

# *Albert Tissandier:*

**Drawings of Nature and Industry in the United States - 1885**

## **CHAPTER V**

*In 1885 the French illustrator Albert Tissandier traveled across the United States. He documented his journey with these drawings, now in the permanent collection of the Utah Museum of Fine Arts. Included here are his pictures and descriptions of Southern Utah and Arizona.*

### **Excursions in Utah and Arizona:**

The southern regions of Utah, the province of the Mormons, and the Kabob Plateau in northern Arizona, are almost completely ignored by Americans, so how is it that Europeans are familiar with these places? Mr. E. Powell, Director of the Geological Survey in Washington has, for the past fifteen years, made numerous explorations in this curious place. With the assistance of Mr. Thompson and other geologists, he drew remarkable maps of this extraordinary country. Thanks to Mr. Powell and his good advice, I was able to undertake this exploratory journey. I cannot thank him enough for his kindness and warm welcome.

From Salt Lake City the railroad travels thirteen hours to Milford where the grand excursion really begins. This little rail journey in Mormon country is nothing at all like others. As for the view, after having passed the valley and the banks of Utah Lake, the only perspective one has is of arid, sandy desert. The stations at which the trains stop are very primitive. One in particular, named Juab, has five or six wooden houses and would have no life without the railroad. At the end of the day we dined with the conductor and his aides beside the baggage car. A single traveler, Mr. Lund, kept me company in the train. All cooking was done on a stove, and, if the provisions of the employees were modest, they were offered in good heart and warm spirit. The remuneration, however, was insignificant. The harsh phenomena of mountains and plains unfolded rather sadly before our eyes. Finally, at nine o'clock in the evening we arrived at Milford where a little house constructed of wooden planks served as the hotel.

At seven o'clock in the morning Mr. Lund and I boarded the mail carriage that was to take us to Silver Reef. The carriage had no suspension and the seats were stuffed with either kernels or stones, which species I am unable to determine. The ceiling of this primitive chariot was a torn coarse canvas cover. As it was impossible to rest against any sort of backrest in order to relax for a few moments during the heat of the day, this manner of travel caused some fatigue. Meanwhile, the barely traced routes produced an intolerable dust. I cannot describe the number of jolt felt, and the distressing state of our persons, unrecognizable because of the clouds of dust produced by the wheels of our carriage.

From a distance we caught sight of numerous herds of cattle, left to graze in solitude all year. If cow or sheep starves to death and falls beside the barely visible road, no one pays

attention. The carriage will then turn aside slightly to avoid the carcass that will rest there until it has completely decomposed. Frightened by the noise of our horses, quantities of jackrabbits ran in front of the carriage. They hid under the meager blue-leafed sage, the only shade in these deserts, from where they watched us pass. We also saw fleeing chipmunks, miniscule and charming little squirrels of the sands and, several times, restless and savage wolves roaming in the distance. A veil of dust nearly always hid from sight the beautiful flowers that grow in these lands, and the Blue Mountains on the horizon. Twelve hours passed like this, without much comfort or pleasure, before we finally arrived in Cedar City. This is a Mormon village that seemed to me like an oasis after the long, monotonous road we were on since morning. Cedar City has pleasant avenues planted with beautiful trees, charming brick houses and garden enclosures walled off by hedges, filled with fruits and vegetables.

Surrounded by fields and prairies, a large sandstone mountain shelters Cedar City. Streams of water descend from the mountain, running from all parts and joining a small river whose joyous murmur was audible.

Mr. Lund is a Mormon and knows all the inhabitants of Cedar City. His first responsibility was to take me to meet the bishop of Cedar City who gave us dinner and lodging for the night. The bishop is a farmer who, it seems, has two wives. I met only one of these ladies, presumably the older of the two, who appears to be intelligent and educated. It was she who served us at the dinner table. Their house, which was scrupulously tidy, serves as a refuge for the rare travelers who pass through Cedar City, and is also the telegraph station. In the living room where a good fire warmed us there were rugs everywhere, and open newspapers on the table. The fireplace was decorated with a large framed list of the pious rules the family must follow daily. To finish off the evening, the bishops' young daughters played the organ while one of the farm boys (at least that is who I assumed he was) entered, cleaned up and properly dressed, sang ballads with them. Mr. Lund then took me to see several of the other Mormon farmers of Cedar City. In all their houses I noticed the same order, the same extreme tidiness, and the same comfortable furnishings. It was hard to believe I was so far removed from all civilization. We left Cedar City at three o'clock that morning. Mr. Lund accompanied me; we bid adieu to the brave bishop and his family who were all up to wish us the traditional bon voyage.

At about one o'clock we arrived at Silver Reef, the entrance to the spectacular Red Rock country of Utah. The landscape of this place, and of Kaibab in Arizona, assuredly resembles nothing that we see in European countries. The grass of the prairies grows on sandy lands of sandstone of the most striking tones of green, beige, pink, and golden yellow. The sandstone-rock mountains are, for the most part, similarly colored. These diverse hues, one against the other with no transitional tones, make a strangely indescribable sight. Under the sun's light and fire the ground and mountains took on a fantastic appearance. The vegetation, too, was bizarre with its sparkling June flowers, dark green leafed cedars and bluish tones of the sagebrush, all of which produce an extravagant outburst of color.

## Silver Reef Silver Mines

My journey paused for a time in Silver Reef, a small city of about 400 inhabitants, most of who come from the most diverse places. There are Chinese, some nomad Indians, Irish, Canadians and Americans. Curiously, there is also a small group of nuns who have courageously organized a clinic to administer to the sick. Silver Reef is prosperous because of the large silver mines located there.

Thanks to the recommendation of my travelling companion, the director of one of the mines, Mr. Allen, took me to visit his mine. About 83 meters deep and 400 meters long, it has been in operation for six years during which it has made eighteen million dollars, the equivalent of ninety million francs. One ton of rock can produce an average of twenty-five dollars, or one hundred twenty five francs. The ore is found in beds of aquatic plant fossils, and the silver recovered in the state of chloride or, sometimes, sulfur. Thin leaves of native silver are also found in beds of clay shale. The mine I visited is dug in thick banks of green and white sandstone, and the silver is extracted from the ore by voie d' amalgame, an operation done in a factory situated next to the mines.

Before saying goodbye to Silver Reef, Mr. Lund introduced me to the conductor who would take me to Kanab. So I found myself with a new companion, a Canadian who spoke fluent French. Having grown up in Canada in a family of some means, his father had wanted particularly to learn our language. This man is an enigma for as soon as he came of age he squandered his possessions, then enlisted as a sailor and embarked on a whale-hunting voyage. Changing professions again, he next became a miner and accumulated some wealth, but bankrupted himself three times in succession in a series of mine speculations. He finally settled in Silver Reef where he is the livery keeper and quite convinced that he will make yet a fourth fortune.

We settled in a carriage as uncomfortable as the one that had transported me to Silver Reef, and the roads were equally bad. Luckily the landscape, as before, was splendid. The rocks of the Virgin River are colored pink and silver gray, and I was constantly amazed by their silhouettes, jagged and scalloped in a thousand fantastic ways. We passed through the village of Toquerville where all the houses were hidden under a profusion of trees and flowers.

Then the wilderness began again; for the rest of the day we saw nothing but desert. We skirted the Vermilion Cliffs, a long chain of red sandstone mountains that dominate vast prairies where numerous herds of cattle graze. At night the moonlight fell fairy-like over these scenes. At midnight our horses, tired from the fifteen-hour journey, stopped in front of Pipe Spring, a farm completely isolated in the midst of desert sands. Despite the late hour we were graciously welcomed. The door to a sort of hangar was opened at our call, and we spent the remainder of the night there wrapped in blankets, resting until daylight.

## Kanab



By noon the next day we arrived in the small town of Kanab which is situated on the bank of a river that is almost always dry but which swells during seasons of melting snow pack, spilling out in floods, lifting the sand and covering the whole area with its waters. Large sandstone rock (the Triassic escarpment) shelters this village on one side while on the other the rancho disappears into the horizon. Kanab is inhabited by perhaps 500 souls who would be completely isolated except that their industry has linked them with the luckiest and most civilized cities in the region. The telegraph has been set up here, and I could not help compare this village with many in France that are less remote yet our country folk would not think of establishing a telegraph system at their own expense in order enable news to be communicated quickly.

Each house is in an enclosure surrounded by hedges of yellow roses. The avenues are bordered with acacias. Water from Kanab River is brought into the city by an open-air aqueduct several kilometers long. If there is an abundance of water the inhabitants can cultivate vegetables and fruit. Mormons love gardens and give them great care and

attention. They even try to grow some grapevines within their enclosures that produce sparse crops, but those are valued as recompense for their work and constant battle with the dry climate.

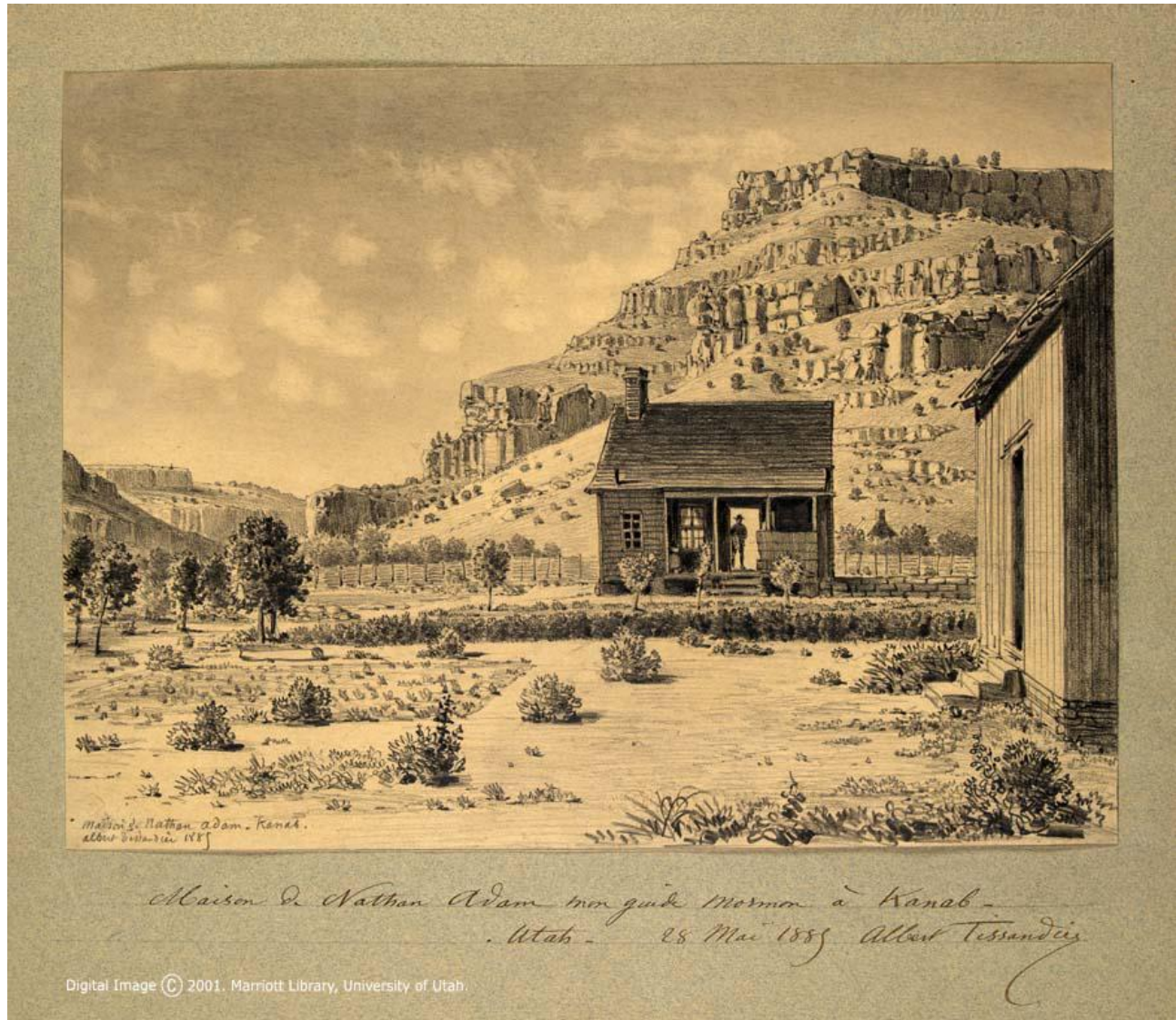
### Distrust of Mormons



My arrival in Kanab caused great excitement. Mormons were distrustful of strangers at this time. Tired of their eccentricities, the United States Government wants them to follow the law and suppress their bigamy. Since the 1882 law prohibiting polygamy and cohabitation, they have been pursued, imprisoned and fined. In the little village of Panguitch two men were recently arrested and imprisoned. The government demands that they send away all their families away, keeping only the wife married first and her children.

Because they live in the shadow of these threats, Mormons constantly fear surprise police raids. Instead of admitting to the practice of polygamy, they now deny the fact when confronted by strangers whom they naturally fear. Thus, the Mormon religion remains

mysterious for someone who is only a visitor. One can only learn a few facts from newspapers that occasionally report scandals caused by fights between jealous wives, reports, which must be carefully verified. Accordingly, news of my arrival had preceded me and several men had left the village to hide in the surrounding canyons.



Much less timid was the wife of my future guide who met me at the doorway of her house. Before she read the letter of introduction Mr. Powell had given me she said, "My husband is not here, you won't find anyone here." Her distrust dissipated immediately after she read the letter, however. When Nathan Adam expressed no concern, and the people of the town were persuaded that I had come as a tourist, not as a representative of the government, I was warmly welcomed. As there are no hotels in Kanab, I was dependent on the hospitality of one of its citizens, or one of the camps in the ranchos outside the village.

Kanab is the central location from which one can make the excursions into the principal canyons. The map (fig. 22) will show the reader more clearly the itinerary I followed in my

visits to the canyons and forests of Arizona and Utah. My first trip, undertaken with my future guide Nathan, was to Mount Trumbull and the canyons of Toroweap. It was a round trip of seven full days. The difficulty of finding water in the deserts that one must cross often makes this exploration arduous. We purchased canned goods, tea, coffee and other necessities at the only shop in Kanab that offered little variety or choice. Nathan's son came with us to act as an aide. We had four horses, one for each of us and one for our baggage.

After leaving Kanab, our days began at four o'clock in the morning, with breakfast at five o'clock. Set out on the grass by Nathan, this consisted of bacon, preserved salmon water and bread that he made three times a day in advance of each meal. The bread is made of a type of dough cooked in a frying pan over a fire of dry branches that are always easy to find in these deserts. Unlike us, the horses, left free each night, found their food where they could. To prevent them from wandering too far during the night, we attached a leather bracelet to each of their front legs and joined them together with a strong, rather short, strap. These poor, tired beasts often ate the scantiest grass and frequently had no water. They are, apparently, accustomed to this austere diet for they maintained their strength, walking twelve to fifteen hours a day on the hardest stages of the trip.

After rounding up the horses each morning, the principal subject for conversation between Nathan and his son was the location of our next stop near a spring where we could fill our canteens and water our mounts. Sometimes we passed an entire day without potable water. The extreme heat of the sands made our stored water too difficult to drink and it was necessary to content ourselves with drinking coffee. The horses were happy if they found some water in a hole in the rocks, left from the previous winter's snow or from a recent storm. During the afternoons we rested, and at about seven o'clock each night we stretched out our blankets on the desert sand or in the forests and slept under the stars. This is the way Mormons traveled to Arizona, however as a Parisian tourist I was surprised at first, but the strange and splendid scenery makes up for the lack of comfort, and one soon becomes accustomed to the small miseries of desert travel.

## Pipe Spring and Cowboys



Upon leaving Kanab it was necessary to return to Pipe Spring, one of the rare places where there is fresh spring water to be found. The likable inhabitants there had already offered me their hospitality, and this time I was received eagerly and most cordially by the mistress of the home and her daughters. If I had been surprised by the bishop's welcome in Cedar City, I was even more so in Pipe Spring. I must offer a fair assessment: these Mormon women are distinguished and educated, although in reality they live like peasants in remote, abandoned places in savage environments. Again I

am compelled to make a comparison with the countryside in some parts of France. In the most ignored corners of our provinces our fellow citizens of the fields are assuredly in a much less deserted environment than that of Utah or Arizona, yet I have to admit they are often less civilized.

All around Pipe Spring are herds of cattle grazing and supervised by hardy young cowboys accustomed to privations. Isolated, they live on large ranches removed from society. However, these Mormon herdsmen lead an active life that is not entirely devoid of interest. For entertainment they can hunt, or contemplate the spectacular scenery of the deserts. They seem to live on horseback and are constantly running after their livestock, or bringing them back from the farthest reaches of their ranches. This work is hard, laborious and too often lonely. Among other



responsibilities they must attend to the reproduction of the animals whose savage state makes this operation difficult and often dangerous. They are also charged with branding the newborns with the special stamp that each owner that has to identify animals in his herd. Stockbreeders in the United States have books they can consult to find names and marks of the owners of herds. I was told that, fifteen years ago, cattle were more numerous around Pipe Spring than they are today. This is because the animals, while grazing, pulled up the roots of the grass that had fragile hold in the sandy soil. Consequently, grains dried out before germinating, the prairie no longer seeded itself and the desert claimed the terrain. Numerous skeletons of animals along roads in this area attest to this reason for the decline of ranching. Moreover, the antelope and wild horses that once lived here in large numbers have moved farther away, or died in the deserts.

I bade farewell to my gracious Pipe Springs hostesses. While they helped me saddle my horse, some cowboys wished me good luck and "cold water to drink" during my travels. We left the high escarpments of the Vermilion Cliffs and soon entered the desolate true desert. The horses labored through the soft, dusty sand and the smallest breath of air lifted little whirlwinds of dust in the distance. Meanwhile, under our feet, a variety of flowers grew in tufts spaced apart from each other, as if they were trying to form bouquets. This is still the month of May; later in the season these brave little plants will be burnt by the hot sun and only the arid sand will remain. Always on horseback, we met some antelope and, farther on, a herd of about fifty wild horses accompanied by their colts. Startled by our appearance, they galloped in front of us.

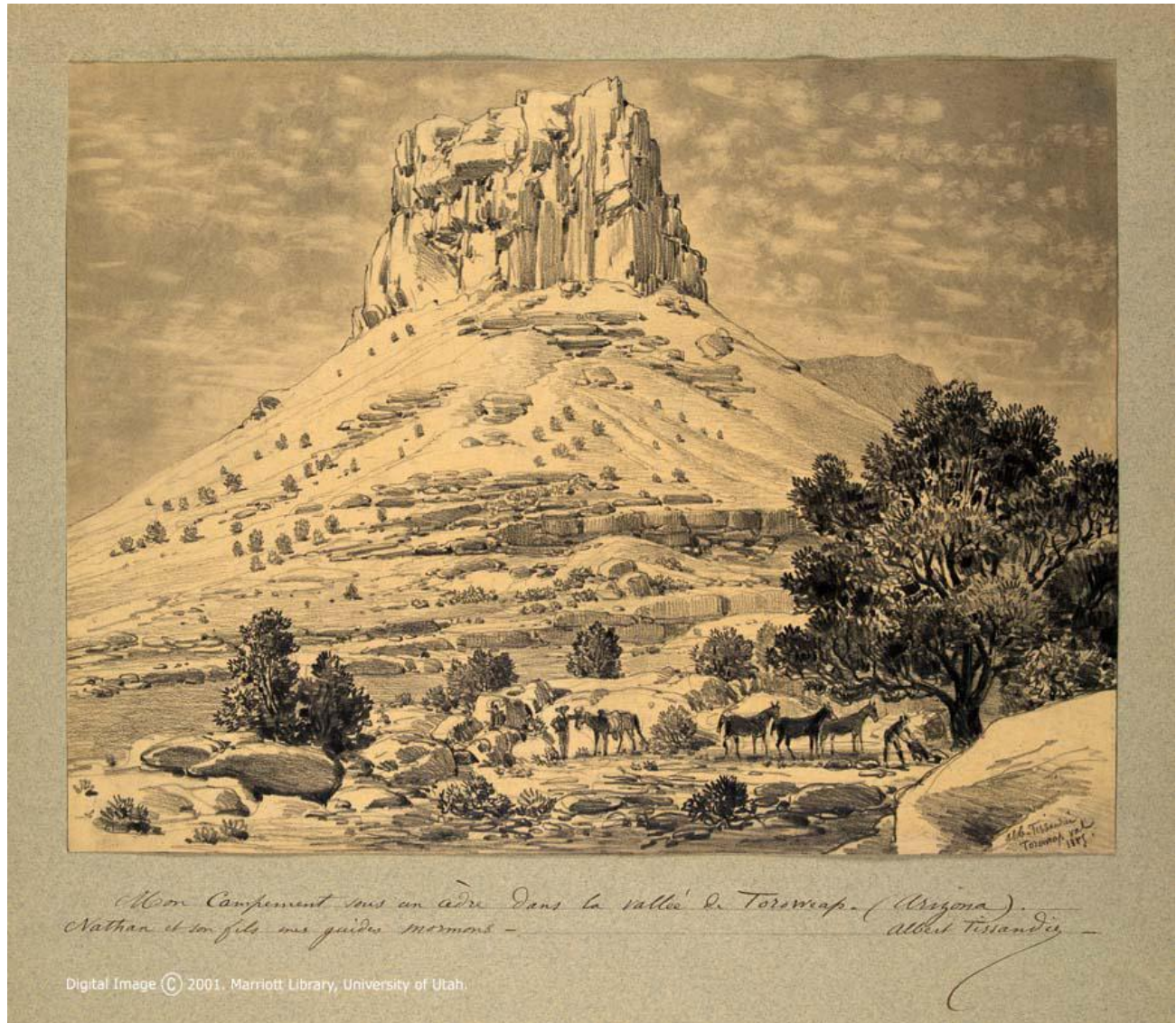


## Trumbull Mountain and Toroweap Valley

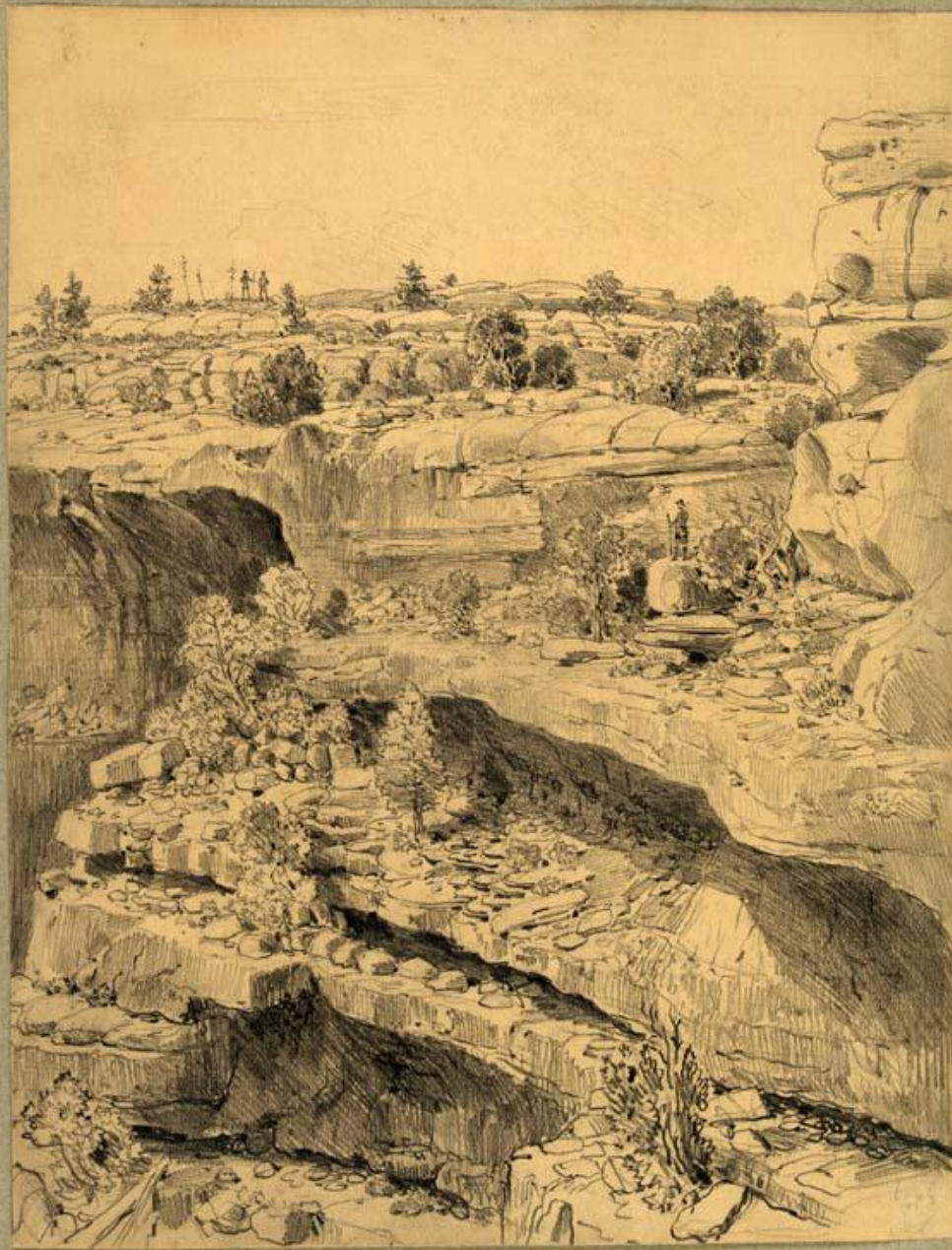


The sandy regions were gradually left behind as we approached Mount Trumbull near the end of the day. The slag and cinders that cover the ground attest to phenomena of past centuries. The volcano has been dormant for a long time and its craters are now covered with forests of pine trees one hundred years old. Once, however, it had inundated the plateaus of the Uinkaret with the immense lava slides over which we are passing today. The forest also testifies to past volcanic events. Under the variety of plants that cover the forest floor, one discovers entire banks of weathered basaltic rock. Farther on the landscape is changed by a sea of lava, the result of a relatively recent slide that has not yet been covered by vegetation. There are only a few miserable, barely developed oaks grow there. A mountain covered with scanty green growth that hides the cinder borders the lava flow, black as the Styx. The distant canyons and gorges of Kanab glitter as the rays of the setting sun illuminate them. They are a startling contrast to the black lava, and make the bizarre silhouette of the volcanic cones of Mount Trumbull appear even more pronounced. We descended these rocks gingerly and laboriously on foot, leading our

mounts by their bridles. Most horses in this area are not shod, so they walk with difficulty and the lava rocks can damage their hooves.



This was our only route to our next destination, the sandy Toroweap Valley adjoining the canyons. Long, and relatively narrow, the valley is enclosed by surprisingly colored colossal rocks. That night there were no complaints about our encampment at the foot of a wall that resembled a fortress. Shaded by an old cedar tree, we were on an immense plateau of sandstone rocks of rounded forms worn by the winter snows. Numerous flowers stunted trees and yucca cactus, often more than four feet high, were delightful decorations for the red and gold rocks. Beyond this we could see the jagged walls that extended to join the horizon. After a short rest we walked on the enormous stones, often climbing them by using our hands to help, or by jumping over large crevasses. I advanced with a feeling of indefinable wonder at the grandeur of this strange landscape.



*Mousselles de grès - 1<sup>er</sup> Canon du Colorado à Toroweap.  
Vue du couché vertical (Arizona) Albert Tissandier*

Digital Image © 2001. Marriott Library, University of Utah.

The scenery changes, but is no less dazzling as we approach the grand precipices of Toroweap with the Colorado River below. The eroded gulfs, some 600 to 800 meters deep, formed by sheer walls or gigantic tiers that descend to the river, create an unparalleled spectacle.

The rocks above the precipices that I surveyed with wonder from the edges of the highest plateau, form promontories with the most bizarre curves. We had to make endless detours, but at every instant there were new sights, each more spectacular than those that we had just experienced.

Geologists can easily read an entire history of the region in the layers of the lateral walls of the immense crevasses. The imagination is overwhelmed at the thoughts of the centuries required for the formation of these marvels.



Mr. Powell's book is a valuable source of information for one who wants to learn about this region. Among other things, he mentions that the region of the Grand Canyon of the Colorado is situated principally in northern Arizona, with northern extension into Utah. It is about 180 miles long from northwest to southeast, and approximately 125 miles wide from northeast to southwest.

The surface is estimated at about 16,000 square miles, almost attaining the surface of four of our départements in France, each of which has an average of about 6,000 square kilometers. The Colorado, named for the color of the reddish silt it carries, traverses the middle of the region. The valleys it has cut are named Marble Canyon, or Grand Canyon.



*Grand Canon Du Colorado. Vue du côté de l'Est - Extrémité  
de la Vallée de Toroweap. (Arizona) 1<sup>er</sup> Jan 1889 - Alb. Tissandier*

The northern part of the Grand Canyon, the only well known part until now, is divided into six distinct parts. First are the Terrasses, immense plateaus carved by erosion in the Miocene and lower Eocene terrains. Next are the Permian, Triassic, Jurassic and Cretaceous levels, all exceptionally beautiful. High cliffs ending in tiers abruptly interrupt them. Finally, from west to east, a view of the Shivits, Uinkaret, Kanab, Kaibab and Paria meets the eye. These plateaus are separated, like the others, by deep faults from the north to the south. The Kaibab is highest of all, and least high is the Paria. These regions that Mr. Powell asked me to visit are still almost unknown. On the high plateau are a series of vertical walls placed one behind the other, and rising up in steps. Slopes of talus on which high projections of crumbled edges of geologic beds appear often intersect these. The successive phases of stratification are clearly brought into relief here. The general design is one of unimaginable grandeur. It is a solemn sight, and one that has an extraordinary architectural quality because of the clean silhouettes and precise lines. The contrast it makes with scenes of mountains and rocks in other countries are striking.



We couldn't camp for very long on the Toroweap plateau because of the lack of water. Nathan and his son had discovered some water from melted snow in a crack in the rock, but only our horses could drink it. We returned to Kanab by the same route in order to organize an excursion to the Kaibab Plateau. Arriving in the village, we learned that Indians who often camp in the area, and among whom I had hoped to find a guide, had

recently left to hunt deer in the Kaibab forests. We were told we wouldn't see them for at least a month. I couldn't wait that length of time, and began to fear I could not continue my journey. Nathan knew the area well, but he did not want to be solely responsible for leading me into these remote places. He declared "I must have an Indian with me because only they know how to orient themselves in the virgin forests." The Mormons then advised me to go straight to the Indian camp. They should have settled near a spring located a long day's journey from Kanab. Once there, Nathan, who spoke a few words of the Ute language, could certainly find a guide he would judge capable. I accepted this advice eagerly and departed immediately.

We arrived at Mangum Spring that same night, after crossing deserts and the picturesque cypress woods. As the Mormons had predicted, we found the Indian encampment there. It was a temporary installation of eight or nine tents in a clearing. Having chosen a site most exposed to the sun, approximately twenty Indians lived there with wives and some children. Tents were made of several branches cut from neighboring trees and joined together with bundles of fibers. These simple shelters were covered with what appeared either a bad material or animal skins.

Mr. Powell goes on a great length in his book about these barbarous and wretched tribes with their primitive but gentle customs. American explorers have never had any difficulties with them. We decided to camp near the Indians so we, too, might be close to the spring. Our horses fraternized immediately with those of the savages and all disappeared into the woods. Under the pines near our camp were two cabins that were, apparently home for two American men who lived with their wives and children in the forest like the Indians. They owned cattle, planted crops and their living arrangements were less primitive than those of the Indians.



After our evening meal the Indians came to visit and to warm themselves around my fire. I gave them some of Nathan's bread and a few drops of coffee. Two disheveled, nearly naked children with an air of little savage beasts approached me. They were instantly won over by the few grains of powdered sugar we gently offered them, and they sat beside me warming themselves at the fire. Several of the Indians are young and in good form. Some have painted faces with the skin colored yellow ochre except for some vermilion under the eyebrows and on the eyelids. Two circles of the same tint, large as five-franc pieces, adorned their cheeks. The total effect reminded me of circus clowns.

The general appearance of these savages is impressive. Their faces are slightly flat

with broad, prominent cheekbones and large eyes. Their skin is dark golden yellow; much like that of old Florentine bronzes. They have magnificent raven black hair that falls on their shoulders and is braided in front; forming long tresses intermixed with threads of red cotton, in the manner of the ancient Gauls. They wear rows of glass beads around their necks, and little oriental style caps on their heads. Their clothing, vaguely European in style, consisting of pants and a shirt imprinted with a floral design, is in extremely bad condition, mainly in rags.

Nathan somehow explained my presence to the Indians, and the reasons for my journey. Then our American neighbors came over to greet us and to ask the latest news from Kanab . We all enjoyed a friendly chat in the midst of the forest with refreshments of spring water and coffee. Later, our fire extinguished, we retired as everyone selected a preferred place on the grass to turn over in their blankets.

The next morning I visited the Indian camp, and met their wives who were, unfortunately, not pretty in the least. They had the same superb black hair, and their eyes sparkled surprisingly, but their faces were so faded and withered it would not have been easy to guess their exact ages. Charged with the most grueling work around the encampment, these poor women are tired and worn before they are twenty years old. One of them carried on her back a sort of willow basket which held her baby whose face was also of the same yellow ochre tint. The poor little creature made a ridiculous sight with its swaddled body buried upright in the basket! The only thing visible was its head that was held in place with a narrow band of willow which served to soften the jolts caused by the mother's walking. Nathan told me the Indian women normally sit with their babies behind their backs in their baskets, or would even sometimes suspend the baskets from the branches of a tree. Long bands that the women put around their foreheads to help carry their burdens pass through the baskets . I wanted to make a drawing of the child, but the mother was opposed to the idea thinking that to do so would cast an evil spell over her baby . Nevertheless, the Indians did consent to allow me to make sketches of their camp, and in the process I was able to secretly sketch baby and basket.



These savages were very busy during my visit. With the help of the wives, they cut up a cow and carefully spread sections of the meat on a rock to dry in the sun. Some were engaged in weaving baskets. Women, clothed in long coats of jackrabbit skins sewn together, lit fires near their tent. They anxiously called to their children who ventured near me to see what I was doing with paper and pencil.

All this time Nathan was gathering information about a guide. At his insistence, a young Indian who had been getting dressed in his tent decided to accompany us. His name (although I cannot guarantee the spelling) is Johan Panichkos and his face, like most of the others, was painted. However, I could not have hoped for a better



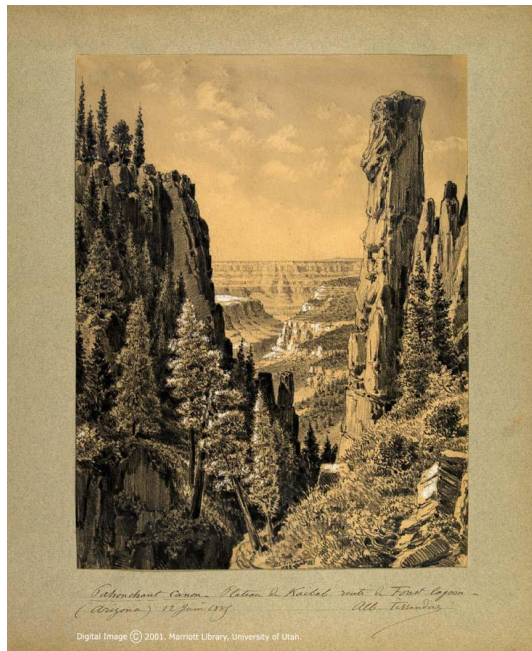
guide. He asked for 6.25 francs per day for himself and his horse, to which we readily agreed and soon left to continue our journey.

The next morning Nathan told me that John was upset because his face paint had worn away and he didn't have the necessary ointments to re-do his ornamentation. I laughed at this perceived misfortune, thinking my young Indian's looks were much improved with his natural skin, white teeth and magnificent eyes untouched by paint. However, we sent him back to collect his make-up.

## Kaibab and the Great Canyons

The second leg of my excursion lasted thirteen days. During that time we stayed in the virgin forest of the Kaibab, a site unsurpassed in its grandeur. Naturally there are no roads through these woods and, as often been observed, Indians must have an extra sense in order to get their directional bearings, perhaps much like that of homing pigeons. We had to climb up and down over endless hills, through ancient pines, thick brushwood entanglements and then pass over dead trees on the bed of moss that covered the ground. It was often so dark under the dense foliage that I wondered if night had fallen unexpectedly early in the day. In some places the brushwood was so thick that I couldn't see my companions who were only a few feet away. Occasionally we would come upon skeletons of deer.

We noticed that some parts of the forest had been burned by Indians who, in their need to warm themselves and cook their meager meals, would choose the largest pine in the forest to set alight. These trees burn easily because of the resin, and often the fire spreads to branches of neighboring trees. If there is a wind, a veritable disaster in these immense forests can result. Indians, however, think little of these disasters, moving on to camp elsewhere and periodically burning new trees without taking proper precautions to prevent forest fires.



Fallen trees are also obstacles for our horses that must continually jump over trunks of pines lying across our crude path. If the trees are too large to hurdle, they detour around them. Forced to make openings for ourselves, we couldn't avoid scratches on our hands and tears in our clothing.

At the top of one hill covered with stately trees John suddenly gave a cry and indicated with a sweep of his hand a marvelous panorama. According to our Indian guide, these are the great canyons of Scotingat . He reported that they are so named because of the profusion of plants that grow in and around the rocks, creating a ground cover. Dazzled and fascinated, I stopped before an unparalleled accumulation of high walls, built one on top of another, forming giant amphitheaters, fairy palaces, towers and fortresses that could have

been built by Titans. Contemplating such scenes, one wonders if one is still on earth; it is like an apotheosis. Imagination runs rampant when confronted by the immensity of these scenes, of these enormous walls and the fantastic plateaus that dominate them, following each other with colors that do not dim until the infinite distance of the horizon. For several days I was caught up in the dreaming these vistas inspired, rather than rational thought about my location.

At Thompson Springs we saw large herds of sheep grazing on the sparse grass of the season. It was strange to see them moving in herds toward the large blocks of salt that Mormon ranchers have placed there. The sheep lick the salt, each in turn, seemingly fond of these food supplements the stockmen of Utah and Arizona consider beneficial.

Arriving at Sublime Point, we realize it is one of the highest points of the Kaibab plateau, situated 2,600 meters above sea level. At this height the rocks form a sort of head from which one can view the entire canyon country of northern Arizona as well as the walls of Hindoo Amphitheater, the heights of Kwagunt Valley and the Temple of Siva. Of all the plateaus of Arizona, the Kaibab is most interesting because it is covered in thick forest up to its highest summits. The other plateaus visible from Sublime Point are, by contrast, almost denuded, appearing more like arid deserts that extend to the horizon. The sight is both moving and sublime. Between the colossal fissures I can see, 1,800 meters below, the waters of the Colorado running in the precipices and vanishing by way of surprising detours.

One of the most surprising things about the Kaibab is its absolute absence of small streams. Nevertheless, the climate is humid, rains are frequent in summer and snow banks are thick in winter. The stationary water in the hollows of the terrain forms numerous small lagoons surrounded by vegetation so luxurious that the illusion is one of a delightful park. Wanting to visit all these marvels in a leisurely way, I camped for three days on the edge of a beautiful marsh named Forest Lagoon that was surrounded by delicate white poplars and old pines. From that location I could easily move about and enjoy all the principal viewpoints.

Birds with brilliant plumage, *Pyrrhuloxia ludoviciana*, with yellow bodies, red heads and black wings announced their presence with the light buzzing of their wings as they flew among the flowers, cedars and arbutus. Accompanied by numerous humming birds, they were one of the major attractions of this place. I had the distinct pleasure of seeing one of them very close near a small cedar. Its wings vibrated so quickly that it was nearly impossible to see them, but when it finally rested to perch on its exquisitely constructed nest, I could examine them more closely. Inside the nest were two eggs the approximate size of beans. Flitting about busily, the bird was unconcerned about my presence as it daintily arranged the grasses that made up its nest, then flew away presumably to gather more materials. This small menagerie of strikingly colored birds was one of the most charming sights of the entire journey, with pearly gray chests and emerald green wings and head.



*Préparatifs du souper et nuit dans la forêt de Kaibab - (Arizona)  
Nathan Adam mon guide et cuisinier Mormon. Albert Tissandier*



Préparatifs de souper dans la forêt de Kaibab (voy. p. 6) - Dessin d'Albert Tissandier, d'après nature.

*Dessin paru dans le Tour du monde*

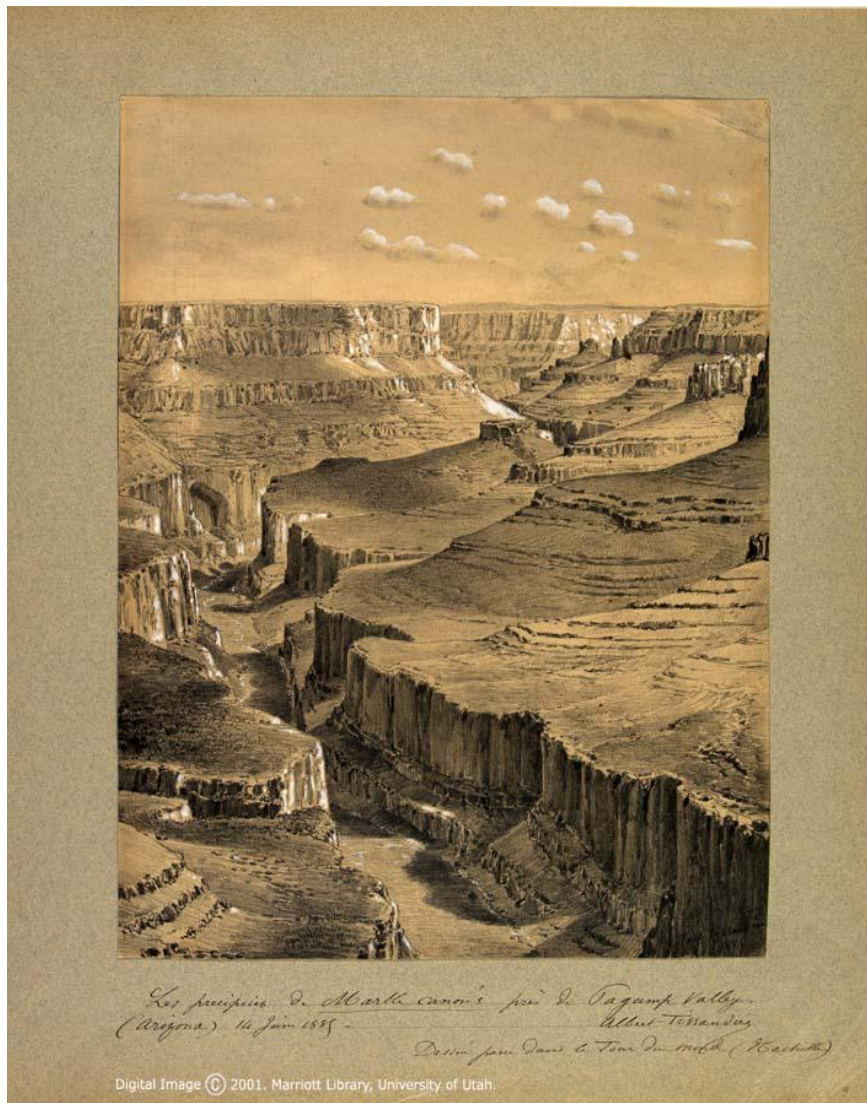
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I continued to make drawings while our Indian, armed with an ancient muzzle-loading gun, went to hunt deer. He killed some, and skinned them in the twinkling of an eye in order to preserve the skins that he intended to sell in the Mormon villages. Thanks to his hunting skills, we had some meals that were better than usual. After moonlight walks through the fairy-tale rocks, we fell asleep near the fire while John sang Indian songs while undoing the long braids of his black hair.

The next day, as we reached the exit of Forest Lagoon we had to descend through thick forest into Pagump Valley. There we met two young Americans who lived in a small cabin.

They lived there alone with a cowboy, raising horses and cattle. Our party, consisting of an Indian, a Mormon and a Frenchman appearing suddenly in the silence of their valley, provided a diversion for them. They ran to meet us, happy to chat with mortals descending, as if by magic, from the Kaibab forests that were 500 to 600 meters above their cabins. Introducing me, Nathan said: "This is a Parisian who came here to make drawings of the canyons of Arizona." I showed them my collection of sketches at which Mr. Gibson and Mr. Gillette enthusiastically urged us to stay there for a time. "Stay here with us," they said, "we have a treasure to show you. Your horses are worn and tired out. We will lend you others while they rest." Their amiability was charming and persuasive. The treasure of which they spoke consisted of the view of immense canyons, the Marble Canyons, with which Nathan was not familiar. I accepted their invitation.

Seeing that we could return from there to Kanab without his assistance, John disappeared into the forest without saying good-bye and without collecting the pay that was due him. Nathan had told him we would pay him in Kanab when he passed through there, and apparently he trusted us to do that.



It was a long day's trek from Pagump Valley to Marble Canyons, but one of the most beautiful excursions of my journey. These canyons are completely different from the other canyons of the Kaibab. They are more arid than other parts of these great amphitheatres, and we saw desolation at its most impressive. Thanks in part to our provisions, that night we enjoyed a large dinner in the tree-trunk hut inhabited by our hosts. The next day they wanted to show us the herds of 1,800 cows and 80 horses on their ranch. "We've been lucky this season," Mr. Gibson told me, "500 calves were born. If this continues, our solitary and savage life can soon end and we will have enough money to visit you in Paris, then settle in one of the large American cities." After the pleasant visit we

said good-bye to each other with genuine affection.

About a third of the way back to Kanab we camped at Kane Spring. At about four o'clock in the morning as I was getting washed and dressed near a spring surrounded by pink and gold rocks, I suddenly heard cries and whinnies. A hundred or so free horses, driven by a cowboy, rushed at furious gallop toward the solitary spot where I had just spent the night. Drawn there by the spring, they appeased their thirst and returned, at the same gallop, to resume browsing on the desert grass. The experience had a profound effect on me. This impassioned, runaway herd in this picturesque site, lit by the morning sun, seemed to me an unusual and uniquely American event. The cowboy, a young man only about twenty five years old, was sufficiently confident in his horses that he stayed behind. He asked my permission to accompany me when I was ready to resume my journey, an easy favor to grant. During this entire time Nathan was busy preparing our daily bread.

The cowboy pointed out to me a small band of Indians on horseback with large potteries hung on each side of their saddles. They had just filled the jugs with fresh water to take back to their newly established camp in the desert, still in direct sunlight. I recognized John among them, his face newly painted with two red circles on his cheeks. He led his friends to us and asked for some flour and coffee. Luckily I had some left to share with them. John had told his comrades about my studies in the forest, and they asked to see what I had drawn in my album. When they saw my sketches of Forest Lagoon and some details of the canyons, they began laughing among themselves and fell into endless dialogue in their Ute language. I wished I could understand what they were saying, although they did not seem to be discrediting me or my sketches in any way. They received a supplementary ration of coffee for their good will, and then they disappeared with their mounts behind the rocks but without saying farewell. Apparently it is not their custom to say good bye when leaving.

I left Kane Spring with Nathan and my new cowboy friend. There was a difficult stage of the journey ahead of us that included five hours of desert in mid-day before we could arrive at House Rock, a spring nearly as solitary as the one we had left behind. However, this time there was a cabin inhabited by an old man and a young boy who lived there to care for the animals and to provide hospitality for the rare cowboy who passed by. The young Mormon boy was lively and chatted with us. I wondered how I could make this decent but nearly savage boy understand my answers to his questions about life in Europe and Paris. How did I come to be so far out in this desert with a herdsman?

My last night in Arizona was spent at Navajo Well, an even more solitary place. Here, between two rocks, we found a hole filled with water. It seemed to be a natural cistern, a depository of rainwater or of melted winter snow that draws people from far across the sands and forests to drink. It is curious to see birds flying in flocks toward this nearly stagnant water, and to realize how important is to them as it is their only source of water for miles around. Arriving at sundown, we were made aware of this reservoir by the number of turtledoves and crows that were there to quench their thirst. Approaching the cistern one by one, creating a line like that at the door of a theater, each politely waited its turn while flitting about and trampling the sand. It was first necessary to appease the thirst of our horses, then after waiting for the cloudy water to clear, I began filling our containers. During our occupation of the spring, a flock of turtledoves, upset at my presence, settled

around me only about ten meters away. As more birds joined them, I moved as little as possible, trying not to startle them. Consequently, these curious little creatures that had powerful motive to stay, as it was their last opportunity to drink before night fell soon surrounded me. I relinquished my place at the cistern with pleasure.

Navajo Well is an exposed place. We were in the open, the red walls coloring the horizon and a crescent moon shone down on us as the last glimmer of day died out. Surrounded by sagebrush filled with chirping crickets that joined with the plaintive songs of turtledoves hidden in the stunted cedars and the tinkling of little bells on our horses, we enjoyed a final concert. I can never forget the magic of the natural surroundings at Navajo Well and the evening spent under a blanket of stars.



Upon my return to Kanab, I thought it time to return to Salt Lake City and to American civilization. Besides, this last part of the journey had been of interest. From Kanab to Panguitch the landscape is not less unbelievable than that of Arizona. It is even more curious and, perhaps, more bizarre but not as grand and overwhelming. The colors of Utah red rock and sandstone are extraordinary. For a long time our horses followed the riverbed of the Kanab, nearly dry in the month of June. They walked in wet sand between two slopes of cream colored sandstone. Above the slopes

were rose and orange colored hillocks, partially covered with dark leafed cedars and bluish sage. In the distance we could see walls of pink sandstone veined with black and, finally, on the horizon, the White Cliffs. These are enormous rounded rocks that contrasted, with dazzling white, with the pink tones of the sandstone. The Kanab River is bordered in certain parts of its banks by a long bank of volcanic stone dominated by the White Cliffs. One can readily see, on these sandstone rocks that have been polished by centuries of blowing wind and sand, the long striae of ancient glaciers.

## Panguitch

In Panguitch I made a trip into the mountains that surround the fertile valley where this little city is located. For a long time we had crossed large prairies filled with peculiar villages. These are cities of prairie dogs of which there are a great number located here. When I passed by rail through the plains of Nebraska I was lucky if I could catch a quick glimpse of these strange little animals, but in the sandy regions around Panguitch I could observe them entirely at my pleasure. Not shy, they continued their joyous frolics and exercises

together as we calmly watched from our horses. They have a short, staccato bark, more like a yap, which is their only resemblance to the canine species. Doubtless it is this similarity to a dog's bark that merited this little rodent the name of prairie dog. At first sight one might think they are large marmots. Their backs are tawny reddish brown, and the fur on their stomachs and flanks is nearly white. They hold their tails erect like squirrels. The tails are eight to ten centimeters long, with dark fur at the ends. My guide told me that one nearly always finds an owl that functions as room-mate and companion in the prairie dog's burrow. They live together as friends. These animals eat roots and stems of the *Sesleria dactyloids*, a plant common in these regions of Utah and of upper Missouri. During the winter they hide in their burrows which they dig themselves and, like marmots, they sleep without waking until spring.

It is extremely amusing to see the animation that reigns in a prairie dog city. There are perpetual comings and goings, jumps and joyous cries. They play hide-and-seek, disappearing suddenly in their burrows, reappear at another location, then push and pummel each other like children at the end of a school day. Mormons seek and destroy as many of these creatures as they can as they cause problems with their herds because of the numerous burrows. Their flesh is, apparently, delicate but the animal is too small to be worth the effort of hunting them for this reason. It suffices to poison their burrows, killing them like rats. Driven by gluttony, the poor animals die quickly and find themselves naturally buried in the dwellings they built.



We soon entered the mountains. In the midst of the terrain of almost apple green sandstone, a large quantity of rocks of the same material rises up. They form high hills, bare and with no consistency. Storms and melting winter snows trace thousands of streams along these high slopes and deform them in bizarre ways. Large quantities of kidney shaped stones often rest on top of little sandstone buttes that crumble away little by little. You cannot imagine a more unusual place and I was constantly amazed by the color of the foreground rocks in contrast with the pink walls crowned by forests that stretched along the horizon. (Even now, back in Paris, I wonder if I dreamed what I've drawn and just tried to describe.)

### **Rattlesnakes and Prairie Dogs**

The canyons around Panguitch have great numbers of rattlesnakes. Although they do not grow very large in these parts of Utah, their rattles are quite audible so that one hears them before they can be seen. I killed some that measured about ninety centimeters long. One of them, immobile in the road, had a menacing look and seemed to want to spring at my horse who stopped short when he saw the snake. Horses have a great fear of these reptiles, and mine was ready to take flight, however, a stone thrown at the creature by my guide smashed the snake and put an end to the little drama. Mormons little fear of these snakes. If someone is bitten the remedy is to make him or her drink spirits until they are inebriated. They are sure that this nullifies the effects of the venom, and that a few days of rest will effect complete recovery.

The land in Utah is less arid than that around the canyons of Arizona. Mormon villages have been created from fertile lands thanks to the long, hard efforts to irrigate their fields. Herds of horses and other animals are visible on the high plateaus bordering the Sevier River. There are even more impressive places in the mountains near Marysville. Bullion Canyons, among other places, are of interest. Except for small rattlesnakes that are prevalent, it is easy to imagine being in the rocky landscapes of the Pyrenees for even the vegetation and waterfalls are similar.

After this long trek I was extremely hungry. Dinner, served by my gracious hostess consisted of crêpes, preserved stewed pears, tea with milk and water. A bizarre but nonetheless satisfying little meal. In the morning I was served eggs with bacon that couldn't be eaten with honey. Mormons certainly do what they can to welcome a visitor, but one is obliged to eat little.

There are still some silver and antimony mines in Marysville. Gold was also discovered there at one time, and a mine was started, but it is no longer in operation because its meager returns could not cover its expenses. On leaving Marysville, to return to Monroe, one follows a severe, even lugubrious desert route. We met some pioneers whose covered wagon had suffered broken wheels, and who could find no help in this isolated place. Their baggage had all been laid out on the ground while men tried to repair the damaged wheels. Despairing wives cried while holding children in their arms. They had been forced to stay here for days before resuming their laborious trek toward some inhabited village.



The cinder covered mountains, barely covered with scanty, sparse grass, looked desolate. Occasionally the sandstone rocks took on yellow tints that provided some curious contrast, but on the whole were not very attractive. In Monroe, as in Marysvale, the landscape once again assumed a refreshingly verdant appearance. There are many splendid side trips to be made into the gorges of the mountain.

Mormon families live in these far-off regions in the manner of ancient pastoral people. Their villages are isolated, and in each house may be found a few books and geographical maps pinned on the walls of family living rooms. These recluses rarely receive news from the outside, and can hope for few letters or other mail. Nevertheless, a postman passes through regularly in a primitive conveyance in which there is only enough space for one person, but he doesn't make frequent deliveries to homes. A small white wooden box is set on a pole on a barely traced road in the middle of a grassy area and in a location known to everyone. It is here that people can receive letters and packages from relatives and friends. The Mormon who hopes for news of a parent or other family member often comes from far away to see if there is something addressed to him in the box. In the rare event that he finds what he looks for, he returns, happy to his wooden cabin.

### **Legends of the Mormons**

Mormons seem to have a strong faith in their bizarre religious beliefs. They are baptized, and swear their desire to adhere as closely as possible to biblical morals. It is in this way that they defend the practice of polygamy. "Abraham and Joseph had several wives," they insist, and they firmly believe they have the right to do the same. I saw virtually none of these bigamous households. In truth, I believe that these poor people most often have only one wife with many children. However, on one occasion, I visited the home of a Mormon married to two young women. I asked one of them if she was the mother of a lovely young girl who was running and playing among the flowers outside their cabin. Both women answered at once: "That's our daughter," and I asked no further. This single response indicated to me that they were not jealous of each other. Their husband assured me that they lived together as sisters who loved each other. The household seemed to be a happy one.

The coachman I had when I left Panguitch was an intelligent young man with a strong belief in his religion. He complained bitterly about the persecutions Mormons were subjected to, yet at the age of twenty-eight he was already married to two wives with whom he had four children, and was thinking of marrying a third wife. Along our route he showed me the high mountains that enclosed the valley. "It is in these rocks that God commanded our prophet Joseph Smith to look for the golden plates on which are written our laws. Joseph Smith had conversations with the Savior, and if we are to reach the kingdom of God we must follow his commandments." The golden plates were found by the prophet and seen, it seems, by three Mormon apostles who copied down their laws. These are the laws that they must follow. My coachman didn't seem to doubt the veracity of this strange legend. As for the gold plates, they have obviously disappeared long ago if they ever existed. The Mormon priests always receive a tenth of the annual revenue of the faithful members. This tribute is paid either in currency or in merchandise of some description.

After my stay in Utah and Arizona, I can vouch for the fact that Mormons are hospitable, good to strangers, gentle and well educated. Most are interested in all aspects of history and civilization. I will always remember fondly their cordial and touching welcomes. They accepted me as a brother, and I could ask for nothing more.

### **Return to Salt Lake City**

After my lengthy explorations, I returned to Salt Lake City where I was happily reunited with several kind people who had given me good advice before my departure. The governor of Utah, Mr. Murray, and Mr. André de l'Orme, attaché to the city's French Consulate, had been of help to me. When one is so far removed from one's native country, one is so much more sensitive to, and grateful for, cordial reception. Therefore, upon my return to Salt Lake City, it seemed that I was meeting old friends.