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Mind in the Forest

An intimate encounter with really old trees

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Painting: Ellen Dittebrandt

THE SETTING OF THIS ESSAY by Scott Russell Sanders is the H. J. Andrews Experimental Forest, a 15,800-acre research area in the Cascade Mountains of Oregon. Research conducted at the Andrews Fo has taught us much of what we know about old-growth in the Pacific Northwest; more than one hundred experiments are currently under way there, focusing on the role of forests in protecting water quality, controlling stream flow and sedimentation, cycling and storing carbon, and providing habitat for wildlife

In 2003 the Spring Creek Project at Oregon State University, in collaboration with the Andrews Forest L Term Ecological Research Group, began inviting writers to spend weeklong residencies at the Andrews Forest, in order to provide ways of observing the land that complement the ways of science. Their respon —poems, stories, essays, field notes, journals—have been added to the data, technical reports, scientific papers, aerial photographs, statistics, and maps that strive to present a comprehensive vision of the And Forest.

Two earlier pieces of writing inspired by the Andrews Forest residencies have appeared in Orion*: Robert Michael Pyle's "The Long Haul" (September/October 2004) and Alison Hawthorne Deming's "The Web" (March/April 2007).*

I TOUCH TREES, as others might stroke the fenders of automobiles or finger silk fabrics or fondle cats.

Trees do not purr, do not flatter, do not inspire a craving for ownership or power. They stand their ground immune to merely human urges. Saplings yield under the weight of a hand and then spring back when the hand lifts away, but mature trees accept one's touch without so much as a shiver. While I am drawn to all ages and kinds, from maple sprouts barely tall enough to hold their leaves off the ground to towering sequoias with their crowns wreathed in fog, I am especially drawn to the ancient, battered ones, the survi

Recently I spent a week in the company of ancient trees. The season was October and the site was the drainage basin of Lookout Creek, on the western slope of the Cascade Mountains in Oregon. Back in my home ground of southern Indiana, the trees are hardwoods—maples and beeches and oaks, hickories and sycamores—and few are allowed to grow for as long as a century without being felled by ax or saw. Here ruling trees are Douglas firs, western hemlocks, western red cedars, and Pacific yews, the oldest of them ranging in age from five hundred to eight hundred years, veterans of countless fires, windstorms, landslid insect infestations, and floods.

ON THE FIRST MORNING of my stay, I follow a trail through moist bottomland toward Lookout Creek where I plan to spend half an hour or so in meditation. The morning fog is thick, so the treetops merge w gray sky. Condensation drips from every needle and leaf. My breath steams. Lime-green lichens, some as long as a horse's tail, dangle from branches. Set off against the somber greens and browns of the conifers yellow and red leaves of vine maples, bigleaf maples, and dogwoods appear luminous in spite of the dam Shelf fungi jut from the sides of old stumps like tiny balconies, and hemlock sprigs glisten atop nurse log The undergrowth is as dense as a winter pelt.

Along the way, I reach out to brush my fingers over dozens of big trees, but I keep moving, intent on my destination. Then I come upon a Douglas fir whose massive trunk, perhaps four feet in diameter at chest height, is surrounded by scaffolding, which provides a stage for rope-climbing by scientists and visiting schoolchildren. Something about this tree—its patience, its generosity, its dignity—stops me. I place my palms and forehead against the furrowed, moss-covered bark, and rest there for a spell. Gradually the agitation of travel seeps out of me and calm seeps in. Only after I stand back and open my eyes, and notic how the fog has begun to burn off, do I realize that my contact with this great tree must have lasted fiftee twenty minutes.

I continue on to a gravel bar on Lookout Creek, a jumble of boulders, cobbles, pebbles, and grit scoured l from the volcanic plateau that forms the base of the Cascade Mountains. Because these mountains are yo the slopes are steep and the water moves fast. Even the largest boulders have been tumbled and rounded. Choosing one close to a riffle, I sit cross-legged and half close my eyes, and I am enveloped in water sou a ruckus from upstream and a burbling from downstream. Now and again I hear the thump of a rock shift in the flow, a reminder that the whole mountain range is sliding downhill, chunk by chunk, grain by grai

Although I have tried meditating for shorter or longer stretches since my college days, forty years ago, I l never been systematic about the practice, nor have I ever been good at quieting what Buddhists call the

"monkey mind." Here beside Lookout Creek, however, far from my desk and duties, with no task ahead o me but that of opening myself to this place, I settle quickly. I begin by following my breath, the oldest rhythm of flesh, but soon I am following the murmur of the creek, and I am gazing at the bright leaves of maples and dogwoods that glow along the thread of the stream like jewels on a necklace, and I am watch light gleam on water shapes formed by current slithering over rocks, and for a spell I disappear, there is o this rapt awareness.

EACH MORNING at first light I repeat the journey to Lookout Creek, and each time I stop along the wa embrace the same giant Douglas fir, which smells faintly of moist earth. I wear no watch. I do not hurry. stay with the tree until it lets me go.

When at length I lean away, I touch my forehead and feel the rough imprint of the bark. I stare up the tru and spy dawn sky fretted by branches. Perspective makes the tops of the surrounding, smaller trees appea lean toward this giant one, as if conferring. The cinnamon-colored bark is like a rugged landscape in miniature, with flat ridges separated by deep fissures. Here and there among the fissures, spider webs spa the gaps. The plates are furred with moss. A skirt of sloughed bark and fallen needles encircles the base o trunk. Even in the absence of wind, dry needles the color of old pennies rain steadily down, ticking again my jacket.

I don't imagine that my visits mean anything to the Douglas fir. I realize it's nonsensical to speak of a tre patient or generous or dignified merely because it stands there while researchers and children clamber up ropes into its highest limbs. But how can I know a tree's inwardness? Certainly there is intelligence here, in the forest as a whole, if by that word we mean the capacity for exchanging information and responding appropriately to circumstances. How does a tree's intelligence compare with ours? What can we learn fro it? And why, out of the many giants thriving here, does this one repeatedly draw me to an embrace?

The only intelligence I can examine directly is my own and, indirectly, that of my species. We are a contradictory lot. Our indifference to other species, and even to our own long-term well-being, is demonstrated everywhere one looks, from the depleted oceans to the heating atmosphere, from poisoned wetlands to eroding farmlands and forests killed by acid rain. Who can bear in mind this worldwide devastation and the swelling catalogue of extinctions without grieving? And yet it's equally clear that we capable of feeling sympathy, curiosity, and even love toward other species and toward the Earth. Where o this impulse come from, this sense of affiliation with rivers and ravens, mountains and mosses? How mig be nurtured? What role might it play in moving us to behave more caringly on this beleaguered planet?

These are the questions I find myself brooding about as I sit in meditation beside Lookout Creek. One is supposed to brood while meditating, of course, so again and again I let go of thoughts and return my awareness to the water sounds, the radiant autumn leaves, the wind on my cheek, the stony cold chilling i sitting bones. And each morning, for shorter or longer spells, the fretful *I* quiets down, turns transparent, vanishes.

Eventually I stir, roused by the haggle of ravens or the chatter of squirrels or the scurry of deer—other m in the forest—and I make my way back along the trail to the zone of electricity and words. As I walk, it occurs to me that meditation is an effort to become for a spell more like a tree, open to whatever arises, without judging, without remembering the past or anticipating the future, fully present in the moment. Th taste of that stillness refreshes me. And yet I do not aspire to dwell in such a condition always. For all its grandeur and beauty, for all its half-millennium longevity, the Douglas fir cannot ponder me, cannot refle or remember or imagine—can only *be*. Insofar as meditation returns us to that state of pure, unreflective being, it is a respite from the burden of ceaseless thought. When we surface from meditation, however, w are not turning from reality to illusion, as some spiritual traditions would have us believe; we are reclaim the full powers of mind, renewed by our immersion in the realm of mountains and rivers, wind and breatl

AT MIDDAY, sunlight floods the gravel bar on Lookout Creek, illuminating strands of spider filament th curve from one boulder to another over an expanse of rushing water. At first I can't fathom how spiders managed this engineering feat. The wind might have blown them one direction but not back again, and ye least a dozen gossamer threads zigzag between the massive stones. Then I guess that the spiders, after attaching the initial strand, must climb back and forth, adding filaments. The stones they stitch together a knobby and creased as the haunches of elephants. Even in still air, butter-yellow maple leaves come sashaying down. A pewter sheen glints from the bark of young Douglas firs tilting out over the stream.

Unconsciously, I resort to human terms for describing what I see, thus betraying another quirk of our spe We envision bears and hunters and wandering sisters in the stars. We spy dragons in the shapes of clouds hear mournfulness in the calls of owls. Reason tells us that such analogies are false. For all its delicious sounds, the creek does not speak, but merely slides downhill, taking the path of least resistance, rubbing against whatever it meets along the way. Boulders have nothing to do with elephants, lichens are not horsetails, moss is not fur, spiders are not engineers, ravens do not haggle, and trees do not confer. Scient are schooled to avoid such anthropomorphism. Writers are warned against committing the "pathetic falla which is the error of projecting human emotions or meanings onto nature. The caution is worth heeding. if we entirely forgo such analogies, if we withhold our metaphors and stories, we estrange ourselves from universe. We become mere onlookers, the sole meaning-bearing witnesses of a meaningless show.

But who could sit here, on this gravel bar beside Lookout Creek, and imagine that we are the sole source meaning? Against a halcyon blue sky, the spires of trees stand out with startling clarity, their fringe of lic appearing incandescent. Moths and gnats flutter above the stream, chased by dragonflies. The creek is lin by drift logs in various states of decay, from bone-gray hulks to rotting red lumps. Wet boulders gleam as lit from within. Cobbles jammed against one another look like the heads of a crowd easing downstream. muscular current, twisting over rocks, catches and tosses the light. The banks on either side blaze with th salmon-pink leaves of dogwoods, those western relatives of the beloved understory tree of my Indiana forests. Everything in sight is exquisite—the stones of all sizes laid against one another just so, the perfo leaves of red alders, the fallen needles gathered in pockets along the shore, the bending grasses, the soari

trees.

Only cosmic arrogance tempts us to claim that all this reaching for sunlight, nutrients, and water means nothing except what we say it means. But if it bears a grander significance, what might that be, and what gives rise to such meaning? What power draws the elements together and binds them into a spider or a person, a fern or a forest? If we answer, "Life," we give only a name, not an explanation.

THOSE WHO FANCY that humans are superior to the rest of nature often use "tree-hugger" as a term o ridicule, as if to feel the allure of trees were a perverted form of sensuality or a throwback to our simian ancestry. Of course, many who decry tree-hugging don't believe we *have* a simian ancestry, and so perha what they fear is a reversion to paganism. And they may have a point. The religions that started in the Mi East—Judaism, Christianity, Islam—are all desert faiths, created by people who lived in the open. Theirs sky god, who would be eclipsed by a forest canopy. In every civilization influenced by these faiths, trees have been cut down not merely to secure wood for cooking and building or to clear ground for agricultur to open vistas around settlements where predators might lurk, but to reveal the heavens.

Worship of a sky god has been costly to our planet. Religions that oppose the heavenly to the earthly, elevating the former and scorning the latter, are in effect denying that we emerge from and wholly depen nature. If you think of the touchable, eatable, climbable, sexy, singing, material world as fallen, corrupt, a sinful, then you are likely to abuse it. You are likely to say that we might as well cut down the last old-gr forests, drain the last swamps, catch the last tuna and cod, burn the last drops of oil, since the end time is coming, when the elect few will be raptured away to the immortal realm, and everything earthly will be utterly erased.

But our language preserves a countervailing wisdom. In Latin, *materia* means stuff, anything substantial, in particular it means wood. *Materia* in turn derives from *mater*, which means mother. In the collective imagination that gave rise to these meanings, trees were understood to epitomize matter, and matter was understood to be life-giving. Perhaps we could tap into this wisdom by recovering another word that deri from mater—*matrix*, which means womb. Instead of speaking about "nature" or "the environment," term which imply some realm apart from us, perhaps we should speak of Earth as our matrix, our mother, the source and sustainer of life.

It is easy to feel nurtured among these ancient trees. I breathe the forest. I drink its waters. I take in the fo through all my senses. In order to survive here for any length of time, I would need to wear the forest, its and skin and fiber; I would need to draw my food from what lives here alongside me; I would need to bu fallen branches for cooking and for keeping warm; I would need to frame my shelter with its wood and c and stone. Above all, I would need to learn to *think like* the forest, learn its patterns, obey its requirement align myself with its flow.

There are no boundaries between the forest and the cosmos, or between myself and the forest, and so the intelligence on display here is continuous with the intelligence manifest throughout the universe and with

mind I use to apprehend and speak of it.

ONE MORNING beside Lookout Creek, enveloped as usual in watery music, I sit leaning against a youn red alder that has sprouted in the gravel bar, its leaves nibbled into lace by insects. Everything here either starts as food or winds up as food. None of the alders growing on this ever-shifting bank is thicker than a baseball bat. The next big flood will scour them away. Beside me, the sinewy roots of an upturned stump seem to mimic the muscular current in the stream. The bar is littered with gray and ruddy stones pockma by holes that betray the volcanic origins of this rubble.

Where better than such a place to recognize that the essence of nature is *flow*—of lava, electrons, water, wind, breath. *Materia*, matter, the seemingly solid stuff we encounter—trees, stones, bears, bones—is actually fluid, constantly changing, like water shapes in the current. The Psalmist tells us, "The mountain skipped like rams, and the little hills like lambs," and Dōgen, a thirteenth-century Zen teacher, proclaims mountains are always walking. Both speak truly. Mountains do move, arising and eroding away over geological time, just as organisms grow and decay, species evolve, tectonic plates shift, stars congeal and burn and expire, entire galaxies shine for a spell and then vanish. Nothing in nature is fixed.

Conservationists have often been accused of wishing to freeze the land in some favored condition—for example, the American continent as it was before European colonization. Back when maps described old growth as large saw-timber, scientists spoke of forests reaching climax, as if at some point the flow woul cease. But we now realize that no such stasis is possible, even if it were desirable. If flux is the nature of nature, however, we still must make distinctions among the *kinds* of change. We cannot speak against the damage caused by human behavior unless we distinguish between *natural* change—for example, the long history of extinctions—and *anthropogenic* change—for example, the recent acceleration in extinctions du habitat destruction, pollution, climate change, and other disturbances caused by humans. The capacity to make such a distinction, and to act on it, may be as unique to our species as the capacity to use symbolic language.

Thoughts flow, along with everything else, even in the depths of meditation. And yet the human mind see compelled to imagine fixity—heaven, nirvana, Plato's ideal realm, eternal God—and the human heart ye for permanence. Why else do we treasure diamonds and gold? Why else do Creationists cling to the notic that all species were made in exactly their present form? Why else do we search for scientific "laws" underlying the constant flux of the universe?

Our yearning for the fixed, like our craving for dominion over nature, may be another expression of our f of aging and death. This occurs to me as I sit, transfixed, beside the narrowest, noisiest passage in the riff on Lookout Creek. A dozen dead snags tilt above my head, their bare limbs like the sparse whiskers on a man's chin. Upstream, a gigantic Douglas fir has fallen across the creek, its trunk still as straight as when was alive. Downstream, another giant has fallen, this one snapped in the middle. I can't help imagining o of the looming snags suddenly toppling onto me and snapping my thread of thought, scattering this

congregation of elements and notions bearing my name.

HIGHER UP THE VALLEY of Lookout Creek, in a grove of five-hundred-year-old Douglas firs and we hemlocks, a hundred or so logs have been placed side by side on the ground, labeled with aluminum tags fitted with instruments to measure their rate and manner of decay. Designed to continue for two centuries this research aims to document, among other things, the role of dead wood in forest ecology and in the sequestering of carbon.

On a visit to the site, I stroke the moss-covered logs, touch the rubbery fungi that sprout from every surfa peer into the boxy traps that catch flying insects and fallen debris, and lean close to the tubes that capture logs' exhalations. The only breathing I detect is my own. I'm intrigued that scientists are studying decomposition, for as an artist I usually think about *composition* —the making of something shapely and whole out of elements. A musician composes with notes, a painter with colors, a writer with letters and words, much as life orchestrates carbon, oxygen, nitrogen, and other ingredients into organisms. These organisms—trees, fungi, ravens, humans—persist for a while, change over time, and eventually dissolve their constituents, which will be gathered up again into living things.

Art and life both draw energy from sunlight, directly or indirectly, to counter entropy by increasing order Right now, for example, I'm running on the sunshine bound up in pancakes and maple syrup. Organisms interact biophysically with everything in their ecosystem, and ultimately with the whole universe. By contrast, the symbolic structures that humans create—songs, stories, poems, paintings, photographs, film diagrams, mathematical formulas, computer codes—convey influence only insofar as they are read, hear otherwise perceived by humans. What happens when we turn our interpretive powers on living organisms Does raven, Douglas fir, spider, or lichen mean anything different, or anything more, when it is taken up human consciousness?

What we think or imagine about other species clearly influences our behavior toward them—as notions a the wickedness of wolves led to their extermination throughout much of their historic range, and as new understanding about the role of predators has led to the reintroduction of wolves in Yellowstone and elsewhere. But aside from this practical impact, does our peculiar sort of mind bear any greater significar in the scheme of things? Is it merely an accidental result of mechanical processes, an adaptive feature tha powered our—perhaps fleeting—evolutionary success? Would the universe lose anything vital if our spe suddenly vanished?

We can't know the answer to those questions, despite the arguments of prophets and philosophers. We ca only form hunches, and, right or wrong, these will influence the spirit of our work and the tenor of our liv For what it's worth, my hunch is that what we call mind is not a mere side effect of material evolution, bu fundamental to reality. It is not separate from what we call matter, but is a revelation of the inwardness o things. I suspect that our symbol-wielding intelligence is a manifestation of the creative, shaping energy t drives the cosmos, from the dance of electrons to the growth of trees. If this is so, then our highest calling

may be to composition—paying attention to some portion of the world, reflecting on what we have perce and fashioning a response in words or numbers or paint or song or some other expressive medium. Our paintings on cave walls, our photos of quasars, our graphs and sonnets and stories may be the gifts we ret for the privilege of sojourning here on this marvelous globe.

IF INTELLIGENCE MEANS the ability to take in and respond to information, then all organisms posses whether animal or plant, for they exchange signals and materials with their surroundings constantly. If intelligence means the capacity for solving puzzles or using language, then surely the ravens that clamor above me or the wolves that roam the far side of the mountains possess it. But if we are concerned with t power not merely to reason or use language, but to discern and define meanings, to evaluate actions in lig of ethical principles, to pass on knowledge across generations through symbolic forms—then we are spea about a kind of intelligence that appears to be the exclusive power of humans, at least on this planet.

Some contemplative traditions maintain that this meaning-making capacity is a curse, that it divorces us f reality, enclosing us in a bubble of abstractions. It's easy to sympathize with this view, when one conside our history of feuds and frauds. Cleverness alone does not make us wise. Yet here among these great tree and boisterous mountain streams, I sense that our peculiar sort of mind might also be a blessing, not only us but to the forest, to other creatures, to life on Earth, and even to the universe.

I recognize the danger of hubris. It's flattering to suppose, as many religions do, that humans occupy a ur place in the order of things. The appeal of an idea is not evidence for its falsity, however, but merely a re for caution. Cautiously, therefore: Suppose that the universe is not a machine, as nineteenth-century scier claimed, but rather a field of energy, as twentieth-century science imagined. Suppose that mind is not sor private power that each of us contains, but rather a field of awareness that contains us—and likewise encompasses birds, bees, ferns, trees, salamanders, spiders, dragonflies, and all living things, permeates mountains and rivers and galaxies, each kind offering its own degree and variety of awareness, even stars even stones.

What if our role in this all-embracing mind is to gaze back at the grand matrix that birthed us, and transla our responses into symbols? What if art, science, literature, and our many other modes of expression feed back into the encompassing mind, adding richness and subtlety? If that is our distinctive role, no wonder feel this urge to write, to paint, to measure and count, to set strings vibrating, to tell stories, to dance and

Scott Russell Sanders, distinguished professor of English at Indiana University Bloomington, is winner of t Award. His twentieth book, A Conservationist Manifesto, *was published this year.*

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