

# The Exploration of the Colorado River and Its Canyons

By John Wesley Powell

**Time Period: 1869**

## Background Material

The material you're about to read is directly from Powell's report of his "journey into the great unknown." Prior to Powell's expedition, virtually nothing was known of the huge swatch of land between western Colorado and Nevada. It was a bleak, waterless and tortured land. On maps, it was a blank spot covering several degrees of latitude and marked "unexplored." It drew Powell like a horse to water. He wanted to be the first to sketch in the features of the map, and most particularly the blue line showing the course of the unknown Colorado.

Powell started at Green River, Wyoming and ran the Green River until it joined the Colorado and from there, down the through the Grand Canyon. When it was over, Powell would come back with more than simple facts of geography and geology, but a lasting impression of the canyon's incredible beauty.

Three reading selections from Powell's book of the expedition follow this introduction. The first describes Powell's journey on the Green River through Lodore Canyon which is located in present day Dinosaur National Monument (close to the corner where Wyoming, Utah and Colorado come together). While Powell had encountered other rapids on the Green above here, the rapids of Lodore were big and tough and presaged what lay ahead in the Grand Canyon.

The next selection describes that portion of Powell's journey which took him through Glen Canyon, located south of present day Moab on the Colorado River proper. Glen Canyon is now covered by the waters of Lake Powell. There were no rapids in Glen Canyon, but Powell's journal is fascinating reading since it provides the first recorded glimpse of this spectacularly beautiful canyon. Glen Canyon is known as one of the great losses in the history of conservation of natural resources. In the 1950's conservationists failed in their attempt to prevent the Glen Canyon Dam from being built.

Finally, the last selection takes place near the end of the Grand Canyon. After weeks of back-breaking work, of drinking silty water and running fearsome rapids, after days in claustrophobic canyons and always living in fear of what they might find around the next bend, three members of the expedition finally could take no more. They wanted off the river. Powell, faced with a crisis of leadership, did everything he could to try to convince them to stay. The men, however, had their minds made up and left the next morning.

Ironically, not long after the men left, Powell successfully floated out of the canyon and reached an outpost of civilization. He accomplished the impossible and made it out alive. Midwestern and Eastern newspapers carried the eagerly awaited news of his return, and Powell was heralded as a hero. But what of the three who left his party? They weren't so lucky. Reportedly, they were killed by Indians and their bodies left, forgotten somewhere in the wastes of the surrounding desert.

## **Selected Readings**

--Readings found on the next pages--

# The Exploration of the Colorado River and Its Canyons

By John Wesley Powell

## Reading Selection 1

(From Chapter 7, "The Canyon of Lodore")

CHAPTER VII.

THE CANYON OF LODORE.

JUNE 8.--We enter the canyon, and until noon find a succession of rapids, over which, our boats have to be taken. Here I must explain our method of proceeding at such places. The "Emma Dean" goes in advance; the other boats follow, in obedience to signals. When we approach a rapid, or what on other rivers would often be called a fall, I stand on deck to examine it, while the oarsmen back water, and we drift on as slowly as possible. If I can see a clear chute between the rocks, away we go; but if the channel is beset entirely across, we signal the other boats, pull to land, and I walk along the shore for closer examination. If this reveals no clear channel, hard work begins. We drop the boats to the very head of the dangerous place and let them over by lines or make a portage, frequently carrying both boats and cargoes over the rocks.

The waves caused by such falls in a river differ much from the waves of the sea. The water of an ocean wave merely rises and falls; the form only passes on, and form chases form unceasingly. A body floating on such waves merely rises and sinks--does not progress unless impelled by wind or some other power. But here the water of the wave passes on while the form remains. The waters plunge down ten or twenty feet to the foot of a fall, spring up again in a great wave, then down and up in a series of billows that gradually disappear in the more quiet waters below; but these waves are always there, and one can stand above and count them.

A boat riding such billows leaps and plunges along with great velocity. Now, the difficulty in riding over these falls, when no rocks are in the way, is with the first wave at the foot. This will sometimes gather for a moment, heap up higher and higher, and then break back.

If the boat strikes it the instant after it breaks, she cuts through, and the mad breaker dashes its spray over the boat and washes overboard all who do not cling tightly. If the boat, in going over the falls, chances to get caught in some side current and is turned from its course, so as to strike the wave "broadside on," and the wave breaks at the same

instant, the boat is capsized; then we must cling to her, for the water-tight compartments act as buoys and she cannot sink; and so we go, dragged through the waves, until still waters are reached, when we right the boat and climb aboard. We have several such experiences to-day.

At night we camp on the right bank, on a little shelving rock between the river and the foot of the cliff; and with night comes gloom into these great depths. After supper we sit by our camp fire, made of driftwood caught by the rocks, and tell stories of wild life; for the men have seen such in the mountains or on the plains, and on the battlefields of the South. It is late before we spread our blankets on the beach.

Lying down, we look up through the canyon and see that only a little of the blue heaven appears overhead--a crescent of blue sky, with two or three constellations peering down upon us. I do not sleep for some time, as the excitement of the day has not worn off. Soon I see a bright star that appears to rest on the very verge of the cliff overhead to the east. Slowly it seems to float from its resting place on the rock over the canyon. At first it appears like a jewel set on the brink of the cliff, but as it moves out from the rock I almost wonder that it does not fall. In fact, it does seem to descend in a gentle curve, as though the bright sky in which the stars are set were spread across the canyon, resting on either wall, and swayed down by its own weight. The stars appear to be in the canyon. I soon discover that it is the bright star Vega; so it occurs to me to designate this part of the wall as the "Cliff of the Harp."

*June 9.*--One of the party suggests that we call this the Canyon of Lodore, and the name is adopted. Very slowly we make our way, often climbing on the rocks at the edge of the water for a few hundred yards to examine the channel before running it. During the afternoon we come to a place where it is necessary to make a portage. The little boat is landed and the others are signaled to come up.

When these rapids or broken falls occur usually the channel is suddenly narrowed by rocks which have been tumbled from the cliffs or have been washed in by lateral streams. Immediately above the narrow, rocky channel, on one or both sides, there is often a bay of quiet water, in which a landing can be made with ease. Sometimes the water descends with a smooth, unruffled surface from the broad, quiet spread above into the narrow, angry channel below by a semicircular sag. Great care must be taken not to pass over the brink into this deceptive pit, but above it we can row with safety. I walk along the bank to examine the ground, leaving one of my men with a flag to guide the other boats to the landing-place. I soon see one of the boats make shore all right, and feel no more concern; but a minute after, I hear a shout, and, looking around, see one of the boats shooting down the center of the sag. It is the "No Name," with Captain Howland, his brother, and Goodman. I feel that its going over is inevitable, and run to save the third boat. A minute more, and she turns the point and heads for the shore. Then I turn down stream again and scramble along to look for the boat that has gone over. The first fall is not great, only 10 or 12 feet, and we often run such; but below, the river tumbles down again for 40 or 50 feet, in a channel filled with dangerous rocks that break the waves into whirlpools and beat them into foam. I pass around a great crag just in time to see the boat strike a rock

and, rebounding from the shock, careen and fill its open compartment with water. Two of the men lose their oars; she swings around and is carried down at a rapid rate, broadside on, for a few yards, when, striking amidships on another rock with great force, she is broken quite in two and the men are thrown into the river. But the larger part of the boat floats buoyantly, and they soon seize it, and down the river they drift, past the rocks for a few hundred yards, to a second rapid filled with huge boulders, where the boat strikes again and is dashed to pieces, and the men and fragments are soon carried beyond my sight. Running along, I turn a bend and see a man's head above the water, washed about in a whirlpool below a great rock. It is Frank Goodman, clinging to the rock with a grip upon which life depends. Coming opposite, I see Howland trying to go to his aid from an island on which he has been washed. Soon he comes near enough to reach Frank with a pole, which he extends toward him. The latter lets go the rock, grasps the pole, and is pulled ashore. Seneca Howland is washed farther down the island and is caught by some rocks, and, though somewhat bruised, manages to get ashore in safety. This seems a long time as I tell it, but it is quickly done.

And now the three men are on an island, with a swift, dangerous river on either side and a fall below. The "Emma Dean" is soon brought down, and Sumner, starting above as far as possible, pushes out. Right skillfully he plies the oars, and a few strokes set him on the island at the proper point. Then they all pull the boat up stream as far as they are able, until they stand in water up to their necks. One sits on a rock and holds the boat until the others are ready to pull, then gives the boat a push, clings to it with his hands, and climbs in as they pull for mainland, which they reach in safety. We are as glad to shake hands with them as though they had been on a voyage around the world and wrecked on a distant coast.

Down the river half a mile we find that the after cabin of the wrecked boat, with a part of the bottom, ragged and splintered, has floated against a rock and stranded. There are valuable articles in the cabin; but, on examination, we determine that life should not be risked to save them. Of course, the cargo of rations, instruments, and clothing is gone.

We return to the boats and make camp for the night. No sleep comes to me in all those dark hours. The rations, instruments, and clothing have been divided among the boats, anticipating such an accident as this; and we started with duplicates of everything that was deemed necessary to success. But, in the distribution, there was one exception to this precaution--the barometers were all placed in one boat, and they are lost! There is a possibility that they are in the cabin lodged against the rock, for that is where they were kept. But, then, how to reach them? The river is rising. Will they be there to-morrow? Can I go out to Salt Lake City and obtain barometers from New York?

*June 10.*--I have determined to get the barometers from the wreck, if they are there. After breakfast, while the men make the portage, I go down again for another examination. There the cabin lies, only carried 50 or 60 feet farther on. Carefully looking over the ground, I am satisfied that it can be reached with safety, and return to tell the men my

conclusion. Sumner and Dunn volunteer to take the little boat and make the attempt. They start, reach it, and out come the barometers! The boys set up a shout, and I join them, pleased that they should be as glad as myself to save the instruments. When the boat lands on our side, I find that the only things saved from the wreck were the barometers, a package of thermometers, and a three-gallon keg of whiskey. The last is what the men were shouting about. They had taken it aboard unknown to me, and now I am glad they did take it, for it will do them good, as they are drenched every day by the melting snow which runs down from the summits of the Rocky Mountains.

We come back to our work at the portage and find that it is necessary to carry our rations over the rocks for nearly a mile and to let our boats down with lines, except at a few points, where they also must be carried. Between the river and the eastern wall of the canyon there is an immense talus of broken rocks. These have tumbled down from the cliffs above and constitute a vast pile of huge angular fragments. On these we build a path for a quarter of a mile to a small sand-beach covered with driftwood, through which we clear a way for several hundred yards, then continue the trail over another pile of rocks nearly half a mile farther down, to a little bay. The greater part of the day is spent in this work. Then we carry our cargoes down to the beach and camp for the night.

While the men are building the camp fire, we discover an iron bake-oven, several tin plates, a part of a boat, and many other fragments, which denote that this is the place where Ashley's party was wrecked.

*June 11.*--This day is spent in carrying our rations down to the bay--no small task, climbing over the rocks with sacks of flour and bacon. We carry them by stages of about 500 yards each, and when night comes and the last sack is on the beach, we are tired, bruised, and glad to sleep.

*June 12.*--To-day we take the boats down to the bay. While at this work we discover three sacks of flour from the wrecked boat that have lodged in the rocks. We carry them above high-water mark and leave them, as our cargoes are already too heavy for the three remaining boats. We also find two or three oars, which we place with them.

As Ashley and his party were wrecked here and as we have lost one of our boats at the same place, we adopt the name Disaster Falls for the scene of so much peril and loss.

Though some of his companions were drowned, Ashley and one other survived the wreck, climbed the canyon wall, and found their way across the Wasatch Mountains to Salt Lake City, living chiefly on berries, as they wandered through an unknown and difficult country. When they arrived at Salt Lake they were almost destitute of clothing and nearly starved. The Mormon people gave them food and clothing and employed them to work on the foundation of the Temple until they had earned sufficient to enable them

to leave the country. Of their subsequent history, I have no knowledge. It is possible they returned to the scene of the disaster, as a little creek entering the river below is known as Ashley's Creek, and it is reported that he built a cabin and trapped on this river for one or two winters; but this may have been before the disaster.

*June 13.*--Rocks, rapids, and portages still. We camp to-night at the foot of the left fall, on a little patch of flood plain covered with a dense growth of box-elders, stopping early in order to spread the clothing and rations to dry. Everything is wet and spoiling.

*June 14.*--Howland and I climb the wall on the west side of the canyon to an altitude of 2,000 feet. Standing above and looking to the west, we discover a large park, five or six miles wide and twenty or thirty long. The cliff we have climbed forms a wall between the canyon and the park, for it is 800 feet down the western side to the valley. A creek comes winding down 1,200 feet above the river, and, entering the intervening wall by a canyon, plunges down more than 1,000 feet, by a broken cascade, into the river below.

*June 15.*--To-day, while we make another portage, a peak, standing on the east wall, is climbed by two of the men and found to be 2,700 feet above the river. On the east side of the canyon a vast amphitheater has been cut, with massive buttresses and deep, dark alcoves in which grow beautiful mosses and delicate ferns, while springs burst out from the farther recesses and wind in silver threads over floors of sand rock. Here we have three falls in close succession. At the first the water is compressed into a very narrow channel against the right-hand cliff, and falls 15 feet in 10 yards. At the second we have a broad sheet of water tumbling down 20 feet over a group of rocks that thrust their dark heads through the foam. The third is a broken fall, or short, abrupt rapid, where the water makes a descent of more than 20 feet among huge, fallen fragments of the cliff. We name the group Triplet Falls. We make a portage around the first; past the second and the third we let down with lines.

During the afternoon, Dunn and Howland having returned from their climb, we run down three quarters of a mile on quiet waters and land at the head of another fall. On examination, we find that there is an abrupt plunge of a few feet and then the river tumbles for half a mile with a descent of a hundred feet, in a channel beset with great numbers of huge boulders. This stretch of the river is named Hell's Half-Mile. The remaining portion of the day is occupied in making a trail among the rocks at the foot of the rapid.

*June 16.*--Our first work this morning is to carry our cargoes to the foot of the falls. Then we commence letting down the boats. We take two of them down in safety, but not without great difficulty; for, where such a vast body of water, rolling down an inclined plane, is broken into eddies and cross-currents by rocks projecting from the cliffs and piles of boulders in the channel, it requires excessive labor and much care to prevent the boats from being dashed against the rocks or breaking away. Sometimes we are

compelled to hold the boat against a rock above a chute until a second line, attached to the stem, is carried to some point below, and when all is ready the first line is detached and the boat given to the current, when she shoots down and the men below swing her into some eddy.

At such a place we are letting down the last boat, and as she is set free a wave turns her broadside down the stream, with the stem, to which the line is attached, from shore and a little up. They haul on the line to bring the boat in, but the power of the current, striking obliquely against her, shoots her out into the middle of the river. The men have their hands burned with the friction of the passing line; the boat breaks away and speeds with great velocity down the stream. The "Maid of the Canyon" is lost! So it seems; but she drifts some distance and swings into an eddy, in which she spins about until we arrive with the small boat and rescue her.

Soon we are on our way again, and stop at the mouth of a little brook on the right for a late dinner. This brook comes down from the distant mountains in a deep side canyon. We set out to explore it, but are soon cut off from farther progress up the gorge by a high rock, over which the brook glides in a smooth sheet. The rock is not quite vertical, and the water does not plunge over it in a fall. Then we climb up to the left for an hour, and are 1,000 feet above the river and 600 above the brook. Just before us the canyon divides, a little stream coming down on the right and another on the left, and we can look away up either of these canyons, through an ascending vista, to cliffs and crags and towers a mile back and 2,000 feet overhead. To the right a dozen gleaming cascades are seen. Pines and firs stand on the rocks and aspens overhang the brooks. The rocks below are red and brown, set in deep shadows, but above they are buff and vermilion and stand in the sunshine. The light above, made more brilliant by the bright-tinted rocks, and the shadows below, more gloomy by reason of the somber hues of the brown walls, increase the apparent depths of the canyons, and it seems a long way up to the world of sunshine and open sky, and a long way down to the bottom of the canyon glooms. Never before have I received such an impression of the vast heights of these canyon walls, not even at the Cliff of the Harp, where the very heavens seemed to rest on their summits. We sit on some overhanging rocks and enjoy the scene for a time, listening to the music of the falling waters away up the canyon. We name this Rippling Brook.

Late in the afternoon we make a short run to the mouth of another little creek, coming down from the left into an alcove filled with luxuriant vegetation. Here camp is made, with a group of cedars on one side and a dense mass of box-elders and dead willows on the other.

I go up to explore the alcove. While away a whirlwind comes and scatters the fire among the dead willows and cedar-spray, and soon there is a conflagration. The men rush for the boats, leaving all they cannot readily seize at the moment, and even then they have their clothing burned and hair singed, and Bradley has his ears scorched. The cook fills his arms with the mess-kit, and jumping into a boat, stumbles and falls, and away go our cooking utensils into the river. Our plates are gone; our spoons are gone; our knives and forks are gone. "Water catch 'em; h-e-a-p catch 'em."



When on the boats, the men are compelled to cut loose, as the flames, running out on the overhanging willows, are scorching them. Loose on the stream, they must go down, for the water is too swift to make headway against it. Just below is a rapid, filled with rocks. On the shoot, no channel explored, no signal to guide them! Just at this juncture I chance to see them, but have not yet discovered the fire, and the strange movements of the men fill me with astonishment. Down the rocks I clamber, and run to the bank. When I arrive they have landed. Then we all go back to the late camp to see if anything left behind can be saved. Some of the clothing and bedding taken out of the boats is found, also a few tin cups, basins, and a camp kettle; and this is all the mess-kit we now have. Yet we do just as well as ever.

*June 17.*--We run down to the mouth of Yampa River. This has been a chapter of disasters and toils, notwithstanding which the Canyon of Lodore was not devoid of scenic interest, even beyond the power of pen to tell. The roar of its waters was heard unceasingly from the hour we entered it until we landed here. No quiet in all that time. But its walls and cliffs, its peaks and crags, its amphitheatres and alcoves, tell a story of beauty and grandeur that I hear yet--and shall hear.

The Canyon of Lodore is 20 3/4 miles in length. It starts abruptly at what we have called the Gate of Lodore, with walls nearly 2,000 feet high, and they are never lower than this until we reach Alcove Brook, about three miles above the foot. They are very irregular, standing in vertical or overhanging cliffs in places, terraced in others, or receding in steep slopes, and are broken by many side gulches and canyons. The highest point on the wall is at Dunn's Cliff, near Triplet Falls, where the rocks reach an altitude of 2,700 feet, but the peaks a little way back rise nearly 1,000 feet higher. Yellow pines, nut pines, firs, and cedars stand in extensive forests on the Uinta Mountains, and, clinging to the rocks and growing in the crevices, come down the walls to the water's edge from Flaming Gorge to Echo Park. The red sandstones are lichened over; delicate mosses grow in the moist places, and ferns festoon the walls.

## **Reading Selection 2**

**(From Chapter 10, "From the Junction of the Grand and Green to the Mouth of the Little Colorado")**

*July 31.*--We have a cool, pleasant ride to-day through this part of the canyon. The walls are steadily increasing in altitude, the curves are gentle, and often the river sweeps by an arc of vertical wall, smooth and unbroken, and then by a curve that is variegated by royal

arches, mossy alcoves, deep, beautiful glens, and painted grottoes. Soon after dinner we discover the mouth of the San Juan, where we camp. The remainder of the afternoon is given to hunting some way by which we can climb out of the canyon; but it ends in failure.

*August 1.*--We drop down two miles this morning and go into camp again. There is a low, willow-covered strip of land along the walls on the east. Across this we walk, to explore an alcove which we see from the river. On entering, we find a little grove of box-elder and cotton-wood trees, and turning to the right, we find ourselves in a vast chamber, carved out of the rock. At the upper end there is a clear, deep pool of water, bordered with verdure. Standing by the side of this, we can see the grove at the entrance. The chamber is more than 200 feet high, 500 feet long, and 200 feet wide. Through the ceiling, and on through the rocks for a thousand feet above, there is a narrow, winding skylight; and this is all carved out by a little stream which runs only during the few showers that fall now and then in this arid country. The waters from the bare rocks back of the canyon, gathering rapidly into a small channel, have eroded a deep side canyon, through which they run until they fall into the farther end of this chamber. The rock at the ceiling is hard, the rock below, very soft and friable; and having cut through the upper and harder portion down into the lower and softer, the stream has washed out these friable sandstones; and thus the chamber has been excavated.

Here we bring our camp. When "Old Shady" sings us a song at night, we are pleased to find that this hollow in the rock is filled with sweet sounds. It was doubtless made for an academy of music by its storm-born architect; so we name it Music Temple.

*August 2.*--We still keep our camp in Music Temple to-day. I wish to obtain a view of the adjacent country, if possible; so, early in the morning the men take me across the river, and I pass along by the foot of the cliff half a mile up stream and then climb, first up broken ledges, then 200 or 300 yards up a smooth, sloping rock, and then pass out on a narrow ridge. Still, I find I have not attained an altitude from which I can overlook the region outside of the canyon; and so I descend into a little gulch and climb again to a higher ridge, all the way along naked sandstone, and at last I reach a point of commanding view. I can look several miles up the San Juan, and a long distance up the Colorado; and away to the northwest I can see the Henry Mountains; to the northeast, the Sierra La Sal; to the southeast, unknown mountains; and to the southwest, the meandering of the canyon. Then I return to the bank of the river. We sleep again in Music Temple.

*August 3.*--Start early this morning. The features of this canyon are greatly diversified. Still vertical walls at times. These are usually found to stand above great curves. The river, sweeping around these bends, undermines the cliffs in places. Sometimes the rocks are overhanging; in other curves, curious, narrow glens are found. Through these we

climb, by a rough stairway, perhaps several hundred feet, to where a spring bursts out from under an overhanging cliff, and where cottonwoods and willows stand, while along the curves of the brooklet oaks grow, and other rich vegetation is seen, in marked contrast to the general appearance of naked rock. We call these Oak Glens.

Other wonderful features are the many side canyons or gorges that we pass. Sometimes we stop to explore these for a short distance. In some places their walls are much nearer each other above than below, so that they look somewhat like caves or chambers in the rocks. Usually, in going up such a gorge, we find beautiful vegetation; but our way is often cut off by deep basins, or "potholes," as they are called.

On the walls, and back many miles into the country, numbers of monument-shaped buttes are observed. So we have a curious *ensemble* of wonderful features--carved walls, royal arches, glens, alcove gulches, mounds, and monuments. From which of these features shall we select a name? We decide to call it Glen Canyon.

Past these towering monuments, past these mounded billows of orange sandstone, past these oak-set glens, past these fern-decked alcoves, past these mural curves, we glide hour after hour, stopping now and then, as our attention is arrested by some new wonder, until we reach a point which is historic.

In the year 1776, Father Escalante, a Spanish priest, made an expedition from Santa Fe to the northwest, crossing the Grand and Green, and then passing down along the Wasatch Mountains and the southern plateaus until he reached the Rio Virgen. His intention was to cross to the Mission of Monterey; but, from information received from the Indians, he decided that the route was impracticable. Not wishing to return to Santa Fe over the circuitous route by which he had just traveled, he attempted to go by one more direct, which led him across the Colorado at a point known as El Vado de los Padres. From the description which we have read, we are enabled to determine the place. A little stream comes down through a very narrow side canyon from the west. It was down this that he came, and our boats are lying at the point where the ford crosses. A well-beaten Indian trail is seen here yet. Between the cliff and the river there is a little meadow. The ashes of many camp fires are seen, and the bones of numbers of cattle are bleaching on the grass. For several years the Navajos have raided on the Mormons that dwell in the valleys to the west, and they doubtless cross frequently at this ford with their stolen cattle.

*August 4.*--To-day the walls grow higher and the canyon much narrower. Monuments are still seen on either side; beautiful glens and alcoves and gorges and side canyons are yet found. After dinner we find the river making a sudden turn to the northwest and the whole character of the canyon changed. The walls are many hundreds of feet higher, and the rocks are chiefly variegated shales of beautiful colors--creamy orange above, then bright vermilion, and below, purple and chocolate beds, with green and yellow sands. We run four miles through this, in a direction a little to the west of north, wheel again to the west, and pass into a portion of the canyon where the characteristics are more like those

above the bend. At night we stop at the mouth of a creek coming in from the right, and suppose it to be the Paria, which was described to me last year by a Mormon missionary. Here the canyon terminates abruptly in a line of cliffs, which stretches from either side across the river.

*August 5.*--With some feeling of anxiety we enter a new canyon this morning. We have learned to observe closely the texture of the rock. In softer strata we have a quiet river, in harder we find rapids and falls. Below us are the limestones and hard sandstones which we found in Cataract Canyon. This bodes toil and danger. Besides the texture of the rocks, there is another condition which affects the character of the channel, as we have found by experience. Where the strata are horizontal the river is often quiet, and, even though it may be very swift in places, no great obstacles are found. Where the rocks incline in the direction traveled, the river usually sweeps with great velocity, but still has few rapids and falls. But where the rocks dip up stream and the river cuts obliquely across the upturned formations, harder strata above and softer below, we have rapids and falls. Into hard rocks and into rocks dipping up stream we pass this morning and start on a long, rocky, mad rapid. On the left there is a vertical rock, and down by this cliff and around to the left we glide, tossed just enough by the waves to appreciate the rate at which we are traveling.

The canyon is narrow, with vertical walls, which gradually grow higher. More rapids and falls are found. We come to one with a drop of sixteen feet, around which we make a portage, and then stop for dinner. Then a run of two miles, and another portage, long and difficult; then we camp for the night on a bank of sand.

### **Reading Selection 3**

#### **(From Chapter 11, "From the Little Colorado to the Foot of the Grand Canyon")**

*August 27.*--This morning the river takes a more southerly direction. The dip of the rocks is to the north and we are running rapidly into lower formations. Unless our course changes we shall very soon run again into the granite. This gives some anxiety. Now and then the river turns to the west and excites hopes that are soon destroyed by another turn to the south. About nine o'clock we come to the dreaded rock. It is with no little misgiving that we see the river enter these black, hard walls. At its very entrance we have to make a portage; then let down with lines past some ugly rocks. We run a mile or two farther, and then the rapids below can be seen.

About eleven o'clock we come to a place in the river which seems much worse than any we have yet met in all its course. A little creek comes down from the left. We land first on the right and clamber up over the granite pinnacles for a mile or two, but can see no

way by which to let down, and to run it would be sure destruction. After dinner we cross to examine on the left. High above the river we can walk along on the top of the granite, which is broken off at the edge and set with crags and pinnacles, so that it is very difficult to get a view of the river at all. In my eagerness to reach a point where I can see the roaring fall below, I go too far on the wall, and can neither advance nor retreat. I stand with one foot on a little projecting rock and cling with my hand fixed in a little crevice. Finding I am caught here, suspended 400 feet above the river, into which I must fall if my footing fails, I call for help. The men come and pass me a line, but I cannot let go of the rock long enough to take hold of it. Then they bring two or three of the largest oars. All this takes time which seems very precious to me; but at last they arrive. The blade of one of the oars is pushed into a little crevice in the rock beyond me in such a manner that they can hold me pressed against the wall. Then another is fixed in such a way that I can step on it; and thus I am extricated.

Still another hour is spent in examining the river from this side, but no good view of it is obtained; so now we return to the side that was first examined, and the afternoon is spent in clambering among the crags and pinnacles and carefully scanning the river again. We find that the lateral streams have washed boulders into the river, so as to form a dam, over which the water makes a broken fall of 18 or 20 feet; then there is a rapid, beset with rocks, for 200 or 300 yards, while on the other side, points of the wall project into the river. Below, there is a second fall; how great, we cannot tell. Then there is a rapid, filled with huge rocks, for 100 or 200 yards. At the bottom of it, from the right wall, a great rock projects quite halfway across the river. It has a sloping surface extending up stream, and the water, coming down with all the momentum gained in the falls and rapids above, rolls up this inclined plane many feet, and tumbles over to the left. I decide that it is possible to let down over the first fall, then run near the right cliff to a point just above the second, where we can pull out into a little chute, and, having run over that in safety, if we pull with all our power across the stream, we may avoid the great rock below. On my return to the boat I announce to the men that we are to run it in the morning. Then we cross the river and go into camp for the night on some rocks in the mouth of the little side canyon.

After supper Captain Howland asks to have a talk with me. We walk up the little creek a short distance, and I soon find that his object is to remonstrate against my determination to proceed. He thinks that we had better abandon the river here. Talking with him, I learn that he, his brother, and William Dunn have determined to go no farther in the boats. So we return to camp. Nothing is said to the other men.

For the last two days our course has not been plotted. I sit down and do this now, for the purpose of finding where we are by dead reckoning. It is a clear night, and I take out the sextant to make observation for latitude, and I find that the astronomic determination agrees very nearly with that of the plot--quite as closely as might be expected from a meridian observation on a planet. In a direct line, we must be about 45 miles from the mouth of the Rio Virgen. If we can reach that point, we know that there are settlements up that river about 20 miles. This 45 miles in a direct line will probably be 80 or 90 by

the meandering line of the river. But then we know that there is comparatively open country for many miles above the mouth of the Virgen, which is our point of destination.

As soon as I determine all this, I spread my plot on the sand and wake Howland, who is sleeping down by the river, and show him where I suppose we are, and where several Mormon settlements are situated.

We have another short talk about the morrow, and he lies down again; but for me there is no sleep. All night long I pace up and down a little path, on a few yards of sand beach, along by the river. Is it wise to go on? I go to the boats again to look at our rations. I feel satisfied that we can get over the danger immediately before us; what there may be below I know not. From our outlook yesterday on the cliffs, the canyon seemed to make another great bend to the south, and this, from our experience heretofore, means more and higher granite walls. I am not sure that we can climb out of the canyon here, and, if at the top of the wall, I know enough of the country to be certain that it is a desert of rock and sand between this and the nearest Mormon town, which, on the most direct line, must be 75 miles away. True, the late rains have been favorable to us, should we go out, for the probabilities are that we shall find water still standing in holes; and at one time I almost conclude to leave the river. But for years I have been contemplating this trip. To leave the exploration unfinished, to say that there is a part of the canyon which I cannot explore, having already nearly accomplished it, is more than I am willing to acknowledge, and I determine to go on.

I wake my brother and tell him of Howland's determination, and he promises to stay with me; then I call up Hawkins, the cook, and he makes a like promise; then Sumner and Bradley and Hall, and they all agree to go on.

*August 28.*--At last daylight comes and we have breakfast without a word being said about the future. The meal is as solemn as a funeral. After breakfast I ask the three men if they still think it best to leave us. The elder Howland thinks it is, and Dunn agrees with him. The younger Howland tries to persuade them to go on with the party; failing in which, he decides to go with his brother.

Then we cross the river. The small boat is very much disabled and unseaworthy. With the loss of hands, consequent on the departure of the three men, we shall not be able to run all of the boats; so I decide to leave my "Emma Dean."

Two rifles and a shotgun are given to the men who are going out. I ask them to help themselves to the rations and take what they think to be a fair share. This they refuse to do, saying they have no fear but that they can get something to eat; but Billy, the cook, has a pan of biscuits prepared for dinner, and these he leaves on a rock.

Before starting, we take from the boat our barometers, fossils, the minerals, and some ammunition and leave them on the rocks. We are going over this place as light as

possible. The three men help us lift our boats over a rock 25 or 30 feet high and let them down again over the first fall, and now we are all ready to start. The last thing before leaving, I write a letter to my wife and give it to Howland. Sumner gives him his watch, directing that it be sent to his sister should he not be heard from again. The records of the expedition have been kept in duplicate. One set of these is given to Howland; and now we are ready. For the last time they entreat us not to go on, and tell us that it is madness to set out in this place; that we can never get safely through it; and, further, that the river turns again to the south into the granite, and a few miles of such rapids and falls will exhaust our entire stock of rations, and then it will be too late to climb out. Some tears are shed; it is rather a solemn parting; each party thinks the other is taking the dangerous course.

My old boat left, I go on board of the "Maid of the Canyon." The three men climb a crag that overhangs the river to watch us off. The "Maid of the Canyon" pushes out. We glide rapidly along the foot of the wall, just grazing one great rock, then pull out a little into the chute of the second fall and plunge over it. The open compartment is filled when we strike the first wave below, but we cut through it, and then the men pull with all their power toward the left wall and swing clear of the dangerous rock below all right. We are scarcely a minute in running it, and find that, although it looked bad from above, we have passed many places that were worse. The other boat follows without more difficulty. We land at the first practicable point below, and fire our guns, as a signal to the men above that we have come over in safety. Here we remain a couple of hours, hoping that they will take the smaller boat and follow us. We are behind a curve in the canyon and cannot see up to where we left them, and so we wait until their coming seems hopeless, and then push on. And now we have a succession of rapids and falls until noon, all of which we run in safety. Just after dinner we come to another bad place. A little stream comes in from the left, and below there is a fall, and still below another fall. Above, the river tumbles down, over and among the rocks, in whirlpools and great waves, and the waters are lashed into mad, white foam. We run along the left, above this, and soon see that we cannot get down on this side, but it seems possible to let down on the other. We pull up stream again for 200 or 300 yards and cross. Now there is a bed of basalt on this northern side of the canyon, with a bold escarpment that seems to be a hundred feet high. We can climb it and walk along its summit to a point where we are just at the head of the fall. Here the basalt is broken down again, so it seems to us, and I direct the men to take a line to the top of the cliff and let the boats down along the wall. One man remains in the boat to keep her clear of the rocks and prevent her line from being caught on the projecting angles. I climb the cliff and pass along to a point just over the fall and descend by broken rocks, and find that the break of the fall is above the break of the wall, so that we cannot land, and that still below the river is very bad, and that there is no possibility of a portage. Without waiting further to examine and determine what shall be done, I hasten back to the top of the cliff to stop the boats from coming down. When I arrive I find the men have let one of them down to the head of the fall. She is in swift water and they are not able to pull her back; nor are they able to go on with the line, as it is not long enough to reach the higher part of the cliff which is just before them; so they take a bight around a crag. I send two men back for the other line. The boat is in very swift water, and Bradley is standing in the open compartment, holding out his oar to prevent her from striking

against the foot of the cliff. Now she shoots out into the stream and up as far as the line will permit, and then, wheeling, drives headlong against the rock, and then out and back again, now straining on the line, now striking against the rock. As soon as the second line is brought, we pass it down to him; but his attention is all taken up with his own situation, and he does not see that we are passing him the line. I stand on a projecting rock, waving my hat to gain his attention, for my voice is drowned by the roaring of the falls. Just at this moment I see him take his knife from its sheath and step forward to cut the line. He has evidently decided that it is better to go over with the boat as it is than to wait for her to be broken to pieces. As he leans over, the boat sheers again into the stream, the stem-post breaks away and she is loose. With perfect composure Bradley seizes the great scull oar, places it in the stern rowlock, and pulls with all his power (and he is an athlete) to turn the bow of the boat down stream, for he wishes to go bow down, rather than to drift broadside on. One, two strokes he makes, and a third just as she goes over, and the boat is fairly turned, and she goes down almost beyond our sight, though we are more than a hundred feet above the river. Then she comes up again on a great wave, and down and up, then around behind some great rocks, and is lost in the mad, white foam below. We stand frozen with fear, for we see no boat. Bradley is gone! so it seems. But now, away below, we see something coming out of the waves. It is evidently a boat. A moment more, and we see Bradley standing on deck, swinging his hat to show that he is all right. But he is in a whirlpool. We have the stem-post of his boat attached to the line. How badly she may be disabled we know not. I direct Sumner and Powell to pass along the cliff and see if they can reach him from below. Hawkins, Hall, and myself run to the other boat, jump aboard, push out, and away we go over the falls. A wave rolls over us and our boat is unmanageable. Another great wave strikes us, and the boat rolls over, and tumbles and tosses, I know not how. All I know is that Bradley is picking us up. We soon have all right again, and row to the cliff and wait until Sumner and Powell can come. After a difficult climb they reach us. We run two or three miles farther and turn again to the northwest, continuing until night, when we have run out of the granite once more.

*August 29.*--We start very early this morning. The river still continues swift, but we have no serious difficulty, and at twelve o'clock emerge from the Grand Canyon of the Colorado. We are in a valley now, and low mountains are seen in the distance, coming to the river below. We recognize this as the Grand Wash.

A few years ago a party of Mormons set out from St. George, Utah, taking with them a boat, and came down to the Grand Wash, where they divided, a portion of the party crossing the river to explore the San Francisco Mountains. Three men--Hamblin, Miller, and Crosby--taking the boat, went on down the river to Callville, landing a few miles below the mouth of the Rio Virgen. We have their manuscript journal with us, and so the stream is comparatively well known.

To-night we camp on the left bank, in a mesquite thicket.

The relief from danger and the joy of success are great. When he who has been chained by wounds to a hospital cot until his canvas tent seems like a dungeon cell, until the



groans of those who lie about tortured with probe and knife are piled up, a weight of horror on his ears that he cannot throw off, cannot forget, and until the stench of festering wounds and anaesthetic drugs has filled the air with its loathsome burthen,--when he at last goes out into the open field, what a world he sees! How beautiful the sky, how bright the sunshine, what "floods of delirious music" pour from the throats of birds, how sweet the fragrance of earth and tree and blossom! The first hour of convalescent freedom seems rich recompense for all pain and gloom and terror.

Something like these are the feelings we experience to-night. Ever before us has been an unknown danger, heavier than immediate peril. Every waking hour passed in the Grand Canyon has been one of toil. We have watched with deep solicitude the steady disappearance of our scant supply of rations, and from time to time have seen the river snatch a portion of the little left, while we were a-hungered. And danger and toil were endured in those gloomy depths, where oftentimes clouds hid the sky by day and but a narrow zone of stars could be seen at night. Only during the few hours of deep sleep, consequent on hard labor, has the roar of the waters been hushed. Now the danger is over, now the toil has ceased, now the gloom has disappeared, now the firmament is bounded only by the horizon, and what a vast expanse of constellations can be seen!

The river rolls by us in silent majesty; the quiet of the camp is sweet; our joy is almost ecstasy. We sit till long after midnight talking of the Grand Canyon, talking of home, but talking chiefly of the three men who left us. Are they wandering in those depths, unable to find a way out? Are they searching over the desert lands above for water? Or are they nearing the settlements?