

The architect, the life-giver, and the moderator of Glen Canyon is the Colorado River. It slips along serenely, ruffled only in the few places where boulder-filled narrows confine it, for nearly two hundred miles. For all its serenity, the first experience is too overwhelming to permit taking 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 light, all are hypnotizing, shutting out awareness of the particular.

Later it is possible 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 seen 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 moiré 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 ^{invests} ~~see~~ long forgotten experiences.

It is an intimate canyon. The feeling of intimacy comes partly from being able to travel through it by boat - from a close association unknown in a canyon seen only from above or dipped into at a few places. The intimacy also comes from the calmness and congeniality of the river and the closeness of the walls. Life along the banks and bars is unhurried. Every bend offers a good camp site. Clear springs are not far apart, providing in a shaded setting of mossy, dripping rocks and wild flowers welcome respite from the heat of noon. At evening in the glow of burnished cliffs a ~~gl~~

quiet peace settles on the boatmen gathered close to their camp fire, their subdued voices accentuating the faint gurgling of the big river slipping past its banks. With night spreading fast and stars appearing one by one in the diminished sky, the canyon's dimly silhouetted walls give comfort and security.

The rocks through which the canyon was carved are old monolithic sandstones rising hundreds of feet, in places straight from the water. 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. This dark varnish, reflecting the sky, turns in the shade to deep metallic blue but in the sun shines a dazzling white. Downstream the Wingate formation dips below the surface. Its place is taken by Navajo sandstone, and the character of the cliffs changes strikingly. ^{Here,} The plateau weathers into rounded domes and the rim is less sharp. Water ~~runs~~ streaks ^{folds of} to the rock the walls with ribbons of color that cling like/wet curtains/~~to the face of the cliffs~~. The dark stains are caused by the algae and lichens that manage to grow in the persistent films of moisture; the bluish-white bands mark where chemicals have been leached from the sandstone.

The Navajo sandstone cleaves to produce immense arches and bays and all manner of rippled and shell-like structures. Slabs spalling off the cliffs from time to time, one layer after another, produce, where water seeps through cracks in the porous rock or where springs flow, caves green with tangles of rank vegetation for which Glen Canyon was named. High on the face of the canyon walls in many places, like the pupilless eyes of marble statues, huge lenticular depressions have flaked out - the beginnings of caves, in which water oozes out along the fracture lines. If shaded, the caves 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 a whole are like worm-eaten wood, riddled with ~~the~~ tunnels on an enormous scale. These smooth ~~unroofed~~^{unroofed}, twisting grooves 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 of water descends through a slit in the roof.

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

But most side canyons, even those carrying no permanent stream, are rich with plant life. For all the havoc the floods work against lifeless structures, they are ineffective against the frailest living things which, like the sea algae of a surf-bound coast, bend to their force and spring back after the torrent has passed, And the power of fertility soon reseeds the uprooted plants. Thick grasses, tall canes, and creeping vines cover the sand banks at the bends. Oaks grow impenetrably in the sunniest spots and redbud fills the shady corners. Cottonwoods seek out underground pockets of water.

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 ^{Sides} ~~edges~~, tearing away all loose material,

and gouging out deep troughs. The narrowness of some canyons - their sides may be hundreds of feet high and less than six feet apart at the bottom - is dramatic evidence of the rapidity of erosion. A few evidently started as tight meanders in the surface rock, in which fast corrasion deepened the channels into wide passages beneath interlocking walls. 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, facing outward, in the stream bed in one of these caves, 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 these awesome shapes expanding over your head out of the ^{confines of the} ~~the~~ canyon floor is, even in the face of the undeniable visual evidence, ~~undeniable evidence~~ a test of credulity.

Of all the phenomena of the side canyons, it is the light, to the farthest depths of the narrowest canyon, that evokes the ultimate in awe. In somber, rocky caverns of purple and ochre stone into which the sun rarely strikes, shallow pools glitter brassily from sunlit cliffs high overhead. And wherever there is a damp cleft, maidenhair fern and scarlet lobelia and white columbine grow. Their drooping leaves turn a dusky cyan-green in the blue shadows creating a subdued, almost funereal atmosphere. But it is reflection that imparts magic to the waters of Glen Canyon and its tributaries. Every pool and rill, every sheet of flowing water, every wet rock and seep mirrors with enameled luster the world about. In narrow chasms streams of melted gems flow over purple sand past banks of verdant willows. ~~Wet~~ Wet mud ripples and small puddles like shining eyes fuse the colors

of pink rocks with a cerulean sky; and in the changing light nothing remains the same from hour to hour, from day to day, and from year to year. Flood and drought, heat and cold, life and death alter incessantly the finer details but leave unchanged the grand plan, the enchanting

quality of the Colorado's masterwork,
of Glen Canyon

The first explorers, the members of the Powell party, well appreciated its beauty and remarked on it often enough in their accounts to have established its reputation as a wonderland of the Colorado. Later visitors, who left many ephemeral marks in the canyon, perhaps did not see its finer aspects for they were lured there by greed. They came in barges with tools and dredges and machinery to extract the riches in gold ~~xxx~~ from the river's sands and gravel benches, but they were frustrated by the ~~xxxxxxxx~~ difficulties of their operations and returned with empty hands, losing even the wealth they had invested. ~~xxxxxxxxxxxxxxxxxxxxxxxx~~ They left their mark, however, in a more permanent form than the scratching they made or the rusting machinery they left behind ~~xxxx~~. They gave names to the places where they strived and lost their hearts and died. Their memory will remain in Smith and California Bar, Klondike and Dead Man Bar long after the crazily tilted, rusting dredge - still to be seen in mid river - is buried in the shifting sands.

But now another kind of invasion is taking place; one that will obliterate all the places that bear these nostalgic names, wipe them out for all foreseeable time, and thus with nothing tangible to recall the past, even the memory of the river's history will be destroyed. This final act of destruction is, as it was with the gold seekers fifty years ago, materially motivated. The wealth of the Colorado 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 ~~xxx~~ disregard of many less tangible aspects of human well-being. Glen Canyon dam may appear to exemplify this ambition; but neither does its imposing magnitude alone justify it, nor can the dam serve all the beneficial ~~for~~ functions attributed to it in the process of obtaining legislative support or as a subsequent apology.

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 gave it life. As the waters creep into the side canyons, enveloping one by one their mirroring pools, drowning their bright flowers, backing up their clear, sweet springs with stale flood water, a fine opaque silt settles over all, covering rocks and trees alike with a gray slimy ooze.

Darkness pervades the canyons. Death and the thickening, umbrageous gloom takes over where life and shimmering light were the glory of the river.

The Glen Canyon trench is a microcosm separated from the world in its depth as well as by its desert borders. Its winds, born of high temperatures and steep rocky defiles, come puffing up the canyon, stirring the sand into smoky plumes and graying the water. Floating downstream against them, even with the help of a motor, is slowed to a snail's pace. When the spray flies, 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 has dropped, the heat settles down as before, and you wish for shade.

Glen Canyon's 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 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 higher up from the cliffside the canyon wren's deliberate down-scale notes echo melodiously. 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-clapping, nuptial flight.

Great blue herons mark with their four-toes prints the muddy border of every lagoon and shallow backwash, where they have stood motionless 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.

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 a stumpy tail. He 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 the high country and canyons of the west; he cannot live without them and he never departs far from them. He builds his roofed nest and rears his young in the spray of waterfalls. He is the dipper or water ouzel and when first encountered will in all probability be bobbing on a stone in midstream; and to your astonishment he may suddenly plunge into the foaming water. It is a strange sight, for this bird is a land bird who has only recently learned the merits of subaqueous existence and the art of conducting himself under the surface. Over his somber, dark gray suit he instantly slips into a resplendent jacket of shiny silver bubbles and in this outfit walks about on the bottom picking up aquatic larvae here and there with as little concern as he would 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 foraging expeditions. He sings his ebullient, varied song throughout the year for no other assignable reason that the sheer joy of doing ~~so~~ so, for he is his only audience when he sings unheard in the mist of a thundering cascade.

To the murmuring and chattering voices of the river, the raven's harsh caw is added now and then from a high ledge or from a point in the air, where he has found a balance between the law of gravity and the laws of convection. There he hangs, rocking slightly as he drifts and soars, seeking out the current~~s~~, his black profile a punctuation to his words and to the unarticulated words of all the past ~~history~~ of his race. The raven is a bird of parts; he is no show-off nor does he hide his talents. He saves a particular quality in his voice for special occasions, and though he cannot sing in the usual meaning of the term, he is able to introduce a bell-like quality into his croak which adds a musical touch without melody. Like the ouzel, the raven does not just live but appears to delight in his greatest accomplishment - flight. A small group may spend hours playing in the air currents, soaring effortlessly, chasing one another in an endless game - diving, swooping wing to 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 guttural cries that release all the pent-up excitement just as children cry out in their play. Who can say this is not their way of expressing joy?

When, on the first morning, I turn in my sleeping bag toward the east, faint light is just perceptible, ~~and soon~~ ^{Soon it} 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. Unlike the waning evening twilight when everything is closing down and in retreat, at dawn each moment is brighter; the path into light, into activity, is full of hope and promise and renewed energy. The sun, still a long way beneath the rim, routs the last stars down the brightening sky. They make a pale stand

in the thinning shadow of the earth. Venus alone holds out, resisting the stampede. Directly overhead fleecy clouds sail from the northeast across the narrow, rock-enclosed sky, preserving the order of their ranks while their shapes shift and flow. Presently a tinge of pink spreads 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, still in shadow, picks up the color and multiplies it, converting gray stones along its muddy bank into uncut lapis lazuli embedded in molten bronze. Blue highlights thread the dry sand ripples. Day is near and soon with the turning earth it will blaze into the canyon depths.

~~The colors are in the air~~ All the ~~day's~~ morning colors fade with day's swift advance. Purple mud and blue ~~sand~~ dunes become common mud and sand. The river becomes muddy green and the rocks turn to brick and clay as the sun climbs above the canyon rim.

We have had our breakfast, packed 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 little world which for a night's stop was the focus of our lives in an eternity of timeless existence. We push the boats 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 glassy surface of the river lined with swirling striae by the upwelling current. The mirrored sandstone cliffs are distorted near the boat, but down the river's reach are nearly perfectly reflected. In the winding canyon dark and light 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 striped walls of Glen Canyon, undercut by the river which has left

no talus, not even a sand bank or bar, to separate them from the ~~river~~ water, are sliced unexpectedly by narrow perpendicular slots. At high water the river deposits its load in them, sand dropping in the eddies at the entrances and the finer sediments precipitating in the quietest waters. Back in the slots these fingers of the river blend into a bank of gray ooze which thickens 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 ^{on which} one 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 ~~inaccess~~ slots give no hint of the strange sights inside their portals. We plunge apprehensively into the mud and water. Sometimes it is waistdeep; sometimes we must 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, inaccessible walls. Dark viridescent lumps of moss dot the surface and, trembling in a perpetual current of air, green fern tentacles grow around them from the slippery rock. From a groove at a higher level a thin stream slides into a black and fathomless pond. The whole interior of this tenebrous chamber, with waving greenery lining its sides, is like the ciliated cavity of a huge sea anemone.

In Cathedral Canyon, beyond a series of immense, vaulted bends, we come to a sudden closing in of the walls where the floor disappears into a water-filled trough no wider than a man's body. Swimming through it is a dreamlike adventure. We glide along like seals, chin deep in the water, through still depths into an inscrutable solitude. Only the hollow sound of our slight splashing reverberates along the contorted channel back into the story labyrinth. We touch now and again, shivering with surprise, the mysterious

bottom - a stone or a graveled ledge - rising to meet us. We climb over wedged boulders from one ribbon pool to another in a journey reminiscent of Xenadu, 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 a dazzling yellow and is reflected to our eyes at water level from the thin concave lips of the pool lapping the rock in gentle undulations; golden threads reaching ahead to delineate for a moment the wavering separation of water from stone. At last, at the end, a wisp of a waterfall from unseen heights overhead, slips down a smooth and algaed chute into a slaty 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 in a tortured trough into a roofed room in the ochreous 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 ~~above~~ above. The sides of the chimney have been ground into concave plaques lying one above the other like immense, elongated scales. An infernal light spreads down this tube and suffuses the chamber, dyeing our faces and half naked bodies a dull furnace red. Our imaginations, turning to the violent events that must periodically take place in this cavern, picture the enveloping spray and hear the roar of water as it pours down the chimney in a tumultuous, thundering rush.

Weather in the canyon country is not always good. Storms sweep over it from the northwest, the outriggers of disturbances spreading down from the Aleutians, that may last for a week, enveloping the canyon in mist and rain. More usually, summer's bad weather is local and short-lived. Storms develop over the bordering plateaus, spreading out over the encircling land until darkening thunderheads rumble their warning. Down in the

canyon, where the view is restricted, they come up unexpectedly. A white-edged, black cloud rising above the ~~margin~~ rim, a flicker of lightning, a crash of thunder that ~~rich~~ ricochets down the canyon may be the first warning. Then the first ~~show~~ large drops spatter wet circles on the red sandstone. They evaporate quickly from the hot surface and are replaced by more as the shower gathers momentum. A dusty smell pervades the hot air. The rain curves into the canyon in gusts, bright points and streaks against the shaded cliffs. The drops float down but they strike the face hard. The black cloud now occupies the entire opening of the sky and a cold, ~~stodding~~ 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, and dying in the cul de sacs. ~~The~~ Rain comes down hard now. The wet cliffs have lost all color, but glisten like mercury from the sheets of water pouring over them. Through the notches and dips in the rim, wherever the walls were streaked, streams pour down. Through larger notches torrents spume over, free-falling hundreds of feet with a roar, some white and clean, others brown with sediments. The noise of falling water and the rush of the rising creek drowns out all but the thunder.

The downpour retreats as quickly as it came. The waterfalls diminish, ~~cease~~ cease, and the sun comes out again. The rocks dry off - a few puddles alone lingering in their hollows and cavities. The trees glitter and drip briefly, but the creek runs brown and full and is the last to return to its former peaceful pace.

Days spent in Glen Canyon have no counterpart in the turmoil of society. They flow through your consciousness, as the river flows through the canyon, without a break and with hardly a ripple to disturb the smoothness of their progression. Time in Glen Canyon, as in any wilderness experience, passes at its own rate different from the rate of civilization.

None of the exigencies of social life that press down so hard on one exist along the river. The problems of the world fade from the forefront of your mind and duration becomes a serene timeless flow without landmarks, without interruptions, without the insistent beckoning of obligations. This is a fact true of all wild places, but especially true of a remote river, which, flowing past its banks toward a distant destination, supplies and, in a sense, supplants the need for a measure of time. The current becomes the time on which you move, ~~replacing~~ replacing the measure of all events. Things happen and days pass but there seems no order to them, existing simply in a fluxless heap of impressions and memories, all different and yet all of one kind.

No more liberating or healing experience than this is to be found unless it is found at sea. By penetrating to the very core of being, scattering anxieties and ~~unraveling~~ untangling all knots of dissatisfaction and ambition, it works an absolute re-creation of the spirit. To put the world, and yourself at the same time, in a valid perspective, you must remove yourself from the demands of both. The world's troubles fade the fastest, but nonetheless surely your personal troubles ~~shrink~~ shrink to acceptable proportions when they are relegated to a position whence they cannot sally forth at any time of day or night to attack you. In the wilderness of Glen Canyon you are unassailable by yourself.