The Canyon That Was

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Eliot Porter describes a place that was alive when he saw it. We have left tense as it was, even though the canyon never will be again.] The architect, the life-giver, and the moderator of Glen Canyon is the Colorado River. It slips along serenely, rifled only in the few places where boulder-filled narrows confine it, for nearly two hundred mi es. For all the seconty, The first canyon experience is too overwhelming to les you move in more than the broadest features and boldest strokes. The eye is numbed by vastness and magnificence, and passes over the fine details, ignoring them in a defense against surfeit. The big features, the massive walls and towers, the shimmering vistas, the enveloping presence of light, are all hypnoticing, shutting off awareness of the particular it is pourt

But one day you begin to focus on the smaller, more familiar more comprehensible objects which, when finally seen in the context of the whole. are endowed with a wonder no less than the total. It is from them that the greatest rewards come. Then are new for the first time the velvety lawns of young tamarisks sprouting on the wet sandbars just vacated by the retreating flood, or how the swirling surface of the green, opaque river converts light reflected from rocks and trees and sky into a moire of interlacing lines and coils of color, or how the festooned designs etched into the walls by water and lichens, evoke in a free imagination scenes of great events, caricatures of life, even the flight of birds. May of hay fryelle It is an intimate canyon. The feeling of intimacy comes partly from your being able to travel through it by boat -- from a close association

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unknown in a canyon seen only from above or dipped into/only a few places.

close to one another

The intimacy also comes from the calmess and gongeniality of the river and the closeness of the walls. Life along the banks and bars is unhurried. Every bend is a good campsite. Clear springs are close; their rocks and flowers are good. Evenings can be superb-the glow of burnished cliffs, a quiet peace settling on boatmen close by the campfire, subdued voices accentuating the voice of the river, gliding into a night that spreads fast. Stars and a diminished sky dimly silhouetted, the canyon's walls, and there is a security between them.

The rocks through which the canyon was carved are old monolithic sandstones and you need to know three of their names to understand what they are doing. The Wingate formation at the upper end weathers through vertical cracks, extending down from the surface, into massive, burnt-red, columnar blocks and slabs. When these break off and fall, shattering on the steep, narrow talus bordering the river, they strew the slope with upended, jagged fragments; their faces, like the cliff above, oxidize to a polished purple-black, a dark varnish which is deep metallic blue in the shade and dazzling white in the sun. Downstream the river the Wingate formation drops out of sight below the many-layered Kayenta formation. Its place is taken by Navajo sandstone, and the character of the cliffs changes strikingly. The plateau weathers into rounded domes and the rim curves, Ephemeral streams have streaked the walls with ribbons of color that cling like wet tapestries. The dark stains caused by are the algae and lichens that manage to grow in the occasional films of moisture; the bluish-white bands axe mark where chemicals leached from the sandstone. Where water seeps through cracks or where springs flow, there are caves green with tangles of rank vegetation.

The Navajo sandstone cleaves to produce immense arches and bays and all manner of rippled and shell-like structures. Slabs spall off the cliffs from time to time, one layer after another. The fresh scars and those of great antiquity combine to shape and blot out the tapestries. High on the face of the canyon walls in many places, like the pupilless eyes of marble statues, hugh lenticular depressions have flaked out—the beginnings of caves, in which water cozes out along the fracture lines supports. If the caves are shaded, they contain a heavy growth of maidenhair fern and mimulus.

The tributaries of Glen Canyon are a unique natural museum exhibiting examples of erosion found nowhere else in the world. The walls of the canyon as whole are like worm-eaten wood, riddled with tunnels on an enormous scale. The smoth bores of their unroofed, twisting holes converge on the common river channel. Most of them are quite short, no more than a mile in length, the shortest snaking back only two or three turns before ending abruptly in a circular chamber surrounding a pool into which a trickle 7 may descend through a sculptured channel in the roof. Mt a May

The similarity of the tributary ground plans shows that the same forces were at work molding them. Their courses are S-curves twisting back into the sandstone of the Colorado Plateau. Some straighten out as they advance headward, but others twist for miles back from the river. Twilight Canyon still has not ended, nor has the height of its walls lessened. It and several other canyons are dry and dead; nothing grows among heaped up boulders except perhaps for a wisp of green high enough above one or two of the inside corners to miss the minor floods. No flowers spring from the barren walls, and no water shows, unless it is deeply shaded under a massively undercut wall. Such a canyon is no place to be caught in a flash flood.

you have recover

side canyons But most, even those carrying no permanent stream, are luxuriant. For all the havoc the floods work against lifeless structures, they are helpless against the frailest living things which, like the sea algae of a surf-bound coast bend to the irresistable force and spring back after the torrent has passed. The power of of fertility soon reseeds the plants that are uprooted. Thick grasses, myriad flowers, tall canes, and creeping vines m2 cover the sand banks at the bends. Oaks grow almost impenetrably in the sunniest spots and redbud fills the shady corners. Cottonwoods remember where the water was. Down all the tributaries pour intermittent floods burdened with sand, each grain a chisel able to liberate imprisoned grains from the ancient walls. The streams batter the canyon edges, tearing away all loose material, and gouging out deep troughs.

Don't worry or atimit home i tom

The narrowness of some canyons—their sides may be hundreds of feet high and less than six feet apart at the bottom —is dramatic evidencem of the rapidity of erosion. A few evidently started as tight meanders in the surface rock. At the sharpest bends the pounding waters have scooped out deep caves, the girdling walls of which envelop an opposite rounded peninsula of rock. These gigantic structures are like loosely articulated elements of an immobile ball and socket joint. If you stand in the stream bed in one of these caves, facing outward, and look up at the top of the dome-shaped inner wall, you see the sky as a crescent of blue, bounded above by the overhanging dark surface of the cave rising behind you. The magnitude of awesome shape expanding over your head out of the narrow confines is almost too Visual evidence isn't enough. much to believe. Visual evidence isn't enough.

Even the sounds are incredible. The sounds of the spaced notes of a chord seemed to develop rules of their own, the individual notes turning back on themselves as they try to pass the upstream and downstream curves. The

notes blend, hang in the air for a while, then fade. / You are ready to believe that the light itself is echoing and re-echoing the way the sound does. Of all the phenomena of the dide canyons, it is the light, even in the farthest depths of the narpowest canyon, that evokes the ultimate in awe. There are Inv somber, rocky caverns of purple and ocher stone into which the sun rarely strikes, shallow pools glitter in brass from sunlit cliffs high overhead. Wherever there is a damp cleft, maidenhair fern and scarlet lobelia and white columbine grow. They reflect a dusky cyan-green in the blue shadows, their drooping leaves imparting a subdued, almost funereal atmosphere. It is reflection that is the magic essence of the waters of the Glen Canyon and its tributaries. You may find reflections first in the slowly evaporating pools on some of the rounded floors -- pools that never quite become dry because they are fed by seeping water, Others are replenished from time to time by storms. All the pools, each rill, the individual sheets of flowing water, every wet rock and seep-these mirror with enameled luster the world about. In narrow chasms streams of melted gems flow over purple sand past banks of verdant willow. Small tarns mix the colors of pink rocks and cerulean sky, and wet ripples of mud may do the same thing. Nothing remains the same from year to year. Flood and drouth, heat and cold, life and death the fines details incessantly alter/but they leave unchanged the grand plan, the essence of the Colorado's masterwork.

> One kind of change now occurring will obliterate all the places that mean most, wiping them out for all foreseeable time. With hothing tangible to evoke the past, even the memory of the river's history will go. This last and final act of obliteration is, as it was with Colorado River goldseekers fifty years ago, materially motivated. The wealth of the river this time is its power, ostensibly at least, although there are those who see a less forthright purpose--the ambition of a federal bureau to build an

empire out of river development, with sincere regard, no doubt, for one kind of public welfare, but with an unknowing disregard of many less tangible aspects of hyman well-being.

It is self-evident that a long-term need exists for something more than material benefits. But effort seems increasingly to be determined by men whose key criterion is short-term economic feasibility, a standard that can measure neither spirit nor beauty. Glen Canyon dam may appear to exemplify this standard. But neither does its imposing magnitude alone justify it, nor can the dam serve all the beneficial functions attributed to it in the process of obtaining legislative support or as a subsequent apology. What it does to beauty is tragic.

The waters impounded by this plug of artificial stone will spread back through Glen Canyon for its entire one hundred and eighty-six miles, inundating the sparkling river, swallowing its luminous cliffs and tapestried walls, and extinguishing far into the long, dim, distant future everything that made for it live. As the waters creep into the side canyons, enveloping one by one their mirroring pools, drowning their bright flowers, bloking up their clear, sweet springs with stale flood water, a fine opaque silt will settle over all, covering rocks and trees alike with a gray slimy ooze.

Darkness pervades the canyons. Death and the thickening, umbrageous gloom take over a place where the living river and shimmering light were the glory. 9 the Mich

Before the bureau chose drastically to change what was there, Glen Canyon was a place to remember, and I remember these things lost:

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The Glen Canyon trench is a microcosm wave separated from the world in its depth, in its atmosphere, and in its living things. bonding deut border, Its wind is its own, born of high temperatures and steep rocky defiles. It comes puffing up the canyon, stirring up the sand into smoky plumes and graying the water. Floating downstream against it, even with the help of a motor, is a smail's pace. When it makes the spray firs, the heat of the day is tempered so suddenly and chillingly that you seek the sunny side of the river. Around the next bend, if the wind is quiet, the heat settles down as before, and you wish for shade.

So do most of Glen Canyon's forms of life. Its vegetation has been reproducing for centuries, most of the species probably arriving from the outside world by way of the river. Its animals, too, are isolated, a few having developed their own races in the flow of evolutionary processes within the restricted canyon environment. The birds are the most conspicuous. It is their nature to live conspicuous lives -- they fly, and in the daytime. They advertise their presence by song, even when they seem to be skulking in the thickets. In the spring the willow and tamarisk jungles of the river's edge ring with the cheerful sibilance of yellow warblers. From among the broken rocks of dry talus comes the bright chant of the rock wren, and tions Cam echoing from higher up the cliff side, the canyon wren's deliberate down-scale Echo malade notes. Added to these sweet songs, there are some unmelodious, comic sounds issuing frequently from the thickets-the harsh clucking, cawing, and whistling of the yellow-breasted chat that lurks mostly unseen in the densest underbrush but occasionally bursts from the top of a bush in awkward, wing-x clapping, nuptial flight.

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Great blue herons mark the muddy edge of the river; their four-toed prints border every lagoon and shallow backwash, where the herons have stood motionaless watching for small fish or frogs. Approached too closely, they rise smoothly, legs dangling, their powerful wings beating slowly in unhurried flight down the river.

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In the side canyons, along the narrow water courses where deep pools are carved in rock and the flow is clear and constant, lives a small, plump, gray bird with stumpy tail, the water ouzel. Hw is truly aquatic, and although not web-footed he is as much at home in the water as a duck. He makes his living in the flowing streams and cascades of high basins and canyons of the west; he cannot live without them and he never departs far, He builds his roofed nest and rears his young in the spray of waterfalls. You will probably first encounter him as he bobs on a stone in midstream. He may astonish you by suddenly plunging into the foaming water. Over his shiny somber gark gray suit he instantly slips a resplendent jacket of/silvery bubbles and walks about on the bottom picking up aquatic larvae here and there with the same unconcern an ordinary bird would show on dry land. In a moment he pops out again, leaving his bright diving suit behind, and as dry as before he dove in, continues about his business. He is apparently pleased with his mode of life, bursting into song most unexpectedly after emerging from one of his underwater expeditions. There are technologists who allege that birds sing merely to proclaim territorial right. But the ouzel sings his ebullient, varied song throughout the year for no other assignable reason than the sheer joy of doing so. He himself is the only audience he requires, for more often than not he sings unheard in the mist of a thundering cascade.

To the murmuring and chattering by the river, the raven's harsh caw is added now and then from a point in the sky where he balances the law of gravity with the law of convection. He hangs there, rocking slightly as he he drift seeks out the rising air, his black profile punctuating a voicea voice that fits peculiarly well the stony world in which he lives. He is a bird of parts, neither showing off nor shrinking. He saves a particular quality in his voice for special occasions, and though he cannot sing what we call song, and he is able to introduce a bell-like quality into his caw which is music without melody. He does not live to exist, but to enjoy-especially to delight in his greatest accomplishment-flight. A small group may spend hours playing in the air currents, soaring effortlessly, chasing one andher in an endless game/-diving, chasing, swooping/wing on wing, turning upside down in a wild exuberant melee racing past the face of a cliff, feeling desperately for the upsurge that will give an advantage, uttering gutteral cries that release all the pent-up excitement just as children cry/in their play. I think this is an expression of joy. The very

place incites it.

I feel it when I turn in my sleeping bag toward the east. A faint light is just perceptible, and it soon will give way to the waxing twilight of morning and the world will fill with color. This is a positive time, a time of expansion and increase and expectation. In the waning twilight of evening everything is closing down and in retreat, but at dawn each moment is brighter; the path into light, into activity, is full of hope and renewed energy and the promise of clarity. The sun,still a long way beneath

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the rim, routs the last stars down the brightening sky. They make a **final** pale stand in the thinning shadow of the earth, until Venus alone holds out, resisting the stampedé. Directly overhead fleecy clouds sail from the northwest across the narrow, rock-enclosed sky, preserving the order of their ranks while their shapes shift and flow. A tinge of pink is spreading over them, changing gradually to salmon and then to yellow, when suddenly from some notch in the horizon the sun bursts into this hemisphere. It lights the top of a butte, transforming it into a metallic crown. Slowly, the color slips down its sides, copperplating them and enveloping the canyon in warmth. The river picks up the color and multiplies it. Gray stones along its muddy bank are uncut lapis lajuli embedded in molten bronze. Blue highlights thread the dry sand ripples. Day is near and earth will soon turn it into the canyon depths.

The advance is swift. Purple banks and blue dunes become common mud and sand, the morning colors refert, the river becomes muddy green, the rocks (Contraction) turn to brick and clay, and the sun appears above the canyon rim.

We have had our breakfast, pack our few possessions, and are ready to shove off into the current lapping at the loaded boats. We check the sands again for forgotten objects, postponing the final moment, loath to depart the which little world/for a night's stop was the focus of our lives in an ehernity of timeless existence. We push the boat out, wading knee deep in mud to gain the deeper water before climbing on board. The day is bright and still. No wind ruffles the river-glass, lined with swirling strike, where the current is uppwelling. The sandstone cliffs are distorted near the boat, but down the river's reach they are nearly perfect. In the winding canyon dark and light

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reflections replace one another in slow succession. The gentle wake of the boat breaks these images into undulating spots and patches. Each wave for a moment holds a fragment of sky mixed with golden globules of sunlit rock.

The walls pass in review, and the breaks in their defenses pass by too, some of them in striped cliffs undercut by the river. No talus, not even a sand bank or bar, separate them from the water, and the cliffs are sliced unexpectedly by narrow perpendicular slots. At high water the river deposits its load in them, sand, in the eddies at the entrances and thefiner sediments precipitating in the quietest waters. Back in the slots, these fingers of the river blend into a bank of gray coze which thickens without detectible discontinuity into a slippery bed of clay of uncertain depth extending from wall to wall. After the spring run-off has subsided and the river withdrawn, these slots are left plugged to their mouths with mud and silt that dries slowly to a cracked, crusted surface you can walk on. But the first local freshet will wash it all out until the next high water.

Like the half-concealed passages into long forgotten tombs, these narrow slots give no hint of the strange sights inside their m portals. We plunge apprehensively into the mud and water. Sometimes it is waist = deep; sometimes we have to swim. We struggle through the sucking clay, one laborious step at a time, to higher and harder ground where we make our way within, unimpeded.

In Mystery Canyon, after traversing a winding corridor of tangled woodbine gardens, we find ourselves at last in a circular arena, confronted by overhanging, inaacessible walls. Dark viridescent lumps of moss dot the surface and, trembling in a perpetual current of air, green fern tenacles

grow abound them from the slippery rock. From a sculptired groove at a higher level a thin stream slides into a black and fathomless pond. The whole interior of this tenebrous chamber, with blindly waving greenery lining its sides, is like the ciliated cavity of an exercisite anemone.

In Cathedral Canyon, beyond a series of immense, vaulted bends, we come to a sudden closing in of the walls where the flood disappears into a water-filled trough no wider than a man's body. Swimming through it is a dreamlike adventure. Shivering we glide along like seals, chin deep in the water, through still depths into an inscrutible solitude. Only the hollow sound of our slight splashing reverbrates along the contorted channel back into the stony labyrinth. Now and then, the mysterious bottom, a stone or a graveled ledge, as it rises to surprise us. We climb over wedged boulders from one ribbon pool to another in a journey reminiscent of Xanadu, through caverns measureless to man, with walls and towers girdled round. A sudden shaft of sun, giving a dimension of reality, penetrates the upper stories through an unseen window. It lights a strip of wall with a dazzling yellow and is reflected to our eyes at water level where instant the pool laps the rock in gentle undulations; golden threads reaching ahead to delineate for a moment the waving separation of water and stone. At last, at the end, is a wisp of a waterfall from unseen heights overhead, slipping over a smooth and algaed chute into a slatey pool. Shivering, we retrace our way, glad to emerge at last into the August sun.

Little Arch, we discover, is a short canyon, ending in a waterfall up which an earlier explorer cut shallow steps in the wet sandstone. We

follow these and are led through pools of a tortured, nærrow trough into a roofed room in the ochrecous rock. It is dry on one side where a sand bank is heaped up; the other side extends a few feet into a moist alcove giving egress—through a chimney leading straight up to the sky—to the free air of the plateau high overhead. The sides of the chimney have been ground into concave plaques lying one above the other like immense, elongated scales. An Interno's light spreads down this tube and suffuses the chamber, dying our faces and bodies a dull furnace red. Our imaginations, turning to the violent events that much periodically take place in this cavern, picture the enveloping spray and hear the roar of water as it rours down the chimney in a tumultuous, thundering rush. Our imaginations relaxed when we remembered that the weather outside was good, and the sky cloudless.

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Weather in the canyon country is not always that good. Storms sweep over it from the northwest, the outriggers of disturbances down from the Aleutians, and they may last for a week, enveloping the canyon in mist and rain. More usually, summer weather is local and short-lived. Storms develop *fru 23* over the bordering plateaus, spreading out over the encircling land until darkening thunderheads rumble their warning. Down in the canyon, where the cliff-edged sky is narrow, they can surprise you. A white-edged, black cloud rises above the canyon rim, lightning fliekers, a crash ricbohets down the canyon, and the first drops spatter dark wet rings on the hot red sandstone. They evaporate quickly but their replacements come fast, A dusty m smell pervades the hot air. The rain curves into the canyon in gusts *m* 23 bright points and streaks against dark cliffs. The drops seem to float down

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Surprise 12k

but they strike the face hard. The black cloud now possesses the entire opening of sky and a cold, chilling wind sweeps through the canyon. Another flash of lightning brightens the obscurity and thunder crashes again, much louder, reverberating from higher terraces, rolling and rumbling up and down the gorge, dying in the cul de sacs. The rain comes down hard now. The wet cliffs have lost all color, but glisten from the sheets of water pouring over them. Through the notches and dips in the rim, wherever, the walls were streaked, streams pour down; thin bands of wetness follow the stripes of oxidation down the cliffs. Through larger notches torrents spume over, free-falling hundreds of feet with a roar, some white and clean, others brown and opaque, all of them drowning out the thunder. | The downpour retreats as quickly as it came. The waterfalls diminish, cease, and the sun comes, out again. The rocks lose their wet sheen, only a few puddles lingering. We and the trees glitter, drip briefly, and dry off. The creek, roiled and full, is the last to forget the storm. Before long the internal warmth from food and the external warmth from sun has exorcised all residues of misery. We move on into the day, living, as all good river travelers should, in the out of context and therefore enconvince present.

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