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THE GOLD REGION.

Observations on the gold region and gold mines of North-Carolina.

The hilly part of North-Carolina, which runs through the State between the mountains and the alluvial land on the sea coast in nearly a northeast direction, comprehends a large and interesting portion of country. It has long received much celebrity for its mild and healthful climate and the fertility of its soil, which is perhaps adapted to a greater variety of agricultural staples, than any portion of the Union. But, besides these inestimable advantages, which it is admitted to possess, recent discoveries have already demonstrated, that it may vie, perhaps with any portion of the known world, in the richness and extent of its mines also.

Ores of iron, copper, silver and mercury, which have the appearance of being very rich and abundant, are frequently met with, almost every where, but at present, claim little attention on account of the rich and extensive mines of gold, which have become almost innumerable, and appear not likely to be exhausted by the skill and industry of man. The sands of nearly all the rivers and water courses are auriferous; and the poorest mines, which are at present wrought, are said by competent judges to rival the gold mines in South America both in the richness and abundance of ore, while the richest of them certainly exceed those which have been described in any other part of the world: and should a judgment be formed from the progress of discovery for several years past and which is almost daily advancing, it must be conceded, that the richest and most abundant mines of this precious metal within our reach, are yet unknown.

From the geological features of this portion of country, it may be considered of secondary, and perhaps of volcanic formation. The rocks are principally, silicious slate, greenstone, quartz, feldspar, hornblend, petrosilex, basalt and wacke, in different varieties and modifications; but nearly all of them exhibit a tarnish and other evidences of decay. The slate is however the most abundant, and is found of almost every colour, and from the softness of steatite, or soapstone, to that of the most hard and silicious kind. The soils have a red, a white, or a gray appearance, and are evidently formed by decomposition; the former principally of iron pyrites, the second of the softer species of slate, and the latter of sulphurated iron and quartz, and often constitutes a dark ferruginous sand, universally admitted as the gaugue of the precious metals and precious stones.

The whole of this formation seems both in analysis and appearance to resemble an ancient lava, the upper part of which has become measurably decomposed by the lapse of time. The rocks which have been enumerated, have been classed among the ingredients of compact lava, and the appearances they exhibit of having been subjected to intense heat, and the existence of other substances which are found among them, such as plumbago, the specular and micacious oxides of iron and pumice stone, are too strong evidences of volcanic action to be disputed. Abundance of iron and copper pyrites are found both in the soil and in the rocks; and native sulphur is sometimes found sublimated in the cavities of the rocks. Mineral springs are very abundant, and in dry seasons the waters almost every where exhibit traces of iron and copper.

That the upper part of this crust or formation has been the most subjected to decomposition, is proved by the digging of wells, in which the earth is generally found to become more firm until it assumes the character of a decomposed rock, which increases in hardness until it becomes firm and compact. Sometimes this rock is found within a few feet of the surface, and can be penetrated to considerable depth without much difficulty, while it is sufficiently firm not to need a curb or wall to prevent its caving in. Similar results have been experienced in digging for gold; and some mines have been abandoned at no very considerable depth on account of the difficulty of penetrating the rock, through which the vein of ore has burst. I have seen specimens of this rock at places, several hundred miles apart, and found at a considerable depth; and they bear a great similarity and appearance to be a species of greenstone slate of a bluish color, considerably mixed with quartz, which was sometimes in chrystals. The water of nearly all the wells, as well as that which rises in the gold mines, is more or less impregnated with minerals, and is generally of a chalybeate nature. The lower part of this crust may perhaps be considered as composed of a firm and solid rock; and from the characteristics of this whole formation it may be suspected to abound in veins and beds of different kinds of valuable minerals. But at a period much more recent than its original formation, and perhaps contemporaneous with the alluvial part of the State, from the waters, which evidently covered it at no very remote period, the whole of this country seems to have undergone a tremendous revolution, from the rage of subterraneous fires, which brought into existence its richest and most valuable minerals.

Appearances seem to justify the supposition, that an immense torrent of auriferous lava, at a great degree of heat, was projected from the bowels of the earth towards the western, or southwestern part of this region, and meeting resistance from the structure of rock, composing the lower part of its formation, passed along under it in an eastern or rather northeast direction, raising it up to a considerable degree, and sending up streams through the fissures and rents made in the rock by its heavings, with sufficient force to reach the surface, and sometimes throwing up considerable portions of the rock itself, in the form of hills, and gushing out in burning torrents at their base. The former of these streams may perhaps be considered as composing the vein mines, and the latter, what are called the deposite mines of gold, found at the foot of the hill and covered to some little depth, perhaps by the washing of the earth from the hills upon them.

The vein mines commonly appear in oblong slips, their longitudinal direction bearing to the east of north, and corresponding with the direction of the veins of rock throughout the country; and they commonly rise to the surface from the west, in an angle of about forty-five degrees, but frequently appear diverted from this, which seems to be their natural course, by some obstruction in their passage. Only a small [illegible] ed the surface; but when only one has done so, a considerable number of others may generally be found near it, at different depths, as if the fissures through which they burst were made at different periods of this great commotion, and the lava sent up with different degrees of force.

The contents of all the streams or veins appear to be of the same age; and, although at a distance from each other, they often exhibit some shades of difference, perhaps from chemical or accidental causes; they are nevertheless essentially of the same composition, and may be considered as a cellular or porus lava, the prominent ingredients of which are quartz, iron and sulphur, but are intermixed with almost every known mineral. They are always securely coated round with what is called talc or soapstone; but this substance seems to be principally composed of alumine and silex, and to bear some analogy to volcanic ashes. All of this lava appears to have cooled with considerable rapidity, and the top of the veins to have cooled first, and in such a manner as to have afforded a passage for exhalations from the lower parts, until their heat subsided. In following these veins in their descent, the top rock, or that part nearest the surface, is always the most hard and firm, and contains the most quartz, and is frequently intermixed with the white arseniate of iron and sulphurite of different appearances. It is so poor in gold that it is seldom if ever wrought.

Owing to the variety of minerals, and especially to the quantity of sulphur contained in this lava, it is constantly undergoing a decomposition. The black sulphurite of iron becomes converted into the red oxide, and even the quartz itself bears evident marks of corrosion and decay. This process is, however, favorable to the development of the gold which, from its purity, is exempt from any chemical action, and only becomes liberated from its gaugue.

At what place these streams or veins first make their appearance at the surface, and how far to the east, or rather to the northeast, they may be traced, is at present unknown, but it is certain that they abound from South Carolina to Virginia throughout the whole region, which has been described, and are perhaps of much greater extent. But, at the place where I suppose them to commence, the commotion of the earth which occasioned their existence, appear to have been most violent: and the streams consequently more frequent, and disgorged a greater portion of their contents upon the surface, which, in some places, by subsequent decomposition, has formed a rich and auriferous soil of considerable extent. The deposite mines, as they are called, and which appear to have been formed by the lava gushing out at the base of the hills, are in the vicinity of this place. These latter mines correspond precisely with the gold mines in the vallies among the Honkadoo hills, in the interior of Africa, described by Mungo Park. At this place, the lava likewise seems to have been longer in cooling, and probably from the commotions of the earth, to have undergone some degree of agitation, while in a placid state, favorable to the aggregation of the gold into larger particles. In some instances, and especially at the deposite mines, which may be considered as the longest in cooling, the quartz is almost wholly separated from the rest of the lava, and appears in compact and homogeneous masses rarely containing any gold or other substances. Passing from this place to the eastward, or rather northeastward, no deposite mines have yet been discovered, and the vein mines appear less numerous, and to have disgorged less of their contents upon the surface. The lava is likewise more porous, and its ingredients more intimately mixed together, and the gold is in finer particles and more universally disseminated among the whole mass, all of which seem to indicate that the commotions which produced them were less violent and of shorter continuance, and the lava more rapid in cooling.

In the neighborhood of these veins, and sometimes at a considerable distance from where any have been discovered, I have frequently observed volcanic slugs, and sometimes considerable portions of the lava which from their isolated state seemed to have been thrown through the air. I have never examined any of these, which I did not find auriferous, but most commonly they were slightly so, and the gold in very fine particles. It seems probable, that, during these irruptions, considerable quantities of fluid matter were sometimes thrown into the air, and that the gradual diminution of their projectile force might be favorable to the aggregation of the principal part of the gold they contained into masses of considerable size; and this may perhaps account for the most considerable lumps of gold being found at or near the surface and unconnected with any mine. But in all cases whatever, throughout the whole of this region, the gold is found in irregular and indeterminate forms, and appears as if it had been thrown into small crevices or among [illegible]

The similarity of the lava composing the gold ore in all the mines in this region, both in point of age and composition, affords a strong evidence that they were all brought into existence at one time and by one great commotion of nature. The deposite mines may doubtlessly be traced to immense beds underneath the adjacent hills, although it may be extremely probable that upon the cooling of these beds and the pressure of the hills, the connection between them and the deposite may be nearly or quite destroyed, and the upper surface of the beds be found much lower than any part of the deposite.

The vein mines seem to be derived from a large horizontal stratum, which lies underneath the rock composing the lower part of the vein of formation, which has been described. That this stratum is of great thickness and extent, and likewise very rich in this precious metal, is apparent from the great extent of country in which these veins abound, the quantity of matter they contain, and their increased richness the deeper they are followed. The thickness of the crust of formation, covering this stratum, may be supposed to differ in different places, and likewise to be more or less difficult to penetrate, but its average thickness may be supposed not much to exceed the height of the hills adjoining the deposite mines in the county of Burke.

That such an immense body of heated lava once existed, at no very great depth from the surface, is farther corroborated, by the appearances of the ledges and quarries of rock in many parts of this country. I have frequently found the veins and fissures of these to exhibit traces of heated vapours and exhalations having passed through them from underneath, and to be coated over, in the same manner and with the same substance, as the smaller masses of lava in the upper part of the vein mines. In some instances, I have found this coating to form a black porous riptus of several inches in thickness, partially decomposed and considerably auriferous, but the gold in very fine particles. Near the top of a considerable number of large hills or mountains, as they are sometimes called, which I have examined, I have never failed to find volcanic slugs, scoriæ and other evidences of their having once inherited all the phenomena of volcanos; and the age of these appearances uniformly bear a great correspondence with the age of the gold mines.

That this part of the world is sometimes agitated by commotions sufficient to produce all the terrible phenomena, which have been described, is abundantly proved by the earthquakes, within the memory of every one, and which seem to have been felt throughout the continents of North and South America. The accounts given of them on the western lands of the Mississippi, which was perhaps nearer their centre of action than any other place, from which correct information could be obtained, represent the terrible heavings of the earth to have equalled any thing which has ever been recorded. Their march extended from the St. Francis to the mouth of the Ohio, making a point of at least three hundred miles. During their awful commotion the undulations of the earth resembled waves, increasing as they advanced; and when they arrived at a certain fearful height, they would burst and vomit forth immense volumes of water, sand and pitcoal. The chasms thus made were always in a direction from southwest to northeast, and they frequently occurred within half a mile of each other and were of a size sufficient to swallow up a house;* but in the intervals of these commotions, and on the same night in which the fatal earthquake took place at Carracoas, there was a brilliant and cloudless evening, in which the people of this vicinity witnessed the western sky to be a continued glare of the most vivid flashes of lightning, which seemed to proceed from the ground below the horizon and were followed by peals of subterranean thunder. To account for the phenomena of this evening, many reasons might be given to induce a belief, that such an event as has been supposed once to have existed in this part of the country, did actually take place in the neighborhood of the Ozarke mountains, and that an immense column of lava was then pursuing its subterranean march, and continually throwing up streams to the surface, and vomiting forth into the air masses of liquid fire.

These brief observations are submitted to the public with diffidence, and more with a view of promoting enquiry, than as containing any thing satisfactory on the subjects they treat. The theory I have ventured to suggest seems to me at least probable. It is supported by all the facts which have come within my knowledge and observation; indeed it was exclusively suggested by them; and as yet I have found none to militate against it; but I confess my opportunities have been limited. Should it however prove to be correct, this part of the country must certainly offer the most splendid field, for individual and even rational enterprise, which has ever existed.

JOEL STRONG.

Guilford County, March 25, 1830.

*"Great part of the earth was covered with water and sand to a considerable height, and the changes made in its appearance are almost incredible."

BIOGRAPHICAL SKETCH OF WILLIAM IV. KING OF ENGLAND.

The throne of the United Kingdom is now occupied by William the IVth, late Prince William Henry, Duke of Clarence.—It is boldly asserted that his measures will be like those of his brother, yet there are certain stubborn facts remaining in the public memory, which have so seriously affected his character as a man, that it is impossible not to augur unfavorably of the monarch.

The title of Clarence is d[illegible]d from Clare in Sussex, and originated i[illegible] the time of Edward III. The present duke is the third son of George III., and was born in August, 1765. He was destined as the future commander of the Navy; (his brother of York had already monopolized the Army) and early in life he was commissioned a midshipman, and placed under the supervision of Admiral Digby

"as he sailed."

In this capacity he was present at the famous fight of Rodney in 1780. Two and twenty sail of Spanish ships were captured, and one of 64 guns was re-christened "Prince William Henry," in consequence of his being present at the capture. Subsequently he visited New York, and files of old newspapers published in that city bear testimony to the great satisfaction his visit afforded some of the belles of that day. Many anecdotes have already found their way to the public eye in relation to his manners, appearance and pursuits while in port.

In due season the midshipman became a lieutenant, and as royal roads to promotion are generally short cuts, he was soon transformed into a captain. We believe he commanded a frigate; but under what flag officer is not remembered.

In 1789 he was created Duke of Clarence and St. Andrews in Great Britain, and Earl of Munster in Ireland, and had sixty thousand dollars per annum settled upon him; pocket money for "the third calender, the son of a King," as the story book says.

He was frequently attendant at the House of Lords, and gained some reputation by his facility in public speaking, and from advocating the cause of West India Colonists. He was [illegible]e in favor of the Catholic claims, but found it convenient to change his opinion on the subject.

On the death of Lord Howe, he was appointed Admiral, and in 1814 hoisted his flag on board the Royal Charlotte yatch, and took Louis XVIII. to France.

In July, 1818, he married Her Serene Highness, Amelia-Adelaide-Louisa-Catharine, eldest daughter of George, late Duke of Saxe-Meiningen; by whom he had two daughters, who both died in infancy.

In 1827, upon a change of Ministry, the office of Lord High Admiral was revived, and the Duke of Clarence was appointed to fill it; contrary it is reported to the wishes of his brother, the King, who said, "As sure as you give William an office under his controul, he will make some terrible blunder." Sure enough, "William" did not belie the prophecy, he made a series of "professional visits" to the various ports, and as his expenditure was most profuse, he soon came athwart the Duke of Wellington's hawse, who having an opinion of this Royal Mummery, refused "to pay the bill." The new Lord High Admiral was obliged to back his topsail, nor did he stop till he backed out of the scrape and the office together—and it was once more abolished.

Like all the rest of the Royal family, the Duke of Clarence has indulged in divers more or less discreditable *liasons*. His principal, however, was the one with the celebrated actress Mrs. Jordan; his conduct to her, after years of intimacy, was pronounced cruel and unfeeling, and the account of Mrs. Jordan's sufferings at the abrupt separation and the manner of it, as published at the time, was in a high degree touching.—Of her daughters, one married [illegible] aid-de-camp to the King, and as late as 1[illegible] Sophia, Mary, Elizabeth, Augustus and Amelia Fitz Clarence, were pensioners on the civil list for 2500 pounds each; at this time the Duke's own allowance was something near 150,000 dollars per annum; there is also a son in the army.

Let those who so unnecessarily clamor about the expenditures of our homely government, think for an instant how immeasurably far behind our mother country we are in this respect.

We now conclude our brief sketch of the new monarch of Great Britain. The impressions of him are unfavorable both at home and abroad, and the British nation have a great deal to dread should he be prompted by evil advisers. In this country, we are apt to consider the theory of government by which the reigning families of Europe are sustained "as the madness of the many for the gain of the few." Who can tell what frightful dissensions may not occur between the accession of William IV. and the majority of the Princess Victoria? Or in the event of the death of the former and a regency for the latter, what avenues may not be opened to unchastened ambition? The present royal family is unpopular as well as incapable, and who can tell whether, in a fit of universal wrath at governmental abuses, and despair at oppressive taxation, these domesticated Hanoverians may not be driven from the land in a storm of popular tumult and indignation.

By often contemplating the spectacles of royal degeneracy as well as royal splendour, we will learn to value more highly republican simplicity and republican virtue. May a wise Providence guard us from the efforts of misguided factionists, under whatever banner they are arrayed, and long avert from us the frightful conclusion to faction and anarchy, to civil dissension and public corruption.—*Albany Daily Advertiser.*

ERIE CANAL.

The whole length of the Erie Canal, from Lake Erie to the Hudson river, is 363 miles.

It is forty feet wide on the surface, and four in depth.

Lake Erie is 565 feet above the level of the Hudson at Albany. There are from one extremity of the Canal to the other, 84 locks, and the total rise and fall is 698 feet; of which about 650 are full.

The entire cost of the Erie and Champlain Canals, according to the Canal Commissioners' Estimate, is $7,519,995, or $17,367 19 per mile; making the total cost of the Erie Canal, including that for locks, feeders, bridges, and all appendages, $6,304,280 97. According to another estimate, that contained in the report of Mr. S. Wright, to the Senate, Feb. 12, 1827, the cost of the Erie Canal per mile was $23,573. But in this estimate were included large sums paid for repairs, and for works not strictly appendages to the Canal.

The time required for passing the locks, is varied according to circumstances. We are not able to state the average detention. The general rate per hour of travelling, is about four miles; of transportation about three.

The amount of toll collected on the Erie Canal in one year, 1828, was $727,150 20. We have no document at hand to which we can refer for the rate of toll.

There are no means of ascertaining the number of passengers who passed along the canal since its completion. The number of boats that arrived and departed from Albany during the season of canal navigation, in 1829, was 12,329. The whole quantity of down freight on which toll is charged by the ton, was 75,500. The quantity of merchandize, &c. conveyed up the canal was 33,000 tons. There were other articles of freight both ways, for example, down 18,008 cords of wood; 32,156 feet of timber; 28,180,284 feet of lumber; and 17,130 feet of shingles.

The number of passage and transportation boats is continually varying. They all belong to individuals.

Two horses are generally used to draw the boats, and sometimes three. They are usually changed about every twelve miles.

The net income from the Erie and Champlain Canals from 1817 to Jan. 1829, was $6,487,742 10. The net profits for the year 1829, applied toward the payment of the canal debt, amounted to $471,528 22.—*Northern paper.*

"May you live in bad company," was considered by the ancient Greeks one of the bitterest imprecations that could be uttered against an enemy.