

LIGHTS AND SHADES  
OF  
MISSIONARY LIFE:  
CONTAINING  
TRAVELS, SKETCHES, INCIDENTS,  
AND  
MISSIONARY EFFORTS,  
DURING  
NINE YEARS SPENT IN THE REGION OF LAKE SUPERIOR.

BY

REV. JOHN H. PITEZEL,

ALIAS, WA-ZAH-WAH-WA-DOONG, OR "THE YELLOW BEARD."

"Every matter in the universe is linked in such wise unto others,  
That a deep, full treatise upon one thing might reach to the history of  
all things."  
TUPPER.



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## CHAPTER X.

SCENERY ABOUT EAGLE RIVER AND THE CLIFF  
MINE—SKETCH OF THE MINE.

WHAT is embraced in this chapter, with slight variations, was penned on the spot in the summer of 1848, and published in the "Christian Visitor."

Eagle river is an inconsiderable stream, except at its mouth, emptying into Lake Superior about twenty-five miles west of Copper Harbor. It derives its name from the Indian *Me-go-zeh*—an eagle—and *se-beh*—a river. The small town at the mouth bears the same name. The site is an immense sand-bank, and has no attractiveness. The special want is a good harbor, as it forms the depot for the Cliff Mine and several others, is a central rallying-point for all parts of the Lake, and necessarily a place of much business. A good pier, built at great expense, supplies, in a measure, the want of harbor. Here is a regular preaching-place; but no society has been formed, and no immediate prospect of one. Mr. Atwood kindly opened his dining-hall for religious worship, and, with his family, has shown us many marks of favor. A mile and a half up stream is what is called Eagle River Diggings. Here are the Lake Superior Company's works—now abandoned—our place of residence.

From the Lake, going nearly south to the Cliff, we ascend gradually till we reach the top of the hill, five or six hundred feet above the level of the Lake, two and a half miles inland. A road has been constructed at much expense—still very rough and uncomfortable. The wet places are bridged with round logs, technically termed *corduroy*. The hill-side is stony and uneven. From the top we have a fine view of Lake Superior to the north. When the atmosphere is clear, Isle Royal can be seen, at a distance of fifty miles. The land is heavily timbered with birch, maple, hemlock, etc., and well watered with numerous springs. The soil is alluvial, and adapted to farming purposes. Many people get their living by farming in as rigid a climate and on poorer soil. Still it is granted that farming can never become a chief source of industry or revenue in the Lake Superior region.

Passing through a defile, we gradually descend, by means of a road which winds around the side of the bluff, to the south. The natural scenery is here highly picturesque. As you descend, to your left is a deep chasm, which forms the valley of Eagle river. Here you look down on the tops of tall trees, and far beyond the land rises to view in mountainous ranges. Here a cold spring gurgles from the Cliff, and crosses the road; there a delightful little stream tumbles down the precipice, and makes music on the ear. To your right the Cliff now rises above you in majesty and grandeur. At the works the top of the Cliff is two hundred and twenty feet above the west branch

for surface workmen. Captain Jennings, a master at mining, was Agent, but succeeded the next summer by Mr. L. Hanna, a gentleman well qualified for so important a charge. Captain J. still managed the principal mining operations, while Mr. H. took a general oversight of the whole business.

The workmen are generally robust and hardy, but rough in their appearance and manners; yet, under the rough exterior are some noble minds and generous hearts. To get a good view of them as they issue from the mine, you should be at a prominent place at the ringing of the dinner-bell. You may see them coming from the mine, covered with mud and dirt, and often drenched from head to foot. Sometimes they leave their light behind them, but often you will see a small tin lamp fastened to the hat, or a piece of candle in a lump of wet clay attached to the hat—all burning. The workmen now, generally in single file, make a straight wake for their boarding-house, crossing each other's path in nearly all directions. If one did not know better he would suppose them to be inhabitants of a world where the sun's rays never reached; and they are, eight hours out of twenty-four.

THE CLIFF MINE AS SEEN IN THE SUMMER OF 1848.

If the kind reader is disposed to take a peep into some of the wonders that are disclosed beneath the surface of the earth, he may please accompany me through the Cliff Mine. But before doing so we will go to the office and form the acquaintance of the

Agent, Mr. Hanna, Captain Jennings, and others. Thence you will be desirous to visit the stamps, where you will see a large bank of mineral, stamped through the winter, yielding from ten to twenty per cent. of copper. Several persons are here employed in washing copper. The stamps have lately been somewhat improved. They now stamp about two hundred and thirty tons per month. In one month eighty-six barrels of this copper were washed and barreled ready for shipping.

Let us now go partly up the bluff, into a large mineral shed, where the stamp-work is first burned in a huge fire, then broken to pieces, and conveyed to the stamps. Here are also several men engaged in cutting huge masses of the pure copper into blocks sufficiently small to admit of being transported. This part is attended with great labor and expense. A wagon is driven along side this shed, where these masses are raised by a crane, and thus swung into the wagon, and drawn to the Lake. From eighty to one hundred tons of copper, including that which is barreled, are taken to the Lake monthly.

We will now go up a flight of stairs to another large level, formed of broken stone taken out of the mine. Here is a machine, worked by two horses, to pump out the mine. Adjoining this is what is called a *whim*—the Cornish say *wim*. This is a large perpendicular cylinder, turned by horse power, as tanners grind bark. A large rope is wound around this cylinder, with a large bucket at each end, which

connects with shaft No. 1, to raise the rock and mineral. To your right is a blacksmith-shop, used mostly for sharpening drills. To the north is another machine connected with shaft No. 1, called a *sheer*; it should be *sheers*. (*Vide Webster's Dictionary*.) This machine gives a power sufficient to raise ten tons weight. With this the large masses of copper are taken out of the mine. A little to the left, overhead, is another whim, which connects with shaft No. 2, twenty-eight yards north of No. 1. You may now turn to the right, and follow a rail-track through another mineral shed, where all the broken rock of a poorer quality is taken, and the precious separated from the vile. As we turn about to see whence all this treasure is taken, you will naturally cast your eyes up the bluff, where you may see a large opening which once contained a great mass of copper. You will notice also a slide of greenstone, dipping to the north at an angle of perhaps 45°. This occasions a *fault* in the vein, at which the mineral ceases.

Before going into the mine we must return to the office to get a change of apparel. If you are at all careful about your velvet or broadcloth, you must doff it before you go under ground. You want a complete miner's suit from head to foot. Then you must have the safe conduct of Captain Jennings or Boss Jones, who will see that each one is furnished with a candle, and a lump of wet clay to put around it, which you must keep moist. Thus equipped we

will now go into drift No. 1, which is on a level with most of the works we have been viewing; only be careful, in passing by No. 2, not to step off the plank into the depths below. Here you may go in several hundred feet, where not much is to be seen, except the empty space where the mineral has been removed.

We will now return to shaft No. 1, and go below, sixty feet, into the *Adit*. This is a drift extending from the river nine hundred feet north, and is used for draining the mine. Let it now be remembered that we must descend by ladders, several of which are nearly perpendicular, and one quite so. You must now pull off your gloves—if you have any on—and do not be afraid of soiling your hands as you hold on to the muddy rounds of the ladder. As you follow your guide, you must learn this lesson, and not forget it for a moment: “*Hobl fast with your hands—never mind your feet.*” As we go down we occasionally come on to a small platform, and, by simply turning round, we take hold of another ladder. But you must not let go one ladder till you see where you are; a single misstep may precipitate you down the main shaft from one hundred to two hundred feet. We now find ourselves safely in the *Adit*. This is called the ten fathom level, or drift No. 2. The course of the vein is nearly north and south, dipping slightly to the east.

From shaft No. 1 we will now go north, passing over a pit fifteen or twenty feet deep, where the



mineral has been removed. Soon we shall reach shaft No. 2, which we will cross on planks, on one side, holding on to an iron bar fastened to the rock on each side. At the north extremity of this drift is a mass of copper which has been thrown down by a sand-blast, which will probably weigh from thirty to fifty tons. This must be cut to pieces with chisels before it can be taken out. Overhead you will see, in many places, what is called a *stull*, or *pent-house*. This consists of heavy timbers placed across the mine so as to form a scaffold. In this way the *lode* is all approached, and removed from one drift to another, ten fathoms, or sixty feet. This *stulling* is often torn down by heavy blasts, and is one source of the danger of miners. In going south we will see nothing very different from what is to be seen north, except that there the lode is not so rich as here.

Finding our way to shaft No. 1, we will again go down sixty feet to drift No. 3. The appearance here is very similar to that in drift No. 2. Every-where you have evidences of an inconceivably rich mine. In places you will find the lode entirely removed; then you will pass huge masses of mineral not yet disturbed. North of shaft No. 2 we pass a chain-ladder, which, if you are fond of adventure, you may ascend five or six fathoms into a large opening in the mine. A little farther on we cross over a *winze*, which is a communication from one drift to another to air the mine. This is soon to be used for a third shaft. The whole length of this drift, from north to

south, is about one hundred and ten yards. If your curiosity is not yet satisfied, we may go down sixty feet further, into drift No. 4. In the extreme end north, after crawling on your hands and knees for some distance, over what miners call *dead's*—that is, broken rock—you find yourself in a large opening, where is the appearance of a large mass of copper. The mine in this region is very rich. In this drift, among the many things too tedious to name, we notice what is called the *sump-shaft*. This is only a continuation of shaft No. 1, eighteen feet below the lower level. This, as the others, is to be sunk sixty feet before drifting again. The Captain is much elated with the prospect here, and promises for the next sixty feet to show the richest part of the mine. In what is called the *country*—that is, by the side of the vein—a mass of copper has been taken out weighing fifteen hundred pounds. The material is here raised to the lower drift by a windlass. A short time since I was visiting the mine, and, being desirous to see the bottom, my friend J. let me down in a bucket. But the miners having stopped work, water had collected two or three feet deep in the bottom. The first warning I had of this was the impression of wet feet as the tub was filling with water. This Boss Jones called *sumpen*.

The most agreeable time to go into the mine is Monday morning when the work commences, or Saturday afternoon after the miners quit work. The mine is then free from smoke. But if you choose

to go when all are at work, you will see more. Here you may see a person holding a huge drill, and another with a large hammer, making every stroke tell on the hard rock. There you may see several men, with levers, at work at a mass which has been torn loose by a *sand-blast*. Here you may see one wheeling the rock, and throwing it down through a *mill*, where it is taken by others, put into buckets, and raised to the surface. In different parts of the mine you will hear the blast, the report of which rolls like thunder through the subterranean vaults. A dismal gloom seems to pervade the whole region, and at every turn you will be impressed with the fact that few men are so exposed to danger as miners. But what above every thing else should impress every one is the evidence of the wisdom, goodness, and power of God, above, beneath, and all around.

Doubtless you are as ready now to leave the mine as you were to enter it. We have now one hundred and eighty feet of ladder to climb; but, by perseverance, stopping a moment occasionally to take breath, we shall soon be at the top. Now we emerge from a world of darkness into a world of light. We may now return to the office, and assume our own attire, by which time it would be no very strange thing if a good meal would relish well. If the reader thinks this description of the Cliff Mine too minute, it may be a source of relief that this must suffice for all the other mines of Lake Superior—to explore one thoroughly is to see the leading features of all the rest.