

The Gouges and Scours of Primordial Time

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Back in some ancestral past, some collective unconscious, ice age waters pouring around the globe aroused accounts of Noah in Genesis and Moses in Exodus. Tongues transmitted tales of catastrophic floods across the human generations. Once the memories and tales gave way to dreams across millennia, then dreamtime burgeoned into lore. Blood-chemicals sculpted religious sagas in ways we might never comprehend. Genetic memory still bends the imagination.

I.

In the bioregion where my family and I live, a lobe of the continental ice sheet dammed up Lake Missoula during the late Pleistocene. That mammoth water body lay two thousand feet deep, three thousand square miles in size, as big as today's Lakes Erie and Ontario combined. Ice age changes froze it up and thawed it out again and again. Lake Missoula's icy shores hardened, inflated, buoyed and collapsed. Each successive collapse sent floodwaters gushing to the Pacific four hundred miles away, charging through and around what is now our Columbia Plateau home.

No one knew about that prehistoric cataclysm until J Harlen Bretz and Joseph Pardee found the ancient flood-path. They noticed massive ripple marks on stone, they found scoured and gouged basalt that only coursing waters could have made, they discovered strand lines high above the town of Missoula that marked the lake's historic shores. What we know as fact today, they had to argue as theory then: it was the largest drenching ever to have worried planet Earth.

Bretz floated his conviction at a conference in 1927. His peers sneered. They believed he was giving comfort to literal readers of the Bible; blowing a dog whistle meant to summon those who thought Noah's flood had a basis in fact. Fellow scientists at first thought Bretz a geological fraud. For fifty years after he spoke up, though, they analyzed the remnant flood-path, the arid landscapes scoured by apocalyptic water. They met, conferred and compared notes. Convinced at last of the truth of the planetary cataclysm, the veracity of Bretz's research, they humbled themselves and commended him in a telegram that read, "We are all now catastrophists."

The Lake Missoula theory has held steady for two generations already, but it places great demands upon the imagination even now. I've urged my children to envision cataclysmic water raging across our landscapes as fast as cars on highways go, flooding with force enough to erode the epidermal soil layer, channel bonelike stone. The liquefied flesh of a damaged planet seethed south and west to empty down a drowned Columbia River to the sea. I ask my boys to visualize, as if in time-lapse film, those floods occurring sixty, eighty, even a hundred times over

centuries, the ice dam at Lake Missoula's western border freezing, rising, breaking, and freezing again.

In the hall between their bedrooms when they were young, I tossed a pillow. I lay on the floor and whispered them to sleep. Freeform stories, improvised tales poured forth. Ancient Lake Missoula then resembled a blister bulb, its ice dam a crust that toughened like a scab to heal a stubborn wound. The blister burst and drained secretions. Those secretions carved the basalt scablands into runnels and ruts. Our corrugated parcel of the globe recovers slowly – a long time in human terms, geologically a simple blip. Our beast of a region still is healing, striving still to rebuild the skin those ice age floods sloughed off.

II.

My son Chase and I rise early. We hoist our kayak on the car to paddle on the vestigial stream that materialized when Lake Missoula drained: the Clark Fork River in north Idaho. He snoozes on the road and I sip tea from a Nalgene bottle. When we arrive at the town of Clark Fork and motor down, he opens an eye. On the bridge above the river a boy is dangling his feet. He appears to have Down Syndrome, much like in the movie *Deliverance*. Perilously near the current being powered to the lake by snowmelt he sits. He gazes at the surface as if transfixed.

Watching him and the burly current compels a spell of vertigo in me. The girders of the old bridge shimmer, its taut suspension cables seem to whine, and the wooden deck of the bridge tosses like a drunken boat. The vertigo makes my head spin. Chockablock on the bridge I have to halt the rusty Subaru and draw breath. Chase glances my way with surprise and I smile. When at last the tilt of the world grows still, I motor to the bumpy road that leads to Johnson Creek.

When that road dead-ends, a man and boy who are casting lines. "Any luck?" I ask, my voice a croak, my elbow out the window. The creek is cloudy, the day overcast.

"Just a few squaws." The fishing father frowns then turns back to his casting. Chase beside me lifts a lip at that odd utterance. He is wondering what he got into when he agreed to paddle with me down these waters and camp overnight.

"He means squawfish," I whisper, raising the window and rolling away.

With the advent of the Columbia watershed dams, so-called squawfish began to burgeon in the superheated reservoirs behind the dams. There they prey on salmon spawn. To try to squelch them, the Bonneville Power Administration pays bounties for squawfish heads, more than 225,000 bounties in 2016 alone. Taxonomists renamed the fish the northern pikeminnow, doubtless to avoid the trashy ethnic slur, but change comes slow to Idaho in these far parts.

Chase and I bump across the graveled lot to the boat-launch. At fifteen years of age, he occupies an awkward stage of life – six feet two, leggy as a calf giraffe, his hair a mop, voice cracking. A flick of a wrist gauges his mutable mods. On the screens of portable machines, he hunts down tiny figures. He also likes to fish. At the sight of the Clark Fork River and Johnson Creek he begins to pay slow attention to the world around him. His muscles are remembering the act of casting, the heave of a fish on his line, the reeling of it onto shore.

Chase's arrival in this world was mistimed by more than two weeks. Following hikes, massages, and infusions of cohosh tea, his mother's water finally broke. The delivery took eighteen hours. Due to his protracted womb-time, his chin came sharp and chiseled as an elder's, his limbs desiccated. At the sight of that thin chin, and the freaky cone-head effect from the skull plates piling up to travel the birth canal, I suffered in long silence. A supple mass of bone forms the human head, like tectonic plates on the planet before the continents settled out. At last the physician in attendance remarked the skull plates were receding and restored my peace of mind.

The Ice age floods that scoured our land were earthly births, as devastating in keyways as they were generative. *Landscape* is land *shaped*; our pliable language reminds us. Shaped by humans in our occupied environs, by water mostly in the wild. Imagine if we each had to replay birth's ordeal dozens of times, if we were to endure parturition for centuries like the Northwest's battered landscapes did. River drainages laced by tributary streams and creeks and swamps – witnessed from a mountain or a plane today– startle for their stark resemblance to our circulatory systems at work, our subcutaneous capillaries and veins made plain ([figure 1](#)).

III.

At the boat-launch I park the car, take a piss, and begin to unstrap the tandem kayak from the roof rack. Chase squints at the sky and turns to unbind the lashes on the other side. His long hands mimic mine, his angular face mirrors mine, except for his prominent brow gouge.

A car crash last year gashed his forehead and caused a brain bleed. The healing brow scar reminds his friends of the character Harry Potter. Chase was sleeping in the backseat with a family friend when an elderly woman crossed the line and caused a head-on smash-up at a combined speed of ninety. Chase got knocked out but hung clumsily to life. A fractured wrist, a brain bleed and a bruised intestine propelled him in and out of hospitals for several days.

One year later, his numbness and random headaches still fret Karen and me. So do fears he'll be at risk of more concussions. Even though he claims to have no memory of the accident, unexpected aural stimulation agitates him like it never did before. Experts classify his condition as a kind of PTSD. Other cognitive riddles abound. Raucous online games such as World of Warcraft mesmerize him. Summer nights till two or three, he competes on screens with gamers

he will never meet. He shouts over his headphones as if with ghosts. The cruel Lord Voldemort tried to murder the toddling Harry Potter, who wears a brow scar like a lightning bolt now.

Time spent outdoors might dampen cranial trauma, might thwart its formidable force. Meditative mindfulness, some hopeful research claims, can alter the cellular makeup of the brain. Outdoor time away from media vanquishes their power, restructures the cerebral cortex, reshapes adolescent neurons. Or so his mother and I have read. We are hoping to test the waters of those hopeful notions, to place our trust in the neurologists. We want to believe. At home Karen hems up her worries during the light of day then rips out the stitch-work in the long hours of the night.

Chase fidgets and pulls gear from the hatchback of the car. He couples the halves of his rod and threads the fine line through each eye. Fishing is a kind of magic, we both believe. Fling a gaudy replica of a bug and you never know what species of creature might bite. He clips on a feathered lure, creeps to the stream and casts his bright enticement just shy of the far bank. Then he gently reels back in. The water mutters and breathes up steam. An osprey clears the line of poplars, followed by another. For such big-winged fish hawks, they peep like barnyard chicks.

No pikeminnows are biting for Chase today, no trout or bass. The water is high. Hard to fish in these conditions. We cross the lot to stare at the catch of the preoccupied father and son. They have no words for us, intent as they are on the task of gathering. In pails, their captured fish gulp and circle like lobsters cramped in bistro tanks; fish soon to be whacked in the head, fileted in slabs, doused in egg and milk, dipped in toasty breadcrumbs and deep-fried. They do not tempt our jaded tastes. In memories of my hunter-gatherer clan, chain-link stringers still clash against the hulls of rowboats, still click with trout laced through gills and out the mouth.

We gaze goodbye to fishermen and fish and head back to our launch spot. On the kayak's webbed decks, we lash our dry bags fore and aft. We slip into flotation vests and zip. Slide the craft to the water's edge and load more gear in a hold behind the stern seat. As I steady the shell on the wobbly rocks and water, Chase creeps in crabwise. I visually sweep the shore one last time then shove us off and leap. A lurch of current overtakes us, spins and propels us toward the river and the lake. My vertigo recommences. My altered state, my paddling's woozy hazard.

When Johnson Creek merges with the Clark Fork, the spring flood water becomes the hue of clouds, murky with snowmelt and rock flour. Its *fluvial* muscle clutches at us.

Overhead three ravens strain from cottonwood branches, as if they hope to haze us. They surrender themselves to full-throated cries, the broad wings mantle, the necks flatten like adders, beak-parts ajar. The tongues flick and glint, much like their prehistoric reptile kin. When

they take wing at last, their flight feathers sough as eloquent as grunts squeezed from wet lungs. The cottonwood branches they've pitched from throb. Downstream the birds ratchet out the news of our arrival, along a line of cottonwoods like rifle sights down to where the lake maw yawns. That relic of the Ice Age floods reflects a patch of sky and spreads out for miles. It is as if it were transmitting sound, the water of the lake an acoustic blue, a singing bowl struck and rung.

Like the voyageurs that poured their French words on the water two centuries before us, Chase slaps the gurgling surface of the river with his blade. He is *avant de bateau*, the bowsman, while I am *gouvernail de bateau*, the steersman and rudder. Fully awake at long last, hormones surging within him, he asks to commandeer the stern where I sit, the power position of the boat.

IV.

For many years I have entertained a goofy urge to paddle Lake Missoula, even dreamt about traversing that defunct water body. Its energies tangle my sleep. My dreams might stem from the knowledge that we abide in an ancient flood path. The Industrial Revolution and its detriments today –we as a species imperiling the planet, manipulating the water and land, tweaking the very atmosphere – have become the slow equivalent of those geological powers.

In one dream about the Pleistocene, my family is with me. The dire wolves and woolly mammoths are plunging into the long night of extinction. Stunned on hilltops when the first flood comes, the people fear some feral god is stirring up the fury. A mastodon bobs to the surface after the deluge. The people snag the carcass and haul it in to shore. Wretched and desperate with hunger, they feed on it for days, digging deep within the animal's cavity, bloody and reeking, tunneling their way to the untainted meat. That bloated carcass becomes the only deliverance they are able to divine. Their hoped-for exodus takes the shape of an escape from rising waters, an evasion of the fate the clan across the drainage suffered from the inland sea.

A dream child born amid their peril launches thin cries. They bend to hush it, fearing that a predator might trace them by the sound. Sick at last from eating tainted meat, they turn away to pursue other prey. Our rooted instincts still recommend we leave old carcasses behind.

In the coming flood path, we humans roamed the forests and plains. We leveled big mammals with stone-pointed spears. Our knapped obsidian and flint tips detached inside the bodies, tons of thundering muscle negating our labour. Most of the mammals had gone extinct by 10,000 years ago, including the two-horned rhino and the Hagerman horse, that last a kind of New World zebra. Deluges flushed their remains away. To find whole skeletons is altogether rare today. We find a skull here, a vertebra there. Did *Homo sapiens* kill them off? The science on those extinctions is suspended in a state of competing theories, contending doubts.

Our current epoch, the Holocene, began some 12,000 years ago, and now a number of our luminaries are supplanting the word *Holocene* with *Anthropocene* to name the current era. That new label supposes humankind will continue as the major geological force for millennia, maybe even for millions of years to come. We are indeed the weather-makers, the future-eaters, but I harbor contrarian doubts the planet itself is doomed. We have an eleventh-hour opportunity to amend our destructive ways; become a creative force to heal and restore. In the act of restoring the damaged and animated planet, we might also enjoy an opportunity to “re-story” ourselves.

The wreckage of the Ice age floods coincided with the rise of our kind as an invasive species and geological force. Whether coincidence or causation is a kind of question that shapes scientific revolutions today. Some speculate the spread of *Homo sapiens* sped a suite of species extinctions. Slow predation, industrial plunder, might better typify our impact on other beings.

Pundits jumping on the Anthropocene are behaving feverishly, as if such attention were productive. Writer Robert Macfarlane has noted, “There are . . . good reasons to be skeptical of the Anthropocene’s absolutism, the political presumptions it encodes, and the specific histories of power and violence that it masks.” A proliferation of Anthropocenic artifacts deepens our pessimistic despotism. Makers, artificers, fabricators, we inscribe the catastrophic with our imaginations. We keep the cataclysm swimming always within view. How much healthier to focus on nature’s resilience before the onslaught of 7.3 billion of us technophilic beings. How much more “healthy-minded,” to take up the splendid phrase of psychologist William James.

A generation ago, ecologists liked to allude to the balance of nature. Now environmental ethicists and scientists embrace disequilibrium as a theory to qualify older notions. This analogy comes from Ernest Partridge: “The simplest example of an equilibrium would be a ball-bearing in a bowl. At rest, the ball is in the center. When jostled, it moves off center, only to return to the exact same spot where it was before the disturbance. The shape of the bowl is the ‘self-correcting mechanism’.” This analogy describes the range of historic variability in ecosystem change. The bearing at rest represents the balance of nature, or equilibrium. The “jostling” is the disruption that nature favours over natural balance and states of temporary stasis. The theory of disequilibrium asserts that nature is in constant flux, or at its very best in states of provisional equilibrium. Which, of course, is what the theory of evolution itself contends.

V.

Just as the slow pace of geological change makes for few witnesses to mass extinctions, most killing also flits beneath our notice due to its small scale. Ask E. O. Wilson, the Pulitzer Prize winner who began by studying ants, whose weight on Earth is alleged to rival human beings. Only when carnage rises to human magnitude does it catch much of our care. Cats will vanish from urban yards when coyotes seize them. A cougar near a jogging path strikes dread, as do

bears in the orchard and wolves in fields grazed by cattle or sheep. Where Lake Missoula spread, fled and filled back up, short-faced bears and scimitar cats prowled. Their planetary descendants in predation still show us how they thrived. To dwell in necessity, minus any instruments to measure ecological change, made human lives precious, precarious, and brief.

The origin of the word *carcass* is uncertain, lost within the fogs of time. It first called up the moribund forms of people. As it evolved, it contracted to apply to animal bodies only, never anymore to people. A whiff of sanctimony arises from that tapered semantic range. Our blessed bodies remain fresh better than others, and so our carcasses came to mandate nobler care. We humans proved so treasurable, we differed so very much from other animals, that to call our dead bodies “carcasses” became akin to blasphemy. The locution *corpse* slithered in as a better fit.

Human bodies are held to accommodate souls that the subaltern animals lack. Is a soul a substance or an attribute, visible or invisible? Descartes saw animals as robots, all destitute of sentience. “If there were such machines with the organs and shape of a monkey or of some other non-rational animal,” he wrote, “we would have no way to discover that they are not the same as these animals.” A carcass is a *case* for the *carne* or flesh, a vessel for foul substances within. In the sixth extinction, we witness species dying far less than we see the dead and dying of our own.

Lake Missoula had its way with the world’s body. It furrowed the flesh of our ecosphere when its heavy waters flowed. Stark beauty now saturates the channeled scablands near Chase’s and my home. How ironic that an abundance of H₂O, some three hundred feet deep in places, gave way to the great aridity of the American West today. John Crowe Ransom’s 1938 book *The World’s Body* drove home his renegade notion that poetry and science offer equally valid forms of knowledge – a creed to inspire my scarred son as he forges his sense of the world. Humankind might need its poets as much as its scientists to illuminate the particulars of the Anthropocene.

If science and poetry lie on opposite sides of that dynamic sphere we name the brain, their contact points might flint up wisdom from verse, spark poetry from science. Consider *De Rerum Natura*, the epic poem by Roman philosopher Lucretius. As an atomist, he trusted that the universe consists of particles in ceaseless motion. Atoms collide and combine and shape the material world. When mortals die, we decay and revert to random atomistic states. We pass into chance particles. Unless we favour parking our carcasses in caskets meant never to biodegrade, that is. Unless overweening self-regard demands we pay an undertaker to enoble our
our
remains.

Atop the copious flow my son helps me propel the kayak. Strong despite his near-mortal car crash, he slaloms our craft to dodge rocks, stumps, limbs and strainer trees toppled from the

flooding shore. He outstrips me on bikes, boats and software know-how. How glad I am to have brought him out, glad to have a chance to break the ties to technology that so often bind us.

Paddling takes us to a meditative place. It lends the peace to set a weary psyche at ease. Distance from the chaos afoot in civilization can make for greater insight. It can idle us down.

IV.

Thomas Cole made a painting in 1833 titled *The Titan's Goblet* that hangs in the Metropolitan Museum of Art ([figure 2](#)). The goblet's bowl forms a basin for a lake. On it a civilization teems. The goblet appears discarded, cast off. The titan of the title is nowhere to be seen. Were the goblet in use, the titan afoot, the antlike humans would not be thriving. Or so we viewers assume. But the humans who sail their boats on its surface, who build castles and homes on its shore, might be unable to view its entirety due to its scale. Such incompetence might apply to us, our Earth, its processes in planetary time. We do not know how resilient this planet of our dwelling really is. Nature is reclaiming Cole's goblet. A mustache of foliage furs its lip. People have built upon the goblet, ignorant of its possessor. Has the titan perished or absconded? Been ousted by another species? Left his or her accessories behind? The painting offers us no clues.

Maybe Cole as a Christian meant to celebrate the advent of Christ and the abandonment of pagan ways. Maybe Cole was painting like a paleontologist, lamenting that we have pestered out the supping titans, who left behind only a few inscrutable artifacts our minute scale precludes us from viewing. Or maybe Cole's titanic timescale, like Lake Missoula's geology, differs so much from our perceptions that the titan has only paused between sips. In that interim our generations come and go. Our empires rise and fall. Like bacteria, our civilizations reproduce around the goblet. If the ancients knew Earth time as titanic time, we moderns can intuit neither one.

Once Chase and I cross the delta – where the Clark Fork River and the historical Lake Missoula meet – the morning overcast has turned to sun-drenched afternoon. Here lies the aqua incognita of my fantasy and dream life. Here, the watery proxy for the ice-dam cork. It popped often and shot its froth across the Northwest in the late ice age. The choppy waters of the Clark Fork river widen, pivot, hinge and subside. Montana and Idaho merge. Chase and I now ache to paddle faster. Profile low, our locomotion almost silent, the boat propels us as light as a feather on the same sky-water that dizzied Thoreau, when he contemplated its reflective depths.

Chase spots them first, a raft of mergansers, a fish duck and her eighteen chicks. The fluff balls scud after the hen, clamber on and off her back. She tries to pilot them but, like the old woman who lived in a shoe from the rhyme I recite, her lifted wing implies she's ready to whack them

and send them back to the nest. The crown of her head is cinnamon red. Feathers stream behind her crest like strands of frowzy hair. Game agents named this species of bird a varmint long ago and urged its destruction year-round. Science changes. Laws change to follow changing science. The hen dives and her fledglings try to follow. Weaker of foot or lung, they surface first.

She pops up and in her beak bears a waterweed, roots dangling, as if she means to plant it. This fish duck seems to me at once to be the wide world's body, a water-bearing vessel just like us. She serves the mercenary ends of water, transporting it from one spot to another. Her turbulent spot on Earth merges chaos and old night. Here the water tumbling from the mountains grows tame to meet the lake, here the two fluids swirl to a depth of eleven hundred feet. At the same time this fish duck is a clever predator. Her rasped beak clasps like a dragonfly's to capture and hold her slimy prey. This common merganser becomes the earth-diver of origin stories, the being meant to register time for the First People. To accomplish her job, she must take human form now. Comfort us and wise us up. Teach us where we came from and why.

VII.

For my family's sense of place and time, we are all catastrophists. We have little vestigial confidence we will meet with even keels on our journeys out. We have suffered rash cataclysms and outlasted them. We have prevailed against the gouges and scours of primordial time.

To dwell upon our Anthropocenic wreckage runs the risk of instilling self-consciousness akin to original sin. It can enervate and deepen perceptions that our ancestors absconded with all the good fruit and left us behind, damned and doomed to consume their fumes and sicken in their spew. When my fellow humans speak of getting away from it all, they mean getting away from our own species, both the spoor of our civilizations and those who belabor and denounce them.

As the father of a young man-in-the-making, I place some trust in our human efforts to improve the future. We sensible apes might yet acquire the capacity to learn from our mistakes, endure this rough stretch of the Anthropocene, mend this epoch our technologies have wrought. Learn wisdom and solicitude for our fellow planetary travelers and occupants. Survive to overcome the carcasses of hidebound ideologies and leave their perishing flesh behind.

Figure 1: [Veins of America](#)

Figure 2: [The Titan's Goblet](#)