

**JOHN WESLEY POWELL**  
DOWN THE GREAT UNKNOWN

By

Lee Stetson

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ACT ONE

As the lights rise, the voice rumble heard off-stage gradually becomes distinguishable as the International Irrigation Congress in convention. The set is an antechamber that leads into the great hall where the delegates are gathered. It is a simple, if elegant room, with desk, chair, and coat rack. A hat and coat hang from the coat rack. A pitcher of water and a glass sit on the desk, along with some papers. The door to the convention hall is off-stage, but obviously open, as we hear a speaker addressing the crowd.

OFF STAGE VOICE

My fellow delegates to the International Irrigation Congress! We are today proclaiming the "Republic of Irrigation" and intend to inscribe upon its massive arch those two synonymous terms, irrigation and independence! After summing up the achievements of our three days of deliberations, arrived at by consensus of several hundred delegates from more than twenty states and territories and a dozen foreign countries, we will have the added delight of presenting to you the thoughts and considerations of Major John Wesley Powell, former director of the United States Geological Survey Department, who will deliver to us a paper on "The Water Supplies of the Arid Region". It will be a great delight to add his venerable voice to the vision we have here created - the sensible development of the arid west, with the establishment of a million 40 acres new farms, adequately furnished with life-giving water, for the productive development of the Western United States. First then to sum up the achievements and resolutions of this Congress....

The door suddenly slams shut; the speaker's voice is cut off and we can hear only the murmur of the crowd. John Wesley Powell enters, formally dressed, carrying a large rolled map in his hand. He is obviously angry, and not yet aware of the presence of the audience.

He flings the map down into the umbrella well of the coat rack, digs into the coat pocket, extracting two copies of the speech he is scheduled to deliver to the delegates, and then crosses to the desk where he pours himself a glass of water. During these actions he is muttering to himself, increasingly unable to contain his fury.

POWELL

The feather-headed idiots! Damn their irresponsible hides! We will not need your map, Major Powell. Simply read your paper, Major Powell. No questions to follow, Major Powell. No discussions allowed, Major Powell! It will not be necessary to draw any conclusions, Major Powell. Oh, and please allow me a priori perusal of your speech. And keep colloquial, Major Powell. Good God, what morons.

(At this last outburst he is about to take a drink from the of glass of water he has poured, and is stunned to suddenly notice the audience.)

Oh. Oh, my dear friends. I am so very glad to see you, and so very embarrassed that you should see me like this. I had no idea... you do forgive me - I have not forgotten my promise to tell you the story of the '69 expedition, but in my anger at these knuckleheads, I did forget that we were to meet here. Well, it will be a joy to wander once again down the Colorado. Not only because it will fulfill my promise to you, but it should serve to drive this Irrigation Congress from my mind for a spell. And we'll have ample time, for the Chairman has assured me that they will babble on for an hour or so... which reminds me.

(He recovers himself, speaking more formally, picks up papers from the desk.)

He has asked for a prior perusal of my speech - no doubt to assure himself that I will not overly disturb the delegates' vision of paradise to-come. It is only a description of the "Water Supplies of the Arid Region" - which they will use to justify their senseless enterprise. They will be kind enough to allow me to tell them where the water is, as long as I forbear to tell them what the water means. The fools!

(He throws the papers back onto the desk.)

Did you hear that windbag? They want to create a million forty acre farms!

(MORE)

## POWELL (CONT'D)

"We are today proclaiming the Republic of Irrigation and intend to inscribe upon its massive arch those two synonymous terms, irrigation and independence. 'Synonymous terms'? - a dazzling thought, a noble thought, -with only one fatal flaw; it's not true. Independence is the very least likely outcome of their plans for irrigation. The fact is, all the good public lands fit for settlement are gone. And on the land remaining, individual farmers with small holdings cannot farm as men have done in the east, where rainfall is plentiful. Here! Just look at this map, which I brought along hoping to enlighten these fools. If you collected and then evenly distributed all of the surface water flowing between the Columbia River and the Gulf of Mexico, you would still have a desert almost indistinguishable from the one we have today. Irrigation is now dependent upon moving the waters of some great river and that requires machinery, dams, reservoirs, canals, - costing large sums of money, employing many men, and all beyond the reach of our average farmer.

I have been saying it for years: in the arid West, value lies in the water, not in the land. And if one man or corporation holds the rights to that water he practically owns that land - a fact not lost on these capitalists and promoters, many of whom have already appropriated all the streams, and obtained options on the land. They will then make contracts to supply water, organize and control construction companies, all in the name of profit. The real challenge for this Congress is to find some practical means by which water rights may be distributed among individual farmers.

Irrigation and Independence, indeed! These delegates desperately need irrigation - of their brains - to leach out the greed in them. I swear if Christ were to appear before them on the Cross, they'd see only the firewood. Enough! Good friends, I know that you are not here tonight to hear me rant on about this irrigation Congress, so let me fulfill my promise to you and tell you now of my first exploration of the Colorado River and the Grand Canyon. Some of you are too young to remember that in 1869, that this was the last unexplored region in the entire United States.

(He retrieves the map, hangs it on the coatrack.)

(MORE)

## POWELL (CONT'D)

We knew where the Colorado and its tributary, the Green, plunged into the canyon lands, and knew too that it came out at the Grand Wash Cliffs in Arizona on its way to the Gulf of California. But was the river passable, a logical route to California? Did the river disappear underground, as some claimed? Did the river freeze, requiring a long stay for the winter? Would hostile Indians bar our way? A thousand miles of mystery which in May of 1869 I determined to resolve.

Our original party of nine - Dunn, the Howland brothers, Hawkins and Hall, Sumner and Bradley, my brother Walt and myself, gathered on the banks of the Green River in Wyoming to begin our descent. Here we met another man, Frank Goodman, a stout willing Englishman, with a florid face and more florid anticipations' of a glorious trip, and we added him to the crew. We had four boats, three built of oak, staunch and firm, double-ribbed, with double stem and stern posts, and further strengthened by bulkheads, dividing each into three compartments, two of which, fore and aft, were decked, were forming water-tight cabins - to enable them to float should waves roll over them on rough river. They were given their names by the crews manning them; "Kitty Clyde's Sister", 'Maid of the Canyon", were the names quickly settled upon for two of them, and after a long period of heavy deliberation, the last was called the "No-Name".

These boats were heavily loaded, each holding some 2,000 pounds, and only with the utmost care was it even possible to float without shipping water. We took provisions expected to last ten months - clothing, ammunition, axes, hammers, saws, - and for scientific work, we had a number of sextants, chronometers, barometers, thermometers, compasses etc. The fourth boat I called the Emma Dean for my lovely wife. It was made of pine, very light, only 16 feet in length, with a sharp cutwater, and every way built for fast rowing, for it was in this boat I intended to proceed ahead of the others to explore the channel.

My boatmen in the Emma Dean were the kind of cool-headed mountain men now fast disappearing in the West, J. C. Sumner and William H Dunn. Sumner was a fair-haired delicate-looking man, but a great traveler in the mountains. He once crossed the Rockies in mid-winter on snowshoes.

(MORE)

## POWELL (CONT'D)

Dunn was a hunter, trapper and mule packer in Colorado, with raven hair falling down his back, for he had a sublime contempt of shears and razors. His one and only uniform was of buckskin, donned years before, and since he had lived primarily on fatty venison, this odious outfit shone with dark, resinous luster.

And so, in late May, the good people of Green River City gathered to watch us raise our little flag, and push the boats from shore, reeling and rocking into the swift current and down into the barren desolation and strangely carved rocks of the Green River badlands.

And so began our incredible voyage of three months. The early going was filled with only minor difficulties as we honed our skills on the river. We ran aground on sandbars occasionally, were swamped frequently and often thrown from the boats, like being bucked from a wild horse. But soon, the headlong rides, shooting past rocks and islands, rearing and plunging with the waves filled me-with an exhilaration I only experienced before in riding a fleet horse over the outstretched prairie. The "Emma Dean", being light, was tossed about in a way that threatened to shake her to pieces, and we plunged along singing and yelling like drunken sailors. Jack Sumner' said later that it was like sparking a black-eyed girl - just dangerous enough to be exciting. But the danger and excitement turned to disaster at the Canyon of Lodore. Lodore was the fanciful name given to the canyon by Andy Hall, after the English waterfall commemorated in Southey's poem. Andy, a Scotch boy, only nineteen, with deep set blue eyes and a beaked nose had, despite his youth, much experience in hunting, trapping and fighting Indians. That he should know the poem Lodore surprised me, and disgusted Sumner, who said that the, "idea of diving into musty trash to find names for new discoveries on a new continent is, to say the least, un-American".

We came to rapids where it was necessary to make a portage, that is, to carry our boats and equipment around it on the banks. These rapids or broken falls usually occur when the channel is suddenly narrowed by rocks tumbling down from the cliffs or washed in by lateral streams. Now immediately above this channel, there was a bay of quiet water, enabling us to land with ease. I noticed that at the top of rapid, the water descended from the bay with a smooth, unruffled surface into sag, and thence into the narrow angry channel below.

(MORE)

## POWELL (CONT'D)

Above this sag, we could row with safety, taking great care not to pass over the brink into this deceptive pit. We landed the little boat, the Emma Dean, and I signaled the others to come up behind. The next boat behind me made shore all right, and so leaving one of my men with a flag to guide in the others, I walked along the bank to examine the ground ahead.

The first fall was not great, only 10 or 12 feet and we often ran such, but below, the river tumbled down again for 40 or 50 feet, in a channel filled with dangerous rocks that broke the waves into whirlpools and beat them into foam. Suddenly, I heard a shout, and looking round, saw one of the boats shooting down the center of the sag. It was the "No-Name", with Captain Howland, his brother and Goodman. Scrambling along, I passed 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 lost their oars; she swung around, and was carried down at a rapid rate, broadside on for a few yards, then, striking amidships on another rock with great force, she was broken quite in two and the men thrown into the river. But the larger part of the boat floated buoyantly, and they soon seized it. Down the river they drifted, past the rocks for few hundred yards, to a second rapid filled with huge boulders, where the boat struck again and was dashed to pieces and the men and fragments were soon carried beyond my sight. Running along, I turned a bend and saw a man's head above the water, washed about in a whirlpool below a great rock.

It was Frank Goodman, clinging to the rock, with a grip upon which his life depended. Howland was going to his aid from an island on which he had been washed. Soon he came near enough Frank with a pole, which he extended toward him. Frank let go of the rock, grasped the pole, and was pulled ashore. Seneca Howland had been washed farther down the island and caught by some rocks, and though somewhat bruised, managed to get ashore.

And so now the three men were on an island, with a swift, dangerous river on either side or a fall below. The "Emma Dean", the lightest and most maneuverable of the boats, was soon brought down, and Sumner, starting above as far as possible, pushed out. Skillfully plying the oars, a few strokes set him on the island at the proper point.

(MORE)

## POWELL (CONT'D)

Then they all pulled the boat up stream as far as they were able, until they stood in water up to their necks. One sat on a rock holding the boat until the others were ready to pull, then gave the boat a push, and climbed in as they pulled for mainland, which they reached in safety. We were as glad to shake hands with them as though they had been on a voyage around the world and wrecked on a distant coast.

We had lost a full third of our provisions, and the crew of that boat had lost all of their clothing, save what they still wore. And so we adopted the name Disaster Falls for the scene of so much peril and loss. Frank Goodman had lost not only his clothing, but all of his enthusiasm for the trip, and as we were still in known country, with an Indian agency not far away, he decided that the river's whirlpools were better left to fools", and said farewell.

Disaster Falls. Even Sumner seemed to find the name appropriate, - American enough, if not overly poetic. The words to describe that mighty river and its canyons are beyond even the power of poets.

The landscape everywhere, away from the river is of rock - cliffs, tables, plateaus, terraces, crags of rock, ten thousand strangely carved forms; rocks everywhere, and in much of it no vegetation, no soil, no sand. And in many places the walls, which rise from the water's edge, overhang on either side.

When thinking of these rocks, one must not conceive of piles of boulders or heaps of fragments, but of a whole land of naked rock, with giant forms carved on it; cathedral-shaped buttes, towering hundreds or thousands of feet, cliffs that cannot be scaled, and canyon walls that shrink the river into insignificance, with vast, hollow domes and tall pinnacles and shafts, all highly colored - buff, gray, brown, red orange chocolate- never lichenized, never moss-covered, but bare and often polished.

And ledges of rock- not such ledges as you might have seen where the quarryman splits his blocks, but ledges from which the gods might quarry mountains, which rolled out on the plain, would stand a lofty range. And cliffs of rock, not such as, you might have seen where the swallow builds his nest, but cliffs where the soaring eagle is lost to view.

(MORE)

## POWELL (CONT'D)

Always as we descended, an endless, curious ensemble of wonderful features - carved walls, royal arches, glens, alcove gulches, mounds and monument, shaped from sandstone, limestone from marble, from the hard granite, and in some, places lava flows left even more strangely shaped features.

And through it all, we heard, unceasingly from the hour we entered it until the hour we emerged, the roar of the canyon waters - no quiet in all that time. But its walls and cliffs, peaks and crags, its amphitheaters and alcoves tell a story of beauty and grandeur that I hear yet - and shall hear forever. For that land has a voice, an old wise voice, and no observant traveler there can fail to heed it.

The murmur of the convention folks without is heard.

## POWELL (CONT'D)

Unless it be these delegates to the Irrigation Congress, of course!

I should like to take these delegates by the scruff of the neck and march them out through the arid west for a month or two; then they would be forced to recognize that the country simply does not need their plans and proclamations, for the country is already well defined - by nature. And if we could only be wise enough to follow nature's plan, the west truly could be wisely settled.

It is stunningly simple. In any part of this mountainous country all of the streams combined together form a drainage system, bounded above and on each side by heights of land, with the irrigable lands lying below on the mesas and low plains. This I call a hydrographic basin.

Now in almost every hydrographic basin there is already found a enterprising population, with common interests, for not a spring or creek can be touched without affecting every person who cultivates the soil in the region. Let these people organize, under national and State laws, into a great irrigation district, including an entire hydrographic basin, and let them make their own laws for the division of the waters. They can tax themselves and borrow money, for they would have a basis of land titles, water rights, pasturage, forest and power rights. There are some great rivers that would have to be divided into two or more districts, but the majority would be of the character described, with each community possessing its own irrigation works.

(MORE)

## POWELL (CONT'D)

Give these irrigable lands to the people in common as homesteads. They are more likely to see the land for what it is, and organize themselves in conformity to nature, as they should.

And I shall go back to my story, as I should. Often while the men were engaged in camp work or while making a portage, I would climb the surrounding cliffs, to obtain a good outlook on the surrounding country, make scientific observations, to seek out interesting fossils, or explore the old ruins we discovered there, - usually only foundations, of stones laid in mortar, with a great deal of pottery strewn - about, etchings and hieroglyphics on the rocks, and old trails, sometimes deeply worn into the rock.

It is ever a source of wonder to me that these ancient people sought such inaccessible places for their homes. Yet, how exhilarating to stand high up along the walls among the ghosts of these ancient inhabitants. Exhilarating too, to get out onto the brink of the canyon and look down to the water below. Although it took several years of mountain climbing to cool my nerves so that I could sit with my feet over the edge and calmly look down a precipice 2,000 feet. And I still cannot look on and see another do the same. I must either bid him come away or turn my head. And for all my current coolness, I once found the experience of looking over the brink entirely too exhilarating.

We had encamped opposite a long peninsular rock we named Echo Rock, and desiring to climb it as part of a series of astronomic observations for latitude and longitude, Bradley and I took the little boat and pulled upstream, landing on a talus of rocks and scrambled along until we reached a place where the river swept against the wall. Here we found a shelf along which we could pass, started up a gulch, then up again over a series of broken rocks, benches, and crevices, until we had ascended 700 or 800 feet, where we met a sheer precipice. We found a place where it seemed possible to climb and I went ahead; Bradley handed the barometer up to me and followed, and thus we proceeded stage by stage, until we were nearly to the summit, where, by making a spring, I gained a foothold in a little crevice, and standing on my toes, grasped an angle of the rock overhead.

(MORE)

## POWELL (CONT'D)

Here, I found I could get up no farther and could not step back, for I could not reach a foothold below without letting go with my hand, and I dared not let go. I called to Bradley for help, and he found a way by which he could get to the top of the rock over my head, but could not reach me.

He suggested that he might reach me with the strap of the barometer case, but I feared that I could not hold onto it, and he began to search around for some stick or limb of a tree, taking time that seemed very precious to me, and of course, found none in that almost treeless canyon. The moment became rapidly critical. It was eighty feet or so to the foot of the precipice. If I lost my hold I would fall to the bottom and then perhaps roll over the bench and tumble still farther down the cliff. Standing on my toes, my muscles now began to tremble. At this instant, it occurred to Bradley to take off his trousers, which he did, and swung them down to me. I hugged the rock, let go with my hand, seized the dangling legs, and with his assistance gained the top. Never before or since have I been so enamoured of another man's trousers!

However dangerous we might find the cliffs, it was the river that was forever treacherous, forever instructing us with its harsh wild lessons, slowly snatching away our provisions, our equipment and our strength. For now, instead of freely running the river, we were often forced to spend much of the time lining the boats, that is, attaching ropes to them and slowly guiding them through the rocky rapids from shore. In such a case, one man remained in the boat to keep her clear of the rocks by pushing off with an oar, and preventing her line from being caught on the projecting angles. On one such day Bradley was in the boat. G.Y. Bradley was a scrupulously careful man, with a ready hand and powerful arm, and in danger, rapid judgement and unerring skill, all of which he was shortly to need.

We had approached a rather bad place, where a little stream came in from the left, below which there was a fall, and still below another fall. Above, the river tumbled down, over and among the rocks, in whirlpools and great waves, the waters lashed into mad, white foam. Now there was a bed of basalt on the other side of the canyon, with a bold escarpment a hundred feet high.

(MORE)

## POWELL (CONT'D)

It seemed to me that we could land the boats at a spot well ahead of the first fall, then climb the basalt, run a line, and let the boat down further.

The men went to work, and I climbed the cliff to obtain a better view, and descending on the other side by broken rocks, found that I'd made a dangerous error - there was no possible landing place before the break of the first fall. I raced back to the top of the cliff to stop the boats from coming down. But when I arrived, I found that the men had already let Bradley's boat down to the head of the fall.

She was in swift water and they were not able to pull her back; nor were they able to go on with the line, as it was not long enough to reach the higher part of the cliff, so they took a bight around a crag, to hold her where she was, while I sent two men back for the other line.

Bradley was standing in the open compartment, holding out his oar to prevent her from striking against the foot of the cliff. First she'd shoot out into the stream and up as far as the line would permit, and then, wheeling, drove headlong against the rock, out and back, now straining on the line, now striking against the rock. I stood on a projecting rock, waving my hat to gain his attention, to let him know we were passing him the line, but my voice was drowned out by the roaring falls, and his attention was all taken up with his own situation. Finally, evidently deciding that it was better to go over with the boat than wait for her to be broken to pieces, Bradley took his knife from its sheath and stepped forward to cut the line. But, as he leaned over, the boat steered again into the stream and now, suddenly, the stem-post broke away, flying high into the air, and the boat was away. With perfect composure Bradley seized the great scull oar, placed it in the stern rowlock, and pulled with all his power, and he is an athlete, to turn the boat downstream, for he wished to go bow down, rather than to drift broadside on. One, two, strokes he made, and a third, fairly turning the boat just as she went over and down almost beyond our sight, though we were more than a hundred feet above the river. Then she came up again on a great wave, and down and up, then around behind some great rocks, and was lost in the mad, white foam below. We stood frozen with fear, - Bradley was gone! - so it seemed. But then, away below, we saw something emerging out of the waves, evidently a boat.

(MORE)

## POWELL (CONT'D)

A moment more and we saw Bradley standing on deck, swinging his hat to show that he was all right. But he was in a whirlpool, and we had the stem-post of his boat attached to the line.

So Hawkins, Hall and I ran to the other boat, jumped aboard, pushed out, and away we went over the falls, heroes to the rescue. Immediately, a powerful wave rolled over us and our boat became totally unmanageable, then another great wave broke over us and our boat, rolled over, tumbling and tossing, I know not how. Indeed all I remember is that it was Bradley who was soon plucking the gallant heroes out of the water. He later accused me of "foolish fossilizing on the bottom of the river."

I once showed Bradley the fossilized bones of an alligator, he nodded sagely, and said, "Poor fellow, must have been on an independent exploring expedition, and failed as many do for want of breath. At least," he said, "he was sensible enough to die before descending the next rapids."

None of my companions were overly appreciative of my scientific studies. Fossils and rock samples were heavy items to carry through waist high water and over rocks when avoiding rapids. The barometers, heavy and delicate, required long hard climbs up the canyon walls to take readings, the sextant calculations and fossil hunting meant long delays, - and especially in the latter days, on half rations and no end of our journey in sight - the men were anxious to move on. But then, adventure and exploration were their motives - and perhaps the hope of discovering gold in that unknown country.

But it was geology, natural history, anthropology, surveying for cartography maps, - in short, science - that led me down the river. Science had been my passion since early boyhood. My father, from whom I inherited my wanderlust, had a passion only for religion, and as a Methodist lay preacher was constantly uprooting the family to take the gospel further out on the fringes of the frontier. And when we had settled for a time in Jackson, Ohio in the 1840s, I came under the happy influence of Big George Crookham.

Big George, all 350 jovial pounds of him, was an astonishing man to be found on the frontier.

(MORE)

## POWELL (CONT'D)

His house was at once library, museum, and workshop, and I spent countless hours among Indian relics, plants, animals, fossils, chemistry experiments, manuscripts, and books - books by the cartload - all good nourishment for a boy hungry for knowledge. And he took me on long rambling field trips teaching me professional methods of geology and exploration.

This early schooling came to an abrupt and bitter end; like my father, Big George Crookham was an ardent abolitionist, and denounced slavery loudly and often. One sad night southern sympathizers torched his house and burned his precious collection to the ground.

My father was anxious for me to follow in his footsteps, but Crookham had led me to my calling, - science - and nothing could shake it's hold on me. As a young man I had a collection of plants even larger than Crookham's, more than 6,000 of them, and a large collection of land and river mollusks, and as I grew older I began exploring the nearby rivers of the frontier in search of more.

Even the war failed to stop my passion for collecting, - at the siege of Vicksburg, where I spent the hardest forty days of my life, digging trenches to bring up my artillery, under constant fire, I was delighted to find fossil seashells our digging had uncovered.

And so it was that geology and anthropology led me West and to the mystery of the Grand Canyon.

(Powell swings about in his chair, and strikes the stump of his right arm against a side table. He gasps in pain, rendered for a moment breathless, and quickly regains his composure.)

Excuse me. This cursed stump. You would think that after thirty years - well, the unhappy truth is that the nerves have never properly healed; indeed, I'm about to be subjected to the surgeon's knives once again - for the third time. I have great hopes that finally the pain will be eased.

Well, the War, if it took something from me, - gave me much else, foremost of which, I suppose, was the opportunity of learning to command men in difficult circumstances. And it provided me with men as well - on the Canyon expedition, Jack Sumner, my brother Walter, the cook, Billy Hawkins had all been soldiers in the War Between the States. And Bradley I found in an army outpost in Wyoming shortly before our departure.

(MORE)

## POWELL (CONT'D)

He thought the adventure foolhardy, I remember, but said that "if it will let me out of the army, I'd agree to explore the River Styx."

And in truth, to us veterans, even the unknown perils of the Colorado could never match the hell and horror of that War. It was at Shiloh, in '62. I was then a captain of artillery, and in the heat of that battle, as I raised my right hand for a signal to the gunners, a musket ball struck my arm above the wrist, glancing toward the elbow, burrowing deep into the flesh. The arm was removed two days later.

Chained by wounds to a hospital cot, the groans of those lying about tortured with probe and knife, a weight of horror on my ears that I cannot throw off, cannot forget, the loathsome stench of festering wounds and anesthetic drugs filling the air, my canvass tent seemed like a dungeon cell. However gloomy I found the Grand Canyon, however hard the deprivation we were soon to suffer, - not even the death of three of my men - could match the endless horror of that war.

War. The nightmare relic of our animal condition. Many of our modern thinkers have found in war the evolutionary law of natural selection, "the survival of the fittest". But while injustice and cruelty stain the path of our history, I believe that man has risen in culture not by reason of his brutal nature; but because he has been emancipated from such cruelty.

After all my years steeped in geology and anthropology, I believe in evolution. But too fierce an attachment to this doctrine teaches that man is enslaved to powers over which he has no control I believe that human evolution is the result of the exercise of human faculties. By the establishment of institutions, the evolution of reason, and the application of science, we are evolving - away from savagery, barbarism and war, and toward civilization, Science!

Again we hear the murmur of the Congress in the next room.

OFF STAGE VOICE

Major! Your speech!

POWELL

Science! A word I'd like to tattoo on the foreheads of these delegates tonight.

(MORE)

## POWELL (CONT'D)

Which reminds me: the Chairman has "requested" a copy of my speech, and should take a moment to go and give it to him. I suppose it will reassure him that it contains only a general description and will not require him to think. Though since it's perfectly obvious that he cannot think, I am not really confident that he can read.

(He goes to the desk to pick up a copy; looks at it ruefully.)

'The Water Supplies of the Arid Region'! Well, this dry little study should do something to inform them, but as they seem intent on the delusion of establishing a million 40 acre farms, it should provide just enough information to justify the beginnings of disaster, of piling up a heritage of conflict and litigation over water rights; for there simply is not sufficient water to supply the land they would so carelessly settle. How could I let myself be so... manipulated!? Ah, well, good friends, I shall return shortly - for you, are my only hope for any delight this evening. And we'll have ample time to finish my tale, for they will no doubt babble on until all the streams of rhetoric run dry. My river story will have its disastrous moments but none as ugly as the deliberations of this sorry Congress. I'll be back.

END ACT ONE

## ACT TWO

Powell enters briskly, eager to get on with things.

## POWELL

Sorry to be so long, but the Chairman - who I found to my amazement can in fact read a bit - wanted to peruse my paper; and apparently I've received a passing grade, for I'm to present myself to the delegates just thirty minutes from now. In the meantime, thank God we have something better to do than to listen to their nonsense.

To the river then and the mysterious Grand Canyon! And mystery that Canyon was! At every turn it presented a new and surprising face, as changeable as the clouds. Oh, the clouds. Clouds playing in the canyon are a wondrous sight. Sometimes they roll down in great masses, filling the gorge with gloom;

(MORE)

## POWELL (CONT'D)

sometimes they hang aloft from wall to wall and cover the canyon with a roof of impending storm, and we can peer, long distances up and down this canyon corridor with its cloud cover overhead, its walls of black granite, and its river bright with the sheen of broken waters. Then a gust of wind might sweep down a side gulch and, making a rift in the clouds, reveal the blue heavens, a stream of sunlight pouring in. Then the clouds might drift away and hang around crags and peaks and pinnacles and towers and walls, lifting from time to time to set them all in sharp relief. Then baby clouds creep out of side canyons, glide around points, and creep back again into more distant gorges.

The clouds are children of the heavens, though their offspring - rain - can become a bit troublesome to wanderers in this region. For then, little rills are rapidly formed above and these soon grow into brooks, the brooks grow into creeks and then tumble over the walls in innumerable cascades, adding their wild music to the roar of the river. The waters that fall during a rain on these steep rocks are gathered at once into the river; they could scarcely be poured in more suddenly if some vast spout ran from the clouds to the river itself. And when a storm bursts over the canyon a side gulch is dangerous for boats, for a sudden flood may come, and the in pouring waters will raise the river so as to hide the rocks.

I remember one day, encamped near such a gulch, I had gone up a side canyon to find a way up to the top of the canyon wall and the pinyon pines growing there, for we needed to obtain their resin to waterproof our much distressed boats. I climbed so high that the men, repairing their boats, were lost in the black depths below and the dashing river became but a rippling brook, and still there was more canyon above than below. All about me were interesting geologic records. The book was open and I could read as I ran. All about me were grand views, too, for the clouds were playing again in the canyon.

Reaching the summit, I began collecting resin from the pinon pines, growing here in great abundance. But - alas - I had forgotten to bring a means of carrying it down. Because the day was very hot, I had left my coat in camp, so I had no linings to tear out.

(MORE)

## POWELL (CONT'D)

Then it occurred to me to cut off the sleeve of my shirt and tie it up at one end, and in this little sack I had collected about a gallon of pitch, when suddenly noticed that a storm was coming in from the south. I sought a shelter in the rocks; but when the storm burst, it came down - not with gentle drops at first, slowly increasing in quantity, but as if suddenly poured out, a flood from the heavens.

I was thoroughly drenched and almost washed away, but it lasted not more than a half an hour, when the clouds swept by, giving me sunshine again. On reaching the bottom of the side canyon, I found a thousand streams rolling down the cliffs on every side, carrying with them red sand; and these all united in the canyon below in one great stream of red mud.

The rain had not reached the lower end of the canyon, and so my men below would be unaware of the danger bearing down upon them. Running as fast as I could, I found to my amazement that I could travel faster than the stream, for it was coming down a bed of dry sand; and although it came in waves several feet high and 15 or 20 feet in width, the sands soaked it up and it was lost. But wave followed wave and rolled along and was swallowed up, and still the floods came on from above, so I hastened to camp to warn the men that there was another river coming down the canyon. We quickly removed our camp from the bank to where it would be above the water, and then sat down to watch this red river roll on to join the Colorado.

How odd it seemed to me then to see so much water in such an arid land. I have many times since witnessed the action of a storm sweeping all the soil away in floods of mud, for in the arid region, the soil is unprotected by forest, shrubbery or turf. And it is in just this sort of land that this International Congress intends to make forty million Gardens of Eden, hugging to themselves the delusion that the climate is changing.

Fifteen years ago, when I wrote my 'Report on the Arid Regions', I hoped to defy the tide of settlement destined to follow. But Nature then seemed to defy me. For a few years following my report, the rainfall and streams throughout the arid region steadily increased in volume. Many actually attributed the change to the laying of railroad tracks, or the construction of telegraph lines, and not a few even to the intervention of Divine Providence in behalf of the Latter Day Saints.

(MORE)

## POWELL (CONT'D)

Most however favored the "rain follows the plough" philosophy, the whimsical idea that the cultivation of the soil actually increases rainfall. Still, you would think, after these last few years of drought, disastrous crop failures and foreclosures, these people would come to some recognition of nature's truth: that years will come of abundance and prosperity and years will come of disaster, and the thing to do is to enact legislation that will enable us to settle the arid lands wisely, especially as to the control of the water. We must always beware the arrogance of our modern industries, who are so busily handling the forces of nature on a stupendous scale. I am not hostile to corporations; they are and will be the instruments through which nearly all great enterprise of mining, manufacturing, building, financing etc., will be performed. But they require regulation, and the principal work of our lawmakers must be to ensure justice for all of our people, to serve the common welfare. And water - our precious water - what would be more central to the common welfare. Once again, our task must be to guide evolution by wise endeavor.

Well, now I must endeavor to finish my story, for I'll soon need to address these ... delegates. So - by mid-July, after nearly two months on the river, our rations had already been badly depleted. The flour had been wet and dried so many times that it was all musty and full of hard lumps. We made a sieve of mosquito netting and ran the flour through it, losing more than two hundred pounds by the process, since the wrecking of the "No-Name" and various mishaps afterwards, left us little more than two months' supply, and by mid-August the situation had worsened still; everything had been soaked, the worst of the remaining spoiled bacon had been boiled, the few pounds of dried apples had been spread in the sun and re-shrunken to their normal bulk, sugar and salt had all melted and gone down the river. We did have a large sack of coffee, but this was small consolation to hardworking men. Our edibles could not be distinguished from the fossils we had collected, and seemed about as tasty. So desperate for good food we were, I once saw Hawkins down by the boat, taking up the sextant - rather a strange proceeding for our cook - and I questioned him concerning it. He replied he was trying to find the latitude and longitude of the nearest pie.

(MORE)

## POWELL (CONT'D)

And now in late August, the little flour, how precious it became! We divided it among the boats and carefully stored it away, so that it could be lost only by the loss of the boat itself.

Our hope was that the worst places were now passed, but we knew not how much descent the river had yet to make, for the barometers were so much injured that we had lost all reckoning in altitude. Bradley assured us that if we continued much longer in our dizzying descent, we would have to go the rest of way uphill, which is not often the case with rivers. And all of us were unhappy in the black granite of the inner gorge, for the steepness of the river and the narrow walls which always seemed to accompany the granite afforded few places agreeable for camping. We frequently had to search for some time among the barren rocks to find enough driftwood sufficient to boil a cup of coffee.

Nor was an apparently splendid camp any guarantee of a pleasant evening, for many rattlesnakes and swarms of mosquitoes were constant companions, and often the wind sprang up, a regular hurricane, blowing the sand in clouds over us, and we had to hold onto our hair to prevent it from leaving us.

And once, we had camped on a strand fifty yards wide and a quarter mile long thickly overgrown with willow, pine, sagebrush and grass, a lovely spot. But a gust of wind spread the cooking fire, and a sheet of flame swept down the canyon. Rushing for the boats to escape, Hawkins jumped and missed, fell into the river and lost the mess kit. One man lost his shirt, another his pants and my brother Walter lost part of his prized mustache. We finished by running a bad rapid by twilight.

And now we had rain from time to time all day, and were thoroughly drenched and chilled; though between showers the thermometers stood at 115 degrees, - very disagreeable. It was especially cold at night in the rain. The little canvas we had was rotten and useless; the rubber ponchos had all been lost; more than half the party was without hats; not one had an entire suit of clothes, and we had not a blanket apiece. Often the rain, coming down in torrents, extinguished our camp fires, and we sat all night on the rocks, shivering, more exhausted by the night's discomfort than by the day's hard toil.

(MORE)

## POWELL (CONT'D)

After one of these sad evenings, I remember Bradley surveying our miserable camp and declaring with great feeling that "if I had a dog that would lie where my bed is made tonight I would kill him and burn his collar and swear I never owned him."

And now we were ready to start on our way down into the grand gloomy depths of the Great Unknown. We were now three-quarters of a mile in the depths of the earth, and from the cliffs above, the angry waves were but puny ripples, and we but pigmies, running up and down the sands, lost among the boulders. We had an unknown distance yet to run, an unknown river to explore. What falls there were, we knew not; what rocks beset the channel, we knew not; what walls rose over the river, we knew not. And in this condition, we came at last to Separation Rapids.

The place now known as Separation Rapids was a fearsome place to-look down upon. Lateral streams had washed boulders into the river, so as to form a dam, over which the water made a broken fall of 18 or 20 feet; followed by a rapid running two or three hundred yards, beset with rocks, while on the other side, points of the wall projected into the river. Below all this there was a second fall; how great, we could not tell. Then there was yet another rapid, filled with huge rocks, for 100 or 200 yards more. Finally, at the bottom, from the right wall, a great rock projected quite halfway across the river with a sloping surface extending up stream, and the water, coming down with all the momentum gained in the falls and rapids above, rolled up this inclined plane many feet, and tumbled over to the left. I decided that it was possible to let down over the first fall, then run near the right cliff to a point just above the - second, where we could pull out into a little chute, and having run over that in safety, if we pulled with all our power across the stream, we might avoid the great rock below.

I announced to the men that we were to run it in the morning. After supper Captain Howland asked to have a talk with me. O.G. Howland reminded me of a wild King Lear, his thin hair and long beard streaming in the wind. He was a printer by trade, a hunter by choice, and he was this night in a somber mood. We walked up the little creek a short distance, and I soon learned that he, his brother and William Dunn had determined to go no farther in the boats.

(MORE)

## POWELL (CONT'D)

He thought it madness to set out in this place, we could never get safely through it, he said, and further, that the river turned again to the south into the granite, and a few miles of such rapids and falls would exhaust our meager stock of rations, and then it would be too late to climb out. We returned to camp, nothing said to the other men. For the preceding two days our course had not been plotted, and so I sat down on this clear night, and took out the sextant to make a reckoning for latitude, and I found that in a direct line, we must have been about 45 miles from the mouth of the Rio Virgin - the point of our final destination. These 45 miles would probably be 80 or 90 by the meandering river, but we knew that there were settlements up that river about 20 miles.

I spread my plot on the sand, woke Howland, and showed him where I supposed we were, and where several Mormon settlements were situated. We had another short talk about the morrow, and he lay down again; but for me there was no sleep. All night long I paced up and down a little path, on a few yards of sand beach. Was it wise to go on?

I went to the boats again to look at our rations. I felt satisfied that we could get over the danger immediately before us, but what there might be below I knew not. From our outlook the day before on the cliffs, the canyon seemed to make another great bend to the south, and this, from our experience heretofore, meant more and higher granite walls. I was not sure that we could climb out of the canyon here, and even if we could there was seventy five miles of a rock and sand desert between us and the nearest Mormon town. On the other hand, the late rains made probable that we would find water still standing in holes; and at one time in that long night I almost concluded to leave the river. But for years I had been contemplating this trip. To leave the exploration unfinished, to say that there was a part of the canyon which I could not explore, having already nearly accomplished it, was more than I was willing to acknowledge, and I determined to go on.

I woke my brother and told him of Howland's decision. He promised to stay with me; then I called up Hawkins, the cook, then Sumner and Bradley and Hall, and they all agreed to go on.

At daylight we had our meager breakfast, solemn as a funeral, after which I asked the three men if they still thought it best to leave us.

(MORE)

## POWELL (CONT'D)

The elder Howland said he thought it was, Dunn agreed. The younger Howland, a quiet pensive young man, a great favorite of us all, tried to persuade them to go on with the party, failing in which, he decided to go with his brother. Two rifles and a shotgun were given to the men going out. I asked them to help themselves to the rations and take what they thought to be a fair share. This they refused to do, saying they had no fear they could get something to eat; but Billy had a pan of biscuits prepared for dinner, and these he left on a rock.

We took from the boat our barometers, some ammunition, and sadly, the collected fossils and minerals, and left them on the rocks, for we wanted to go over this place as light as possible. With the loss of the three men we would not be able to run all of the boats, so I decided to leave my "Emma Dean", which was in any case now much disabled and unseaworthy. The men leaving us helped in letting down the boats over the first fall. I wrote a letter to Emma and gave it to Howland. Sumner gave him his watch, directing it be sent to his sister should he not be heard of again. The records of the expedition had been kept in duplicate and one set of these was given to Howland. Some tears were shed; each party thinking the other was taking the dangerous course.

I boarded the "Maid of the Canyon" and we pushed out, gliding rapidly along the foot of the wall, just grazing one great rock, then pulled out a little into the chute of the second fall and plunged over it. The open compartment filled with water when we struck the first wave below, but we cut through it, the men pulling with all their power toward the left wall, and we swung clear of the dangerous rock below. Incredibly, we were scarcely a minute in running it, and although it had looked bad from above, we had passed through many places that were worse. The other boat followed without more difficulty. We fired a gun to let the men above know we had passed safely through, and waited for a while in hopes that they might follow. Then, with heavy hearts, we set off once again. Within another day we found the Grand Canyon behind us.

That evening in camp, the river rolled by in silent majesty; the quiet of our camp sweet, our joy almost ecstasy. Only during the few hours of deep sleep, after hard labor, had the roar of the water been hushed.

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## POWELL (CONT'D)

Every waking hour had been one of toil and unknown danger, heavier than immediate peril. Now the danger was over, the toil ceased, and the gloom vanished. We sat till long after midnight talking of the Grand Canyon, talking of home, but talking chiefly of the three men who left us. Were they wandering the depths, unable to find a way out? Or searching over the desert lands for water? Or nearing the settlements?

A year would pass before I would know of their fate with certainty. I was then exploring the Kaibab plateau in preparation for my second expedition down the Grand Canyon. I had the good fortune of having with me Jacob Hamblin - a good man - guide, explorer and Indian missionary for the Mormons, and it was he who arranged a long evening feast and council with some local Indians, a band of whom had been rumored to have killed three white men the previous autumn.

As usual there was endless speechifying, pipe-smoking and rounds of mysterious food-stuff. It was a memorable night, as occasions among these people always were. I have heard the venerable, impassioned orator at the camp meeting ground telling the story of the crucifixion, seen the thousands weep over the story of divine suffering, heard their shouts roll down the forest aisles as they vented the joy of redemption. But the scene was not a whit more dramatic than where a tribe was gathered under the great pines, a temple of light from the blazing fire walled by the darkness of midnight, and in their midst, a wise old man, tells in simple language, the story of Ta-wats, when he conquered the sun and established the seasons and the days.

Their stories are wonderful; for them all life and all phenomena of nature are miraculous and worshipped as divine. And there are mythic animals as well as mythic men. The movement of the sun, moon, stars, winds and clouds, the coming of comets, and the flash of meteors, the falling of rain, the spreading of snow, all are held to be the acts of wonderful animal deities, dwelling in the caves or hiding in the waters, or making themselves invisible as they pass over the land. The wind is the breath of some beast, or the fanning which rises from under the wings of a mythic bird.

I believe that the greatest mark of friendship or confidence that an Indian can give is to tell you his religion. After one has so talked with me, I should ever trust him.

(MORE)

## POWELL (CONT'D)

Though I confess that at this evening's council arranged by Mr. Hamblin, I did not quite trust their food stuff.

During the autumn, grasshoppers abound and when cold weather sets in, these insects are numbed and can be gathered by the bushel, then roasted in fire pits by means of hot stones, thoroughly dried and ground into meal. A great treat, grasshopper gruel.

But perhaps their daintiest dish is an item called "virgin hash". This is made by chewing morsels of meat and breads, rolling them in the mouth into little lumps about the size of a horse chestnut, and then tying them up into bits of corn husk. When a number of these are made, they are thrown into a pot and boiled like dumplings. But the most curious thing of all is that only certain persons are allowed to prepare these dumplings; the tongue and palate kneading must be done by a virgin. An old feud is sometimes avenged by pretending hospitality, and giving to the enemy dumplings made by a lewd woman.

Finally I was permitted to speak. I told the Indians that I did not wish to trade, did not want their lands. I told them that all the great and good white men were anxious to know very many things that they spent much time in learning, and the greatest man is he who knows the most; I said I wished to learn about their canyons and mountains, and about themselves, to tell other men at home, and that to do so, I wished to spend some months in their country and that I would like them to treat me as a friend.

At length, the chief replied; his words haunt me to this day. 'We have not much to give; you must not think us mean. We are very poor. We live among rocks and they yield little food and many thorns. When the cold moons come, our children are hungry. We hear that other lands are better; we do not know. We love our country. The pines sing, our children play in the warm sand, the seeds ripen and we eat and are glad. We do not want lands of others; we want our rocks and the great mountains where our fathers lived. Last year we killed three white men. Bad men said they were our enemies. They told great lies. We thought them true. We were mad; it made us fools. When white men kill our people, we kill them. Then they kill us. We hear that the white men are a great number. When they stop killing us, there will be no Indian left to bury the dead. We are ignorant - like little children in understanding compared to you.

(MORE)

## POWELL (CONT'D)

When we do wrong do not you get mad and be like children too. Your talk is good; you are very wise; you have a good heart; we believe what you say. When you are hungry, you may have our game, gather our sweet fruits. We will show you the springs and you may drink. We will be friends."

Afterwards, Mr. Hamblin fell into conversation with one of the men and held him until the others had left, and so we learned that Captain Howland, his brother and Dunn came out of the canyon and found the Indian village. They were almost starved and exhausted with fatigue. They were supplied with food and put on their way to the settlements. Shortly after they left, an Indian from the east side of the Colorado arrived at their village and told them about a number of miners having killed a squaw in a drunken brawl, and they had no doubt that Captain Howland and the others were the men; for no person had ever come down the river; that was impossible; they were trying to hide their guilt. In this way he worked them into a great rage. They followed, surrounded the men in ambush, and filled them with arrows.

Even knowing of the fate of Howland and the others, when I stood before the sacred fire in the Indian village and listened to the red man's philosophy, no anger stirred my blood.

That night I slept in peace, though these murderers of my men were sleeping not 500 yards away. No good purpose would have been achieved by pursuing the white man's sense of justice, for our justice simply does not treat them with any understanding. They were simply defending their culture, and their land.

And so our journey down the Colorado was done, completed only at this Indian campfire. And of Dunn, the Howland brothers, my brother Walter, Frank Goodman, Hawkins and Hall, Sumner, Bradley - well, many years have passed since the exploration, and those who were boys with me in the enterprise are - ah, most of them are dead, and the living are gray with age. But the memory of the men and their heroic deeds, their generous acts... oh, my friends - I was a maimed man, my right arm gone, and these brave, good men never forgot it.

In every danger my safety was their first care, and in every waking hour some kind service was rendered me, and they transformed my misfortune into blessings.

The door opens and the sound of the convention floods the room. A voice cries out.

## OFF STAGE VOICE

Time, Mr. Powell.

## POWELL

Thank you, yes, on my way. Where is that confounded speech?

(He goes to the desk, reluctantly takes up a copy of his speech. To the audience)

I wonder what my men would say of me were they to see me here tonight, having conquered a mighty river and now trembling in the face of fools. I suppose that Sumner would say, "Un-American", to say the least." Hawkins would suggest I get out the sextant and look for a better pie. And Bradley, brave Bradley - I expect he'd burn my collar and swear he never owned me.

(He deliberates for a moment, then slowly crumbles up the speech, with great deliberation, and drops it into a wastebasket.)

Oh, my. I seem to have misplaced my prepared speech. I suppose I shall have to improvise a bit, eh? I shall simply tell them a few truths of the arid region; that a million forty acre farms can be surveyed, lands staked out, corner-posts established, dividing lines run, titles to tracts recorded. But who can establish the corner-posts of flowing waters? The farmer may brand his horses, but who can brand the clouds or put a mark of ownership on the current of a river? The waters of today, tomorrow, and the waters of all coming time have values and these values must be fairly distributed among the people. We must fix in our constitution that no corporation - no capital - no body of men- can get possession of our water rights. We must hold the rights to waters in the hands of the people.

Perhaps, doubtful, but perhaps, these delegates may be transformed. For finally, I do have faith in my fellow-man, towering faith in our love of justice, and illimitable faith in human endeavor. Evolution by endeavor! He who preaches must practice, eh?

## OFF STAGE VOICE

Time, Major Powell!

## POWELL

Time, indeed! I shall not need the map, my friends. Keep it to remember me by, if you will;  
(MORE)

## POWELL (CONT'D)

let your children study it, study it well, and  
remind them that however they should define this  
wondrous land, nature too has a definition, and  
we must heed Hers, for willy-nilly, She will  
have her way. As I, tonight, shall have mine!  
Down the river then, and damn the rapids.

He marches out, into the tumult of the convention.

THE END