

Extract from
Cushing at Zuni Edited by Jesse Green
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Including all references to **Herbert Tyzack**

....Turquoise, in the words of one modern researcher, was in times past "the most important substance mined by any Indians in what is now the continental United States, (and of North American miners of this substance) the Pueblos were by far the most persistent and prolific. In this first recorded of Cushing's ventures of exploration we see one of the early investigations on which that modern generalization depends. Given his interest, both in the technology and in the history of the Zunis, Cushing had been intrigued by remarks made and a tradition described by his Zuni friends implying that they had "somewhere in the Sierra Madres to the eastwards old mines of Tchalchihuitl, or green and blue stones." Opportunity to see the mines for himself (and thus, among other things, test the value of oral traditions as clues to history) was afforded by an encounter with "a sort of wandering prospector and artisan named Williams," who was staying for a few days with the Zuni trader, Douglas Graham. As Cushing wrote later, Williams "had rambled all over the Southwest, " thought he had seen the mines in question, and, since he was setting off in that direction a few days hence, offered to take Cushing to them.

The documents relating to this frigid expedition (whose object turned out to be mines not of turquoise but of soft green and blue stones used for ceremonial paint) are of several sorts. They include a diary kept by Cushing over the period covering both his initial trek and a second trip to the mines made within a few day of the first,' letters written by him in the course of these journeys,' an account of the trip, undated but written presumably not long after, while he was still at Zuni,' a reminiscence recorded some nine years later in a newspaper interview,' and a letter written to Mrs. Cushing by an important witness twenty-one years after the event. The "Account of Cushing's Search for the Tchalchihuitl Mines, December 1879" was evidently written with publication for a popular audience in mind....

DAILY JOURNAL
November 30th 1879

Decided last night to accompany Mr. Williams [and} a wandering mechanic, to the Zuni Mountains, in the Eastern part of which he says he has found traces of ancient mines for chalchihuitl, or turquoise. I told the Governor I was going in the morning to take a five days journey. He asked where, [and] I told him about where [and] that I would not get back for several days. I did not inform him what I was going for, as this would have excited his opposition.

This morning I flew about and made ready. The Indians all helped to get my breakfast and prepare me for the journey in a way which was quite gratifying, the Governor sitting meanwhile and ordering the women how to prepare this thing and that. We did not get started until nearly eleven o'clock. I repassed the gorge in the rock boundary of the Valley of Zuni and the various ruins which I described on my way in from Wingate. After we had passed the road leading to Wingate, remains of small Pueblo dwellings became more frequent. At Ojo Pescado I found a very flourishing little farming pueblo-quite as large as Tesuque. At the beautiful spring just above occurred two round pueblos, one on either side-originally constructed of stone and adobe, so poorly, and moreover so ancient, that they are now almost levelled to the ground. Above [east} a few rods is another spring, which flows out from under the rocks which rise perpendicularly from it eighteen or more feet. On the top of the rather round mesa thus formed I found other ruins. All of these I hope to plan [diagram} on my return. The spring is of interest from that fact that I identify it with the second spring of Zuni described in Whipple's report. Continuing on up the valley, we came to a number of small ruins, and to the left, where the valley turns and beyond half a mile is joined by a canon, I discovered a circular ruin of great size, near to which were two stone-paved reservoirs (one in an excellent state of preservation). Above, facing and running along the edge of the cleft, was a beautifully laid stone wall nearly three hundred feet long, of which every stone had been perfectly dressed with some sort of edge tool. The prehistoric character of the work was shown, however, by the presence of corrugated pottery and flint implements. I am now convinced of the positive superiority in workmanship of the ancient Pueblos over the modern, though in architecture the modern is far superior to the ancient, as a rule-not wholly. Across the valley diagonally was another mud pueblo ruin, very large and much better preserved than the first. From some of the finest portions of the walls stones had been torn and drawn away by ranchmen so as to disfigure one of the most beautiful ruins I hope to see in New Mexico. Four miles farther on, we came to a cliff ruin, which in the cold and growing darkness I drew a ground plan of. It is a beautiful little thing, which I shall sketch and more minutely record on my return.

In the wall of the lower division I found a peg embedded in the wall. The portion protruding has been worn almost thin by use, showing what an immense length of time the ruin was used. Smoke had deeply blackened most of the interiors of the rooms, of which three or four were perfect. They had little doors fifteen to twenty-six inches wide and tiny holes near the rock roof for the exit of smoke. On the wall of one I observed marks of fingers, which had been dipped in red paint and drawn downward. In the adobe cement of another, a dotting in lines intended to represent the horned frog from the appearance of the wall bit left; in two or [three} others the impression of corn cobs and in a room of the lower

division a stone fire box like those now used for cooking *Paiu-chi* in Zuni. The rock floors of some of the rooms were smoothed in places by use as grinding stones. At dark we remounted and started for the ranch of Ammon Tenney, a Mormon. We journeyed through the canon into a beautiful valley in which the rocks assumed the shapes of men, animals, and even cathedrals on the grandest scale. My ride back through this canon will be a treat and may reveal many more remains, but seen by starlight alone, it was only interesting from the grandeur of its dark forms. Our whistle of "Home Sweet Home" echoed from rock to rock and deep gorge and to mesa summit in a strange way, reminding me indeed how far away I was from home.

December 1st

Stayed at Bishop Tenney[’s] all night. Passed a bad night, but on a good supper of bread and milk, and came away at sunrise without more than four biscuits and the good breakfast which was kindly supplied us. The Mexican work boy there I suspect to have taken my belt (Zuni), and after I went into the house last night, he went through my saddle bags, spilling some of the oats and leaving them open so that the dogs went through them, eating all my meat and bacon and most of my biscuits, leaving us (three men) with five biscuits and two Indian husk corn-cakes. We discovered all this only two or three hours since. Soon after, we lost our way, and, leaving the road, struck out for the mines, which I wish to investigate. Night overtook us, and here we are, in a little canon where we have found a little grass free from snow, which our jaded animals may brace themselves upon. Should a snow-storm overtake us tonight or tomorrow, our "cake will probably be all dough." So we bivouac tonight in the Zuni Mts., where the water, when there is any rain in summer, freezes slightly. It is not terribly cold tonight, and our immense pine campfire at once warms us, gives us light, and melts snow for drinking water-which we accomplish by gathering the snow and placing it in a sheepskin before the fire.

December 2nd

Miner's cabin, on the little Canon del Cobre, Zuni, fifteen miles S.W. of Agua Azul, and about seventy five [miles] east of Zuni.

We passed a fairly comfortable night, getting cold at about three o'clock and rebuilding the fire. After warming [ourselves] and looking after the animals, we again rolled up in our blankets. I slept well enough to dream of all sorts of comfortable things. At sunrise we arose, rekindled the fire, and saddled again, setting out for the mines. Mr. Williams at last saw the [word missing] of the monuments of which he had told me, and then, passing a little canon and crossing the divide, we entered [the] valley of one [i.e., canon] which he pronounced to be that of the mines. 73 Soon he shouted, "There's the boy's

cabin, but no one's there." We rode up to the door, and it suddenly opened, revealing a young man with a handkerchief tied over his left eye, who proved to be alone-in charge of the snug little cabin of Stevens and Co[mpany]'s claims.⁷⁴ This gentleman [Stevens] and his guide, old "Smid" [1] as he is called all over the Territory, were gone prospecting. We jumped off and Williams walked familiarly in. He discovered, some three years since, the claims now owned by this company. After a while, we watered the horses, and one of my two companions picketed mine to a tree down the canon. Then the young man got a breakfast of fried bread and coffee. We ate heartily, and soon after, the whole party went down the canon and up on the left bank to examine the ancient remains, Coming to and examining these, Mr. Williams and Buck bade me good-bye and set out. I immediately commenced planning the ancient ruins. These were in a group of four. The first (most northerly) consisted of a series of three or four rooms and were divisions of parallel walls with two semicircular rooms facing west-very irregular and now almost levelled to the ground. The three first groups, including this, were nearly on a line, and the fourth was to their rear, midway between the last two (most southerly) in the front (western) line. The rocks were coarse sandstone or fine conglomerate resting on a copper-bearing conglomerate formation in which the small pieces of blue and green stones occur of which the Indians make paint and, when hard enough, their green stone necklaces. About these old ruins I found a few pieces of pottery, both painted and corrugated, also some chips of various silicious stones and a hammer stone as well as a pretty white crusher of quartz. ⁷⁵ The walls, partly from age and also from the inferiority of the mud which these Indians must have been forced to use, were nearly level with the ground, though in places standing three feet high and unbroken inside. The first described was the most perfect. Others are reported as existing on the other side of the canon, but I have not found them to examine them.

From the ruins we went south a few rods and came to one of the primitive pointers or monuments, at once distinguishable from the modern miner's by their

⁷⁴ . This was Herbert Tyzack, an employee of the copper miners who owned the cabin and the author, later on, of a letter to Mrs. Cushing, which is printed below. Note 101

⁷⁵ . According to Cushing's later account, Tyzack had also "found rude digging sticks, wooden spades and chipped implements of flint about the place," and he himself found traces of Indian art everywhere around the ruins. The blue and green stones, of which Cushing speaks later at more length, were formed of an oxidized ore of copper containing malachite and azurite-chips of which Hart and Ferguson found still "strewn everywhere" in the area ("Zuni Mining," p. 39).

greater perfection and size and more worn appearance.⁷⁶ 76 Between this and another some thirty yards farther is a bed of washed sand producing the little green nodules, though very soft ones, in great abundance. I sketched both monuments (see Books I [and] II),⁷⁷ and we then went nearly west and about half a mile up the hill, where we came to two immense excavations—one seventy-five by forty feet in diameter and joined above by two others half as large. Great pines grew on them, showing them to be at least one hundred years old.

We then crossed the Canon and near the top of the hill—well up—came upon a series of five fresh holes where the Pueblo and Navajo Indians still dig for the precious material. Further down, we picked a few specimens out from the little hole, which has been dug to start the copper mine. This was commenced on an ancient excavation, and the Indians have this winter pecked about it. Just to its right was a little brush hut, made by binding saplings together, laying sticks against them, and heaping pine needles over the apex. It is now nearly rotted down. Near it I picked up a pine digging stick, well worn at both ends and showing with what infinite labour the work of mining has to be done.

From here we struck off to the right, down the slope some three hundred yards, nearly north east. Here I found and planned twelve excavations, the upper right being very ancient. Five of the latter large and in a line along the ledge and three scattered between these and the more modern works below. The little hollows made by brooks and all the ground about had been scratched over, and all stones had been turned in the search for the green stone. One digging in the half decomposed rock and soil was fifteen feet deep from the upper bank. We were fortunate enough to find one of the well preserved though evidently very old digging sticks with which this work must in the main have been done. It was but little larger than the other (two feet long) and of the same material, though better made.

Since Mr. **Tyzack** has been here (the young man before referred to), at least a dozen Pueblo Indians have been here to dig or scratch about. At one time there were six Zuni Indians, and other parties came, usually by twos, mostly from the former place, Laguna and Acoma. They never stay more than two days and

⁷⁶ . These are the "great monuments of rock" Cushing mentions in his later account as having been erected by the Indians "centuries before near the ancient excavations to mark the sites of their possessions." Until Ferguson and Hart re-examined the site in 1984, the ruins, which Cushing had here been examining (once "crude but substantial stone dwellings of many rooms," as he later described them), were lost sight of from the archaeological standpoint. Meanwhile, as Hart points out, the area has been much disturbed by clear cutting, sheep and cattle grazing, and use by miners and railroad workers. Adequate archaeological investigation has yet to be pursued.

usually only one. Navajos also sometimes visit the place, both to gather stones and to hunt, as the mountains abound in turkey, deer, bears, and smaller four-footed game. Also panthers and wild cats and wolves are quite numerous and bold.

The sun was nearly down when I finished sketching and we came down to get dinner. When I went to re-picket my little mule, I found that my companions had taken Mr. Graham's magnificent lariat and substituted one of their broken ropes. They advised me to always beware of the Mexicans, but great thieves as I know the poorer class of the latter to be, I have learned they do not steal from a friend. I am now writing by the firelight, and at the same {light} Mr. **Tyzack** is sketching a rough plan of the mining claims here, showing the directions of canons and the approximate locations of the ancient diggings.

Mr. **Tyzack** is kindly aiding me in every way possible, and I put this address down here {so} that he may receive anything I may be happy enough to publish on this country. He is most worthy of encouragement. His home is Council Bluffs, Iowa, and his name, **Herbert Tyzack**.

Later.

The moon is just rising over the mountain divide to the right of the canon. A little while since, I went out to see that my mule was quite secure, for on him everything depends. Although we tied him securely and examined each {and} every knot in the old rope, nevertheless I found he had broken it and scampered. I searched the valley over, told Mr. **Tyzack** when he came from the spring, where he had gone to fetch some water, and was joined by him in the search. Then it occurred to me that he would go directly to our last night's camp. We hastened over to it, a mile away, but he was not to be found by the moonlight. I have again carefully searched the canon, its forks and sides about here but have seen or heard nothing of the mule.

"Good-bye, Smiler. You are a little .fool-that's all I've got to say. You will probably spend your days among a lot of Indians now, and maybe, badly as I've treated you, you'll find their whips a little more stingy.

In the morning I take her track. If it go toward Zuni, all right; I'll go there too. If not, I follow it a short distance-although I cannot go far, as I must get back to record the dance which takes place four or five days hence. Meanwhile, I must sleep, and that well too. Nice dreams I'll have, for they always come whenever anything occurs to make me believe more firmly than ever that everything is for the best-even the substitution of a rotten rope for a lariat. It will keep the other fellow's horse from getting away and teach me to trust still less and less those who call themselves my friends.

FHC TO BAIRD
Canon del Cobre
Zuni Mrs, N.M.
December 3rd, 1879

My dear Professor Baird:

Three days since, in the company of a Prospector named Jonathan Williams, of Albuquerque, and a wanderer named Buck (Miller) I started for these Mountains to explore the supposed jade and turquoise mines of which I had received information. These I have found, together with interesting ruins in connection with them, and the sketches, notes and specimens which I have made and secured, form important additions to our collections and facts concerning the aborigines.

While I was searching for ancient remains yesterday morning, my two companions changed a knotted old rope for the magnificent lariat, which I had procured from Mr. Graham of Zuni just before leaving. With this rope I was compelled to picket my mule last night, although before doing so Mr. **Tyzack**, the young man in charge of the mining cabin here, and I carefully examined and strengthened every knot. After I had finished my notes last evening, I went out to once more look after the mule, and he had broken the rope and stampeded. This morning I shall track him if possible; if not, I shall strike off over the mountains for Zuni, where he has probably gone. In this altitude among strange mountains, and with scant provisions, the chances are about equal that I get caught by a snow storm and freeze, get lost and starve, or reach my destination in safety. I therefore leave with Mr. **Tyzack** this letter with the request that he, if I do not return after two weeks for my saddle, bridle, specimens, etc., may conclude that I am lost and forward this letter to you by the first opportunity. Therefore should this reach you, you may conclude that I have perished, and I would suggest, as the easiest way of informing all my friends and relations, that a paragraph be put in the press to that effect. In case this happen, I regret that the material I have collected this summer, much of which is new, may never be worked up, as my notes in the hands of another would be unintelligible. I am not much troubled about my difficulty. My philosophy is that everything happens for the best, if not for the individual, yet for others and that's all I have to say save to thank you for all kindnesses.

Ever your Devoted Follower,
F. H. Cushing

I am grateful to you for all you have been ever ready to do in my behalf, and asking you to give my remembrance to all I loved, I say good-bye.

DAILY JOURNAL
December 3rd {1879}
Bivouac at the foot of the divide.

Mr. **Tyzack** was out early kindling the fire by which to cook my bread. I also got out and began to prepare for my search and journey. By passing the strap of my pouch through the middle ring, thus forming a loop for either shoulder, I made a tolerable knap-sack. To the top of this I have tied one double and one single blanket, thus making a complete outfit for the mountains. After eating a breakfast of bread and coffee, I strapped on the knap-sack, wrote two letters, one to Emma, the other to Prof. Baird, and giving them into the keeping of Mr. **Tyzack**, started out with him to track. We made an entire circuit of the valley, finding only traces of Smiler near the spring where she had last seen the other animals. We found no more tracks; and taking the two bread cakes and half a dozen strips of bacon, I started.⁷⁸ It must have been as late as eleven o'clock, and thus, although I walked uninterruptedly, save for a hasty lunch, yet I only made this point by dark and must wait until morning to resume my tracking. I am in hope that it will not snow, If not, I shall get over the divide safely, But if it snow, I have as much reason to believe that I shall be days in finding my way out as that I shall get out at all. From the intense exertion of climbing up and down not fewer than ten canons and one mountain in reaching this valley, and then coming some fifteen miles, I am so lame I can scarcely move.

I have built a little fire with a pine tree, scraped together some of the comparatively dry needles and thus made myself comfortable. The only water to quench my thirst has been made by heaping snow on my little canvas sugar sack and waiting for it to melt-the water being retained by little sticks laid under the edges of the sack. These mountains are infested by the cougar, the cinnamon bear, the wolf, the lion, coyote, and many other smaller animals of prey. Their tracks in the snow were yesterday every where abundant. The deer, elk, and turkey are also abundant in parts, though I have seen none to help me out today. I shall sleep with my carbine as a pillow, and trusting to the Providence, which has brought this hard lot upon me, lie down again to pleasant dreams.

December 4th (1879)

I have passed the night-not comfortably-and have, nearly exhausted, reached Mason's ranch, the last habitation which we left in going out.⁷⁹ The warm coffee and So-pai-pias [Mexican fry bread] which were placed before me have much revived me, and I shall attempt to reach Tenny's tonight, where I shall make this account more complete.

As it darkens, I find myself still unable to go with sufficient expedition to reach the next ranch (eight miles away).

When I had built my fire last night, laid down in my blanket-not to sleep to any extent, as the wind circled about fiercely in every direction, threatening at any moment to set my blankets on fire. At last finding at which point the wind blew least, here I scraped away the little snow, which had fallen. I placed my litter of pine needles there and prepared to get a little sleep. The wind pierced my blankets as [well as} matting, but by building a great fire I managed to keep half warm. I fell asleep, but the crackle of a branch caused by the footstep of some large animal aroused me, and I found to my dismay that the snow was steadily falling. So again building my fire, I half sat, half laid down, napping now and then during the [remainder of the} night. Toward morning, the storm grew fiercer, and the snow fell faster.

December 11th.

Thus [we] rode on, having no trouble in detecting the trail, as I had learned by hard experience to detect the faintest trace of human passage. We rode over the little rise where the two arroyos of the valley have their sources, one flowing Southeast, the other Northwest. Followed the valley to where it turns at right angles and, instead of undertaking the laborious crossing of the mountains, followed down this Valle de los Argones. Until we had reached this turn, the cold was severe, though the sun shone in summer splendour. Down the valley a mile, we came to a deserted sheep ranch, after which we followed a trail four or five miles until we came to a little canon mouth, opposite to which was another sheep ranch. The walls of the canon on the right were high, bold and beautiful with their bands of red and gray strata, and off to the right were the central peaks of the Zuni Mountains. Turning in to the ranch, we rode up the hill or mountain, following a trail some four miles. Finding that I was one or two canons below that in which the cabin stood, I turned off to the left, and soon struck, to my great joy, the little basin-like valley in which my mule had been picketed. Riding down this a little way, I saw the top of the cabin, and as a further relief of my apprehensions, heat and smoke rising from the chimney.

I rode up to the door and shouted. The renowned old "Smid"-Don Pedro"-was inside, laid up with lameness. **Tyzack** came to the door, the rag off his eye but the usual [bread] dough in his hands. He greeted me boisterously, dough and all, and K'iesh pa-hu and I were soon sitting down with **Tyzack** and Don Pedro to a mountain feast of venison and good bread, for Mr. **Tyzack** certainly knows how to make griddle bread. I took care to get my two letters, which I had deposited with Mr. **Tyzack**-visibly before K'iesh-pa-hu. I learned [that because of] shortness of provisions and fear of snow they were about to leave for the nearest settlement. Had this been the case, a mining pick would have been left for me to draw the lock and enter the hut, though this was deemed unnecessary, as it was

thought I had perished. The letters therefore would have been mailed on the day following, and it would have been reported through all the East that I was dead. After eating, we went to the mining sites to get specimens. On the edge of an abrupt canon opposite the del Cobre, in a vertical dyke I got some good specimens of galena and silver. Copper is abundant all over the hill. I took specimens from the opening visited at first, as also some of the conglomerate in which they occur. 96 Got also specimens of the granite and talc of the higher beds, and a few bits of the blue stone. While I was getting all these, K'ieshpa-hu was busy picking up the blue stone, an occupation which he quit with reluctance as the coming darkness compelled us to go down. We took up a supply of water, brought wood for the night, made a roaring fire, our beds, and prepared a big supper of venison, bread, and coffee. I promised "Old Smid" that, should he remain lame in the morning, he could ride one of my animals and I would walk. He decided to avail himself of the offer, to go down, get another animal and come back.

The night set in clear, cold and starry. No thought of a storm crossed our minds. After writing up notes and studying a map for a while, I rolled up to sleep. During the night I could frequently hear K'iesh-pahu passing out to look after the horses, to see that they were about, safe from wild animals, and where they could get food. Once toward morning I went to the door. All were sleeping. I opened it and looked out. It was dark and cloudy.

HERBERT TYZACK TO EMILY CUSHINGIOI

Vernal, Utah, March 30, 1911

A short time ago I picked up a copy of the Salt Lake Herald which contained an article in reference to the work being done by the government in the matter of irrigation and reclamation among the Indians of New Mexico and Arizona, and while glancing it over I happened to catch the name of "Lieutenant Cushing." To get at the point I will state that this brought to my memory the fact that years ago when I was a boy about eighteen years of age I became acquainted with Mr Cushing under conditions that stamped themselves on my memory. It was when Mr Cushing was living at the Zuni Indian village, when he was living among them in such a way as to be almost one of them, with a view of learning all the old traditions and beliefs, all their old superstitions and fancies and I remember too that he was very enthusiastic in his work. At this particular time I with others was interested in some mining claims in the Zuni Range that we dreamed would make us wealthy some day, and in this particular locality there were many evidences of human life in the long ago.

It seems that Mr Cushing had learned of many things of interest to him in that particular locality and it happened that one day in November I think it was, a fellow whose name I have forgotten, called at the Zuni Village and Mr Cushing learned from him more things that interested him about that section and he

persuaded this fellow to guide him to our camp, believing that he could find his way back to the Zuni Village after he had completed his investigations. He stayed in the camp for two or three days, and I will also state that I was alone there when he came and was alone after he left, but to continue my story I remember that the night before he was to start back he picketed the government mule that he had ridden over, near the cabin for the night and when he went out to see that the animal was safe before going to bed he discovered that he had broken the lariat and was gone. Mr Cushing hunted for hours that night but without avail. The mule was gone, and to make matters worse it started to snow and the next morning the country was covered and of course no tracks could be found. After hunting all that day Mr. Cushing made up his mind to start out for the Zuni Village 75 miles away on foot, with only moccasins on and a red hankerchief tied about his head as was the custom of the Indians. That night before he started he told me the history of his life and his aspirations. He told me of a young lady in Washington who was more to him than the whole world and he wrote two letters to leave with me with instructions to get them to a post office if I did not hear from him in a month after he left; one of these was to the president I think it was of the Smithsonian Institute and the other to the young lady whom I supposed was his betrothed. I will never forget the next morning when he started away. The snow had fallen to a depth of about three inches as I remember but the clouds had cleared away partly but it was threatening to storm again and I thought as he started away across the hills in that wild country that I would never hear from him again. With moccasins on his feet and a red hankerchief tied about his head, some meat and biscuits in his knapsack and his gun over his shoulder he disappeared from view. About three weeks afterward he came back to the camp after his outfit that he had left at the cabin, and this time he brought an Indian with him, and then he told me the story of his experience in the hills, and which you of course have heard from him. Now the reason I am writing to you Mrs Cushing is this: At the time that he came back he told me that it was his intention to write a book covering the traditions of the Zunis and that when he did this he would forward me one, and in it he would mention his trip to our camp. I left New Mexico shortly afterward and he lost track of me. I learn now that he died some time ago and I am writing you for one of his books in which he covers the Zuni Indians and his experiences. If you will kindly advise me what the cost will be and whether you can send me a copy I will remit to you all expense of same. Hoping that I will hear from you I remain;

Yours Truly
Herbert **Tyzack**, Secretary
Uintah Abstract Company, Inc.

ACCOUNT OF CUSHING'S SEARCH FOR THE TCHALCHIHUITL MINES, DECEMBER 1879

Mr. Graham, the trader, had returned, and it happened that a sort of wandering prospector and artisan named Williams was staying with him while engaged in building a derrick for a windmill down at the mission. He had rambled all over the Southwestern country. So one day when I told him that the Indians had, somewhere in the Sierra Madres to the Eastward, old mines of chalchihuitl, or green and blue stones, and that they had related a tradition of the place to me but had refused to reveal its location, he said that he thought he knew where it was. Years before, in prospecting, he had discovered ancient pits and shafts in the mountains, surrounded by stone ruins. He said he was going across the mountains again in a few days and that he would guide me there if I wished to go.

I determined to accompany him. On the evening of the last day of November I made hasty preparations for the journey. The Governor tried to dissuade me, evidently suspecting my intentions, but he ultimately yielded and told me I must return within seven days or he would consider me lost and send a searching party. In order that I might be better protected from the cold, for winter had now fairly set in, {he] produced my corduroys and a flannel shirt. He would permit me, however, neither boots, coat nor hat, as he still insisted that I must have my "meat hardened."

Early next morning, joined by a passing traveller, we set out. A few miles beyond the pueblo of Pescado, one of the outlying farming towns of the Zunis, deserted during winter, we passed ruin after ruin, and in a little canon through which our trail led, perched giddily up on the face of the precipice, were a number of ancient dwellings, of which the Zunis had told me, averring that they were the handiwork and strongholds of their ancestors.

It was long after dark when, nearly frozen, we reached the ranch of Cibollita, where we were entertained by some Mormons. The night was bitterly cold, as was the morning, when, long before sunrise, we resumed our journey. Early in the day we stopped at the little Mexican settlement of Tinaja, the last on our road; then struck out Northeastward across the plain and up a heavily timbered canon into the pine-clad mountains.

Anticipating a solitary journey home, I observed closely every curious feature of the landscape, noting particularly a deserted little deer shelter and, further on, the black, burned trunk of an immense tree. Further into the mountains the snow became quite deep, impeding our progress; and as we climbed the great divide between the waters of the Atlantic and the Pacific and descended the other side into a grand, open, peak-bordered valley, I reached up to an overhanging branch of hemlock, snapped it, and jokingly exclaimed, "There, boys, lose me if you can."

We rode on for miles, passing by rude sheep corrals of felled trees, usually a deserted hut by the side of each, until, toward sunset, we arrived in sight of a great rugged, red rock wall, which apparently terminated the beautiful valley but which really changed its course abruptly to the Southeast. Suddenly, Williams, who had appeared rather anxious for some time, turned to me and said, "We are lost." He added, however, that we might strike a miners' camp, not far from the ancient ruins, by crossing directly over the mountains, which bordered the Eastern side of the valley.

We climbed the canon's broken, heavily timbered slopes until dark and continued on for some distance, until the cold became so intense and the darkness so black that we were compelled to halt and hobble our animals. We had little or no bedding and no food, as with the characteristic improvidence of the genus prospectador, Williams had said at the outset that it would be useless to load ourselves down with provisions. We built a great fire of pine logs and pinon boughs, scraped away a thin crust of snow from around it and, with our saddles for pillows and saddle blankets for beds, lay down to rest.

Before it was fairly light next morning, Williams arose and made a tour of observation, returning to camp just at dawn with the intelligence that he had satisfied himself of the way. We replenished the fire, warmed ourselves thoroughly, saddled up, and again set out.

We had not proceeded more than a mile before we came to a magnificent basin among the mountain heights. There was a snug little cabin at its end, whence a canon led down the mountain and through which trickled a little stream fed by a spring as yet unfettered by the ice and snows of winter. As we rode up to the cabin there was no sign of life about, but a faint smoke curled up from the mud chimney.

We dismounted and yelled in concert. Presently a sleepy, good-natured looking youth unbarricaded and opened the rude door, supporting his hastily adjusted trousers with one hand while with the other he held a double-barrelled shotgun. "Oh!" said he, lowering the gun, "Come in, boys."

Williams entered first. Before we had finished unsaddling our animals, he had quietly helped himself to provisions and was already slicing bacon in preparation for a meal. Our sleepy and as yet silent host took a haunch of venison down from a peg between the logs and threw it before Williams with the remark that he guessed he would make us some bread, as we acted hungry. While engaged in this operation, he informed us that his name was **Tyzack** and that he was watching the claims of some copper miners, to whom the cabin belonged. He was by no means an ordinary camp boy, as shown by books and notes on a rude slab in one end of the room, among which I noticed a History of the United States, a work on natural philosophy, and a French grammar filled with exercises on brown wrapping paper. In answer to my queries, this lonely student enthusiastically replied that he had seen the ruins and pits I was in search of and

had found rude digging sticks, wooden spades and chipped implements of flint about the place, some of which he showed me.

As soon as we had finished breakfast, we all went down to the spring and, before starting up the mountain, watered our animals. I tied my mule to a pine tree with a long, tough riata of buckskin. Our travelling friend soon grew tired of climbing and said he would go back and resume the trail and that Williams might join him further on.

At the top we found the ancient excavations, some of which were circular depressions many feet across and very deep, others mere pits. Near them, the Indians had erected, centuries before, great monuments of rock to mark the sites of their possessions, and over to one side, on a level piece of ground, they had built rude but substantial stone dwellings of many rooms, around the ruins of which were everywhere traces of their art. I became so interested in sketching these quaint ruins and traces of aboriginal work that I determined to remain on the mountaintop until dinnertime. Williams reluctantly said good-bye and departed. **Tyzack** enjoyed my enthusiasm immensely, and so engrossed did we become in a search for ancient remains that it was late ere we descended.

Under the pine tree in the place of my mule and riata was a broken rope which had belonged to our fellow traveller. He had stolen the riata and secured my mule with an old rope. The mule had escaped. While **Tyzack** prepared a meal, I searched in vain for traces of the missing animal. Late that night, by the moonlight, I discovered at some distance two or three of her footprints on the frozen snow-crust, followed by those of an Indian pony. She had been stolen by Navajos and was probably miles away.

Well, we went back to the cabin and built a big fire. Just as we were about to turn in for the night, the wind began to rise and within an hour the snow was falling as it does only among the mountains. **Tyzack** had but a few days' provisions left, and although the poor fellow offered to share with me, I accepted only a wheat cake and three or four sticks of bacon.

I slept heavily that night, and in the morning, as the snow still continued falling, I left letters describing my present situation in care of **Tyzack**, to be dispatched just in case I did not return within fourteen days. With a single blanket, notebooks and carbine, I started across the mountains. During the afternoon I descended into the valley through which we had passed, which I recognized by one of the corrals. Entering the hut by the side of it, I built a fire with which to warm myself, ate part of the cake, then resumed the journey; but, with my utmost efforts, could only reach the dividing mountain. I built a great fire under some pine trees and rolled up in my single blanket beside it. As the night advanced, the snow fell more thickly than ever.

Toward morning I was awakened from a doze by the snap of a twig. Glaring at me from opposite the fire were two great round eyes. I hastily poked up the embers, shoved a cartridge into my gun, and saw by the increasing fire-light the

form of a mountain lion. As I raised my gun, however, it retreated, doubtless more frightened by the fire than by my hostile demonstrations.

With the first break of day, I ascended the mountain. The snow was nearly two feet deep. All traces of our trail were covered. In vain I searched a maze of canon depths stretched out in all directions from the base, and, as I had no compass I could not determine which one to take. Suddenly, I thought of the twig I had jokingly broken. I descended and by great luck discovered it.

I again climbed the mountain, surer of my direction, and went down into one of the canons. It seemed the right one, for ere long I came to the blackened tree trunk, further on, to the deserted deer shelter, and toward mid-day, in the face of a driving storm, came out on the plain and saw the still distant hovels of Tinaja.

During this foot journey, the soles of my moccasins had entirely worn away, and every step I took in the snow left a print of my bare foot. Trudging on, however, heedless of suffering in my anxiety to reach the distant ranch, I was unaware of the intensity of the cold until, at the doorway, I attempted to shake hands with the Senora in charge. My arms were paralyzed and my knees gave way. The hospitable Mexicans carried me inside, placed me by the side of a roaring little fire and, with a cup of hot coffee, some tortillas and wine, so revived me that I determined to resume the journey. They tried to dissuade me. They might have spared the effort, for, attempting to rise, I found myself utterly powerless. Before evening I was nearly delirious with fever and pain.

Early next morning, however, though still lame, I again started forward. I soon reached the Mormon settlement. On sitting down before the fire, I became so weak as to be for some time unable to move. I pleaded for a horse. They feared to trust me with one. So I again set out, but could proceed but slowly. Toward evening, as I was descending into the plain of Pescado, I heard, further behind, the sound of hoofs, and the clink of Indian bridles. Presently, three young Zunis overtook me.

"Well, if here isn't our poor little brother," said one of them.

"Here, give me that pack," said another. And the third, in spite of my remonstrances, hauled me up behind him. Away we galloped toward Zuni, but before we had reached the black hills, the Indian's pony began to flag and he reluctantly left me in the road again. It was late at night ere I rounded the western end of the pueblo- [ms. ends here.]