may expect an abundance of coal, and at a reasonable rate too, from the coal fields of Illinois. I look forward to the time when the mines will be worked upon a systematic principle, and that the supply of lead will be equal to the increasing demands. There is another mineral staple in our mining region which is inexhaustible, namely zinc ore. Dry bone and black jack, which at present are thrown away as worthless by the miners, will in times not far distant, be gathered and washed from impurity, and worked into plate zinc and zinc white. The lack of fuel is the only obstacle to its present accomplishment.

There was but a slight increase of emigration during the year 1824 to the mines, and not much of an increase in 1825.

In the fall of 1824, I wrote to Col. Bomford, recommending a change in the system of working the mines, by working men, and the Government to give license to smelters who

would be liable for the ten per cent of the lead required by the Government. Accordingly, at the close of April, 1825, Lieut. Martin Thomas\* arrived as Superintendent of the mines claimed by the U. S. Government in Missouri, and also of the Upper Mississippi lead mines, by which they were then known. Mr. Thomas said that he was referred to me for information as to the working of the mines, and that [here, unfortunately, the manuscript abruptly terminates].

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\* Lieut. Thomas, a native of Pennsylvania, entered the army as an ensign in 1814, and was wounded in the affair at Lyon's Creek, Upper Canada, Oct. 19th, in that year; and was dismissed from the service in 1831, never having attained a higher rank than first lieutenant.

In the note on p. 271, we erred in saying that Dr. Meeker studied and commenced the practice of medicine in New Jersey; he did not study medicine till he had settled in Wisconsin, about 1830. He was a native of Newark, N. J. At one period, he resided several years in Mineral Point.

L. C. D.

L. C. D.