

The Mindfulness of Natural History

From here, the tropical forest stretches more than two thousand miles toward the Atlantic coast. In the sticky heat I walk beside the Rio Puyo, along the uppermost edge of the Ecuadorian Amazon, having just descended from the Andean highlands. There's a tingling sense that something new, something beautiful, might manifest at any moment, around any corner. The flick of a leaf, the chip-note of an unseen bird—these are potential portals into new worlds. This sense of total alertness enlivens me; the air throbs, ready to explode, it seems, into new life forms. Across the muddy river, a rustle among the treetops seizes my attention, then there it is: a finch-sized bird with a luminescent turquoise head, sharply contrasting with a black body, splashed with a straw-yellow patch on its wing. A bird so gaudy and brilliant, I laugh aloud. In the next moment, a second bird, about the same size, flies onto the next branch, so close it's visible in the same binocular view. This bird shimmers lime-green, with a lemon-yellow belly. They both jounce the branches a bit as they grab insects, then fly off, deeper into the forest. I grab my field guide—the monumental *Birds of Ecuador*, which, given the

tremendous diversity of this biologically blessed nation, fills my shoulder bag. Because of their size, behavior, and fanciful coloration, I'm pretty sure these are both tanagers—members of a large tropical family of fruit-eating birds. Soon I've narrowed it down: a blue-necked tanager (I must concur with the field guide authors' enthusiasm: "arguably one of the more stunning members in a wonderful genus") and a female swallow tanager. My actual observation of these two lasted only half a minute, but weeks later I still tingle with the memory, and with the knowledge that creatures such as these are out there, going about their business, each and every moment of each and every day.

Another morning, far to the south. Low-angle sun of the austral summer glints off the surface of the violet-blue bay, whitecaps kicking up spray into the steady twenty-knot wind. But here on shore, more than two hundred thousand birds stand erect, each as tall as my waist, squawking up a collective cacophony that can be heard well out to sea—almost as far as the fertile scent of their guano can be smelled. Most of these king penguins are in full adult plumage: gleaming white breasts, with charcoal-gray heads, necklaced with sun-bright yellow, the same color that forms a teardrop patch on the side of their heads, like a golden exclamation point on each bird. Scattered throughout the colony are the juveniles, which have a completely different appearance—shaggy and uniformly brown. These adolescents cluster together in small pockets, readying themselves to overwinter on this sub-Antarctic island. All in all, these are stunning creatures. Even a single bird would be astonishing, but so many thousands, packed within a body length of one another, together filling an entire valley, is almost incomprehensible, beyond my senses' ability to process. This enormous colony—the center of the world for this species—is severed into halves by the gracious curves of a river, pulsing

with fresh glacial meltwater, its source visible in the daunting, jagged peaks that jut almost three thousand meters above this remote beach in the Southern Ocean. As an early explorer exclaimed on encountering this island: "It's like coming upon the Alps in the middle of the ocean."

As I move away from the fringe of the penguin colony, Antarctic fur seals glare at me, corkscrewing their necks in broad circles and snapping their formidable teeth in warning. Occasionally I have to waggle a slender stick in their direction to discourage those jaws from chomping onto my leg. Amid all this swarming life, three hours pass by in a blur, and soon it's time to load back into our rubber landing boats and bounce across the roughening sea to our ship.

And the most important moment: this one. Right now, right here. Early spring sun casting broad shadows, glinting bright copper in large patches on the pine needle forest floor. The wind from the end of the huge cyclonic storm system spinning east is almost past us now. Yet the wind's whipping tail tosses the tops of Ponderosa pines as if they were cornstalks on the prairie, their long needles twirling against azure sky. The sound of the powerful wind burrows through the trees, shouldering away the spring sounds of finches. My eyes flick from golden grama grass waving in the sunlit openings to glossy-green Emory oak leaves mirroring the sun. My ears trace the crescendo and decrescendo of wind. My imagination feels the snowmelt moisture slowly percolating into volcanic soil beneath my crossed legs. I'm no longer alone in the world. Rather, I've connected with my true neighbors, and with the force that flows along the ribs of the continent.

Natural history is a practice of intentional, focused attentiveness and receptivity to the more-than-human world, guided by hon-

esty and accuracy. Simply put, it is paying attention to the bigger world outside our own heads. As Zen Rōshi (and contributor to this volume) Robert Aitken noted, attention is prerequisite to intimacy. Natural history, then, is a means of becoming intimate with the big, wild world. For some, this involves watching birds visit a feeder outside a city apartment. For others, it's an annual pilgrimage to witness the spring bloom of desert flowers. Flyfishers pay close attention to aquatic insect larvae, snorkelers gain joy watching the synchronized movements of reef fishes, and geologists trace the evolution of the Earth by following bends and folds in sedimentary rocks. The mind of a hunter is nothing if not attentive to nuances of animal movement and color. With some 30 million species living on this remarkable planet, across an endless variety of landscapes, and interacting in an infinite number of ways, there is literally no limit to the "nature" we can pay attention to.

Mindfulness, a crucial element of many spiritual lineages, is particularly closely allied with Buddhist traditions, which include it as one of the elements of the Noble Eightfold Path. Right Mindfulness involves cultivating a state of increasing clarity and intensity of consciousness, one that filters out illusions and projections. Recognition of the importance of focused attentiveness is common to most spiritual traditions. Christian monks spend long hours in contemplative silence, Hindu yogis focus their minds through breathing and body movements, Sufi dancers invoke unity with the divine, Tibetans chant sutras. By whatever name—mindfulness, meditation, prayer, zazen, contemplation—a process of quieting the mind and attending to the unadorned particularities of the world has been deemed an essential component of human spiritual endeavor across cultures, languages, continents, and time.

Buddhist scholar Nyanaponika Thera, in *The Heart of Bud-*

dhist Meditation, notes that mindfulness begins with a “taking notice,” a “turning toward” an object (or, one could extrapolate—a bird, a flower, a dragonfly . . .). Thich Nhat Hanh declared that “mindfulness is the foundation of a happy life” and that practicing it helps us “become a real person.” Poet (and contributor to this volume) Jane Hirshfield has noted that “in a state of open mindfulness, a broad subliminal attention is going out in many directions at once.” In short, mindfulness represents the mind on full alert, open to sensation and stimuli, eager to engage. Recently, psychologists have developed a keen interest in mindfulness due to its role in helping people maintain psychic balance and health. Shinzen Young, a Buddhist teacher, asserts that mindfulness training leads to greater clarity and equanimity, which he suggests are analogous to strength and flexibility in physical fitness training. In the last few years a professional literature on mindfulness has sprouted. The gist of these articles, largely buried in technical psychology journals, is that mindfulness revolves around openness to present-moment experiences. Such openness, say the psychologists, leads to acceptance and nonjudgment. As Buddhist teachers have long taught, enlightenment derives from full awareness of each present moment.

Natural history and mindfulness are two surfaces of the same leaf, a seamless merging of attentiveness outward and inward, toward the interwoven realms of nature and psyche. For some people, the window is clearer looking outward; for others, it's easier to look within. But regardless what is being attended, the practice of mindful attention is very much the same, and the two practices are fully complementary. That Gautama, the historical Buddha, had his original moment of awakening while seated under a tree is probably not coincidental.

Mindfulness practices of all traditions share three char-

acteristics: a commitment to developing the capacity to pay attention; an object or ally to pay attention to (typically, one's breath); and a focus on in-the-body rather than out-of-body experience. The first notion—developing skill at paying attention—is fully concordant with any definition of natural history. But some advocates of mindfulness have concentrated on the importance of interior reality, while neglecting that which occurs outside. When considering mindfulness, we should erase the false boundary between inwardly and outwardly directed attention. Jungian psychologist James Hillman has pointed out that “the cut” between “the me” and “the other” is completely arbitrary. (In fact, he asserts that psychology’s core issue should be examining the uncertainty of this boundary.) Recognition of the essential permeability of the “self” and larger “ecological self” leads to a sense of unity between mindful practices directed toward the inner and outer landscapes. Hillman concluded that “the most profoundly collective and unconscious self is the natural material world.”

As I sit in the forest, legs crossed, attention to my breathing encourages awareness of rhythms inside the boundary of my skin. Noticing grosbeaks sing from the upper branches of pines catalyzes a sense of “a psyche the size of earth” (to use Hillman’s phrase). And attentiveness to the melodious song emphasizes the fuzziness of the boundary between inner and outer: Does the sound emanate from the bird’s syrinx or as vibrations upon my eardrum? Or is this sensation really about the merging of the two?

Fully developed attentiveness toward the natural world is nothing new. Human ecologist Paul Shepard asserted that the very nature of human consciousness—the way our brains developed capacities for paying attention—is a result of our

keen attentiveness toward predators and prey while evolving from other primates. "Animals," he wrote, "are among the first inhabitants of the mind's eye. They are basic to the development of speech and thought . . . indispensable to our becoming human in the fullest sense." Millennia before "mindfulness" or "natural history" emerged as concepts, our human ancestors paid close heed to interior and exterior worlds and the ways they interpenetrated.

Why does attentiveness to nature matter? In a very fundamental sense, we *are* what we pay attention to. Paying heed to beauty, grace, and everyday miracles promotes a sense of possibility and coherence that runs deeper and truer than the often illusory commercial, social "realities" advanced by mainstream contemporary culture. Even awareness of the grimmer sides of nature (predation, death, decay), when witnessed in ecological context, illuminates the essence and poignancy of human potential.

Our attention is precious, and what we choose to focus it on has enormous consequences. What we choose to look at, to listen to—these choices change the world. As Thich Nhat Hanh has pointed out, we *become* the bad television programs that we watch. A society that expends its energies tracking the latest doings of the current celebrity couple is fundamentally distinct from one that watches for the first arriving spring migrant birds, or takes a weekend to check out insects in a mountain stream, or looks inside flowers to admire the marvelous ingenuities involved in pollination. The former tends to drag culture down to its lowest commonalities; the latter can lift us up in a sense of unity with all life.

John Tarrant, a Zen Buddhist teacher and psychologist, noted that "attention is the most basic form of love"—a form

of blessing. Nicolas Malebranche, a French philosopher in the seventeenth and eighteenth centuries, said that "attentiveness is the natural prayer of the soul." And, indeed, my own observation over three decades of teaching natural history is that it routinely has a centering, uplifting effect on people. Among the attributes I've noticed in those who are attentive to nature are a greater sense of humility, affirmation, hope, and gratitude. At the end of a natural history outing, jaws often ache from smiling—there's so much joy, so much laughter. Who among us can't stand some of this tonic? Paying careful attention to life is, unsurprisingly, life-affirming. Natural history tends to lead to an expanded sense of a naturalist's own humanity.

Natural history is the oldest continuous human tradition. Throughout history attentiveness to nature was so completely entwined with daily life and survival that it was never considered as a practice separate from life itself. In modern life, though, most people have become distanced from the kind of direct interaction with other patterns and processes of life and other living beings—other presences—that was formerly taken for granted. Simply put, there has never been a moment in the story of human existence when natural history was practiced so little.

Our current lack of consideration of what poet W. S. Merwin refers to as "the unrepeatable world"—the massive, unique creation we know as nature—reveals a fundamental hubris in modern life. This lack of attentiveness to nature correlates with a plethora of social, cultural, and environmental maladies: widespread depression, violence, and pollution. Why is there a correlation? Because attentiveness to the more expansive consciousness of "nature" inherently promotes humility and questioning; the lack of it can promote smugness.

Yet alienation from nature is becoming more widespread.

Attention to nature has been marginalized in many institutions. A great many universities have replaced teachers of field natural history with molecular biology researchers. In the realm of K–12 education these days, it takes real commitment to devote a single week out of thirteen years of schooling to field-based environmental education. Many school systems are cutting out even simple field trips, in part due to concerns about safety and litigation. In his *Last Child in the Woods*, Richard Louv notes that modern society teaches young people to avoid direct experience in nature. He coined the phrase “nature deficit disorder” to describe the resulting syndrome of dysfunction. Recent behavioral research makes clear that decreases in direct interactions with nature correlate closely with more indoor sedentary recreation involving electronic media (an increase in “videophilia”). Other recent research verifies that the sense of psychological well-being among urban dwellers reflects the degree of biological diversity they encounter—people simply feel better when surrounded by a diversity of plants and animals.

Even indoor sedentary connection to the natural world is being systematically eliminated. Recently the editors of the *Oxford Junior Encyclopedia* announced that they were removing a great many nature words (buttercup, acorn, fern, wren, and the like) and replacing them with currently fashionable words from technology (broadband, voice mail, database, and so on). So in the lexicon of young people, BlackBerry the electronic gadget replaces blackberry the luscious fruit. With what language will these people discover and express their innate affinity for the rest of creation—that fundamental human tendency that E. O. Wilson termed “biophilia”?

But the simple, elegant practice of natural history—which every person is wired to do, and which costs almost nothing—helps us fall in love outwardly with the world. Natural history

attentiveness was the source of the earliest human literature—stories of the day’s hunt vigorously acted out around campfires—and our first art, whether the cave paintings at Lascaux or petroglyphs chiseled into the desert-varnished sandstone canyons of the Colorado Plateau. As Joseph Campbell, among others, pointed out, we owe the very forms of our bodies and the structures of our minds to the natural history—infused life-ways of our Paleolithic forebears. Prioritizing a reconnection with such fundamental elements of our original mind—paying attention to the larger forces we are a part of—will be crucial to finding a pathway toward environmental sustainability and interpersonal sanity.

If the predilection toward natural history is so fundamentally innate to *Homo sapiens*, why have we strayed so far from it? Have modern humans simply outgrown the need for outwardly directed attentiveness? And what of those people in crowded cities or in poorer, less developed parts of the world? Is natural history simply a luxury, an artifact of a privileged colonial mindset?

Is it more challenging to find “nature” to attend in big cities? Often, yes—but far from impossible. For one thing, “vacant lot” is one of the greatest of urban misnomers—for even small open spaces in cities harbor patches of wildness well worth examining. Tiny flowers emerge from cracked pavement; butterflies come sip their nectar. Curbside trees green up in spring; insects hatch from tiny eggs hidden in crevices along the branches; birds soon descend to forage in this reborn biological exuberance. Moreover, many great cities have parks and other green spaces which can concentrate wildlife. New York’s Central Park and Boston’s Mount Auburn Cemetery, to cite just two exam-

ples, are famously spectacular sites to witness the spring song-bird migration.

There is no reason to believe that poverty-stricken regions of the globe are less inclined to engage in natural history, for there is no direct relationship between economic hardship and lack of interest in the natural world. In fact, often the opposite is true: Campesinos living close to the bone often live close to the land. Indeed, many peasants, fisher folk, and forest dwellers still actively utilize their natural history field skills to supplement their kitchens and their medicine shelves with wild plants and animals. Some of the best naturalists I've ever met have been people living off the bottom end of any economic development concept of poverty, whether indigenous hunter-gatherers along desert seacoasts of Mexico, shepherders high in the Andes, or homesteaders in Pacific Northwest river valleys.

Paying attention to the more-than-human world can be irrelevant only to the extent that clarity of mind and connection with and understanding of greater forces are no longer relevant, to the extent that humility and joy no longer serve the human spirit. Marginalized peoples, whether in sprawling cities or desolate backcountry, need the psychological gifts provided by mindful natural history as much as, if not more than, any academic, museum-going sophisticate.

Natural history is not a privilege, but a right—a fundamental capacity and need of all people. And because its practice requires no fancy tools or technology, it is easily available. Indeed, one of the causes of its demise in many institutional settings—not least academia—is that little money need be exchanged for natural history to be fostered. We don't need gas chromatographs, mass spectrometers, fancy laboratories. We can do this work with our bare hands.

Natural history mindfulness offers many gifts—glimpses of wholeness, connection, and beauty that continue to teach, inspire, and heal for many years.

Along the Escalante River, scarlet flowers bloom on copper-sand terraces under cottonwoods and box-elders, while black-headed grosbeaks sing their long, up-and-down song from hidden branches. Pausing to peer through a hand lens into the tubular cathedral of a *Penstemon* flower, I'm startled by the remarkable array of golden hairs, and the precise seam in each anther, about to burst with pollen.

In the Cascades, five-hundred-year-old Douglas-firs reach into the clouds, which dump silent, steady rain. Higher up, the smell of soil just emerging from a nine-month winter, yellow glacier lilies blooming right at the snowmelt edge, anxious for the fleeting summer to begin. The sharp whistle of a marmot piercing the stillness, then the wind bringing chill.

In the Sea of Cortez, I'm roused each time I step inside an open boat, for I know that one-third of the world's whale and dolphin species lunge through these food-rich waters, and the richest concentration of seabirds south of Alaska clusters on sea cliffs. The pulse of possibilities: gatherings of fin whales heaving their immense bodies through dense schools of plankton; Craveri's murrelet, one of the least-known birds in North America, silently slicing glassy waters; tropicbirds swirling above their northernmost breeding colony. And—just once—the utterly humbling, transfixing experience of being escorted for several hours by a pod of orcas. Gazing eye to eye as they plunged sideways beneath us, their mouths large enough to swallow our stern, the males' dorsal fins projecting above our heads. A sense of menace that transmuted, through shared moments at the surface of the sea, into communion.

Or watching, say, a flock of five hundred Western sandpipers on a Mexican mudflat, knowing they are about to lift into flight—as if a single organism, flashing white, dark, then light again, as they abruptly shift directions—and then wing their bodies, smaller than my fist, to tundra flats north of the Bering Straits.

And these hummingbirds in front of my eyes, signaling with the full force of their fierce, dense energies, that life is not to be lived partway. That every single moment must be a blur of feathers, a deep suck of nectar.

Natural history renews us as it scrubs clean our vision of the world. We need it to counter despair—there *is* durable beauty in this world. And we need it as an essential guidepost as we retrack our collective behavior toward more harmonious ways.

In the pages you hold, twenty-two voices—women and men, poets and scientists, musicians and teachers—declare how paying attention has changed their lives, and how it can change the world. You'll hear how attentiveness to inner/outer nature has made their lives less boring and more fun. How it has made them better thinkers, better neighbors, more fully alive. How it has encouraged humility and insight, protected their sanity and even their lives.

Enjoy their stories. Celebrate this bountiful beauty. Then step outside. What will you witness, this next moment?