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What it is Like to Trip on the Most Potent Magic Mushroom

by MICHAEL POLLAN

Paul Stamets, a mycologist I had come to visit in Washington State's Olympic Peninsula to go mushroom hunting, had a gift he wanted to give me. We were in his office, looking at some images on his computer, when he pulled off the shelf a small pile of amadou hats, made of felt pressed from mushroom fibers. "See if one of these fits you." Most of the mushroom hats were too big for me, but I found one that sat comfortably on my head and thanked him for the gift. The hat was surprisingly soft and almost weightless, but I felt a little silly with a mushroom on my head, so I carefully packed it in my luggage.

Early Sunday morning we drove west toward the Pacific Coast and then south to the Columbia River, where it flows into the Pacific, stopping for lunch and camping provisions in the resort town of Long Beach. This being the first week of December, the town was pretty well buttoned up and sleepy. Stamets requested that I not publish the exact location where we went hunting for Psilocybe azurescens, a variety of "magic mushroom" first identified and named by Stamets, and the most potent ever found. But what I can say is that there are three public parks bordering the wide-open mouth of the Columbia—Fort Stevens, Cape Disappointment, and the Lewis and Clark National Historical Park—and we stayed at one of them. Stamets, who has been coming here to hunt "azzies" for years, was mildly paranoid about being recognized by a ranger, so he stayed in the car while I checked in at the office and picked up a map giving directions to our yurt.

As soon as we unloaded and stowed our gear, we laced up our boots and headed out to look for mushrooms. Which really just meant walking around with eyes cast downward, tracing desultory patterns through the scrub along the sand dunes and in the grassy areas adjoining the yurts. We adopted the posture of the psilocybin stoop, except that we raised our heads every time we heard a car coming. Foraging mushrooms is prohibited in most state parks, and being in possession of psilocybin mushrooms is both a state and a federal crime.

The weather was overcast in the high 40s—balmy for this far north on the Pacific Coast in December, when it can be cold, wet, and stormy. We pretty much had the whole park to ourselves. It was a stunning, desolate landscape, with pine trees pruned low and angular by the winds coming off the ocean, endless dead-flat sandy beaches with plenty of driftwood, and giant storm-tossed timbers washed up and jack-strawed here and there along the beach. These logs had somehow slipped out from under the thumb of the lumber industry, floating down the Columbia from the old-growth forests hundreds of miles upriver and washing up here.

Illustrations by Kelsey Brooks

Stamets suspects that Psilocybe azurescens might originally have ridden out of the forest in the flesh of those logs and found its way here to the mouth of the Columbia—thus far the only place the species has ever been found. Some mycelium will actually insinuate itself into the grain of trees, taking up residence and forming a symbiotic relationship with the tree. Stamets believes the mycelium functions as a kind of immune system for its arboreal host, secreting antibacterial, antiviral, and insecticidal compounds that protect the trees from diseases and pests, in exchange for nourishment and habitat.

"azzies are organisms of the ecological edge. Look at where we are: at the edge of the continent, the edge of an ecosystem, the edge of civilization, and of course these mushrooms bring us to the edge of consciousness."

I saw plenty of LBMs—little brown mushrooms—that might or might not be psilocybin and was constantly interrupting Stamets for another ID, and every time he had to prick my bubble of hope that I had at last found the precious quarry. After an hour or two of fruitless searching, Stamets wondered aloud if maybe we had come too late for the azzies.

And then all of a sudden, in an excited stage whisper, he called out, "Got one!" I raced over, asking him to leave the mushroom in place so I could see where and how it grew. This would, I hoped, allow me to "get my eyes on," as mushroom hunters like to say. Once we register on our retinas the visual pattern of the object we're searching for, it's much more likely to pop out of the visual field. (In fact the technical name for this phenomenon is the pop-out effect.)

It was a handsome little mushroom, with a smooth, slightly glossy, caramel-colored cap. Stamets let me pick it; it had a surprisingly tenacious grip, and when it came out of the ground, it brought with it some leaf litter, soil, and a little knot of bright-white mycelium. "Bruise the stipe a bit," Stamets suggested. I did, and within minutes a blue tinge appeared where I'd rubbed it. "That's the psilocin." I never expected to

actually see the chemical I had read so much about. The mushroom had been growing a stone's throw from our yurt, right on the edge of a parking spot. Stamets says that like many psilocybin species, "azzies are organisms of the ecological edge. Look at where we are: at the edge of the continent, the edge of an ecosystem, the edge of civilization, and of course these mushrooms bring us to the edge of consciousness." At this point, Stamets, who when it comes to mushrooms is one serious dude, made the first joke I had ever heard him make: "You know one of the best indicator species for Psilocybe azurescens are Winnebagos." We're obviously not the first people to hunt for azzies in this park, and anyone who picks a mushroom trails an invisible cloud of its spore behind him; this, he believes, is the origin of the idea of fairy dust. At the end of many of those trails is apt to be a campsite, a car, or a Winnebago.

We found seven azzies that afternoon, though by "we," I mean Stamets; I only found one, and even then I wasn't at all certain it was a Psilocybe until Stamets gave me a smile and a thumbs-up. I could swear it looked exactly like half a dozen other species I was finding. Stamets patiently tutored me in mushroom morphology, and by the following day my luck had improved, and I found four little caramel beauties on my own. Not much of a haul, but then Stamets had said that even just one of these mushrooms could occasion a major psychic expedition.

That evening, we carefully laid out our seven mushrooms on a paper towel and photographed them before putting them in front of the yurt's space heater to dry. Within hours, the hot air had transformed a mushroom that was unimpressive to begin with into a tiny, shriveled gray-blue scrap it would be easy to overlook. The idea that something so unprepossessing could have such consequence was hard to credit.

WHERE IN THE WORLD will I find PSILOCYBE AZURESCENS?

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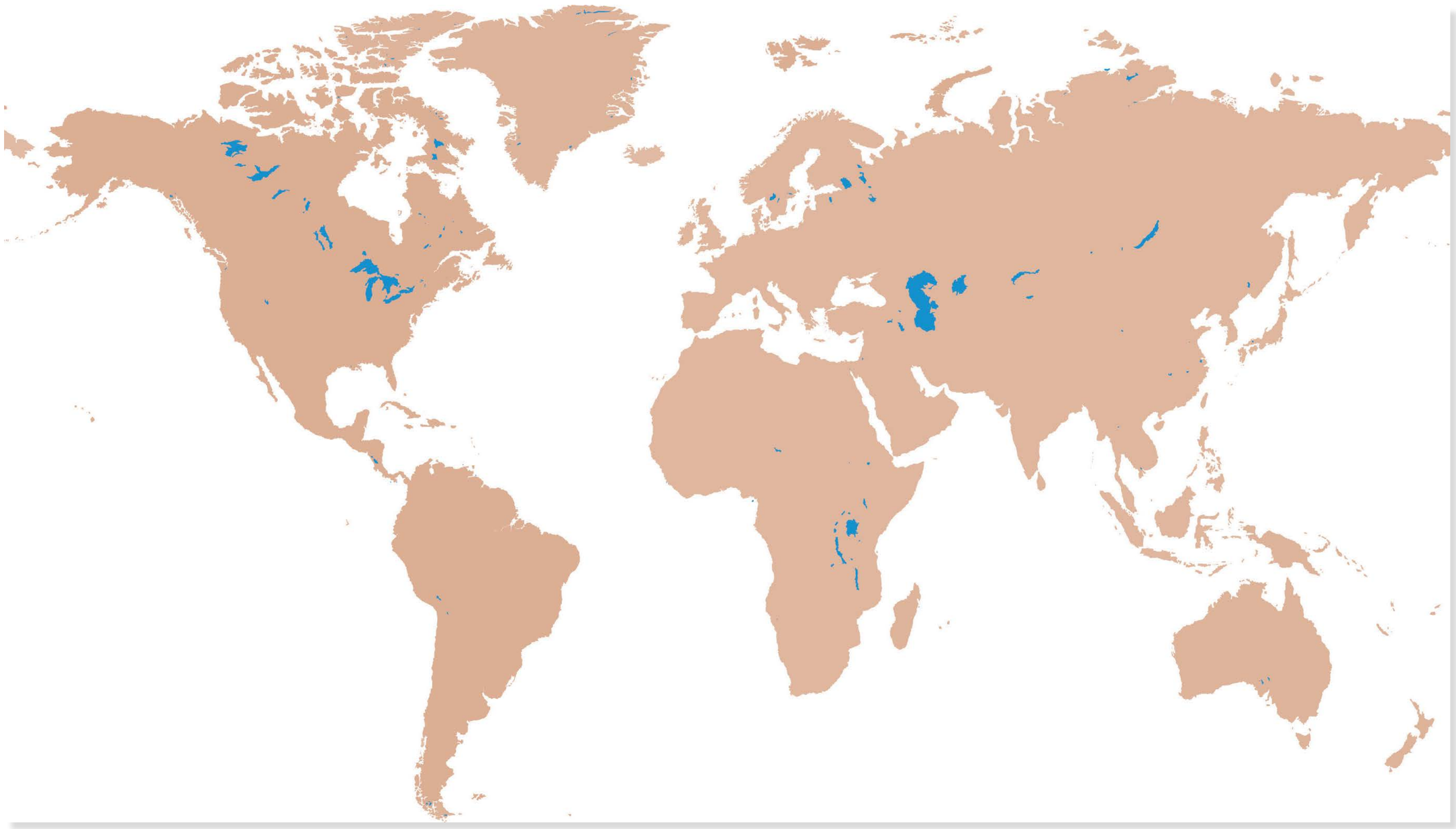


Hunting for the MAGIC mushrooms...

I had been looking forward to trying an azzie, but before the evening was over, Stamets had dampened my enthusiasm. “I find azurescens almost too strong,” he told me when we were standing around the fire pit outside our yurt, having a beer. After nightfall, we had driven out onto the beach to hunt for razor clams by headlight; now we were sautéing them with onions over the fire.

“And azzies have one potential side effect that some people find troubling.”

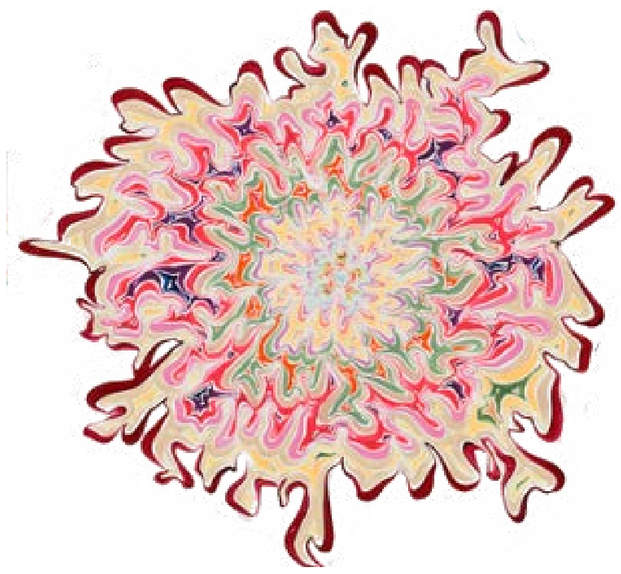
Yes?

“Temporary paralysis,” he said matter-of-factly. He explained that some people on azzies find they can’t move their muscles for a period of time. That might be tolerable if you’re in a safe place, he suggested, “but what if you’re outdoors and the weather turns cold and wet? You could die of hypothermia.” Not much of an advertisement for azurescens, especially coming from the man who discovered the species and named it. I was suddenly in much less of a hurry to try one.

But the leaves were also looking back at me, fixing me with this utterly benign gaze. I could feel their curiosity and what I was certain was an attitude of utter benevolence toward me and my kind. (Do I need to say that I know how crazy this sounds? I do!)

The question I kept returning to that weekend is this: Why in the world would a fungus go to the trouble of producing a chemical compound that has such a radical effect on the minds of the animals that eat it? What, if anything, did this peculiar chemical do for the mushroom? One could construct a quasi-mystical explanation for this phenomenon, as Stamets and Terence McKenna have done: Both suggest that neurochemistry is the language in which nature communicates with us, and it’s trying to tell us something important by way of psilocybin. But this strikes me as more of a poetic conceit than a scientific theory.

The best answer I’ve managed to find arrived a few weeks later courtesy of Paul Stamets’s professor at Evergreen State College, Michael Beug, the chemist. When I reached him by phone at his home in the Columbia River Gorge, 160 miles upriver of our campsite, Beug said he was retired from teaching and hadn’t spent much time thinking about psilocybes recently, but he was intrigued by my question.



Psilocybin Research: Johns Hopkins, Sacred Knowledge, William A. Richards

What music should you listen to while tripping on psilocybin? Take heed from Dr. William Richards, someone who knows way more about magic mushrooms than you do.

"I make the best musical choices I can, trying to separate the 'very good' and the 'excellent' on the basis of years of experience with many different people."

Largely, the playlist comes as a surprise. Rather than the acid house, psytrance or psychedelic rock you'd expect to find, Richards falls back on mostly classical music. Until the final phase that is, when the patient would be returning to their normal consciousness. Here The Beatles, Enya, and Louis Armstrong all make an appearance.

Listen to the playlist HERE

I asked him if there is reason to believe that psilocybin is a defense chemical for the mushroom. Defense against pests and diseases is the most common function of the so-called secondary metabolites produced in plants. Curiously, many plant toxins don't directly kill pests, but often act as psychostimulants as well as poisons, which is why we use many of them as drugs to alter consciousness. Why wouldn't plants just kill their predators outright? Perhaps because that would quickly select for resistance, whereas messing with its neurotransmitter networks can distract the predator or, better still, lead it to engage in risky behaviors likely to shorten its life. Think of an inebriated insect behaving in a way that attracts the attention of a hungry bird.

But Beug pointed out that if psilocybin were a defense chemical, "my former student Paul Stamets would have jumped on it long ago and found a use for it as an antifungal, antibacterial, or insecticide." In fact Beug has tested fungi for psilocybin and psilocin levels and found that they occur only in minute quantities in the mycelium—the part of the organism most likely to be well defended. "Instead the chemicals are in the fruiting bodies, sometimes at over 2 percent by dry weight!"—a stupendous quantity, and in a part of the organism it is not a priority to defend.

Even if psilocybin in mushrooms began as "an accident of a metabolic pathway," the fact that it wasn't discarded during the course of the species' evolution suggests it must have offered some benefit. "My best guess," Beug says, "is that the mushrooms that produced the most psilocybin got selectively eaten and so their spores got more widely disseminated."

Eaten by whom, or what? And why? Beug says that many animals are known to eat psilocybin mushrooms, including horses, cattle, and dogs. Some, like cows, appear unaffected, but many animals appear to enjoy an occasional change in consciousness, too. Beug is in charge of gathering mushroom-poisoning reports for the North American Mycological Association and over the years has seen accounts of horses tripping in their paddocks and dogs that "zero in on psilocybes and appear to be hallucinating." Several primate species (aside from our own) are also known to enjoy psychedelic mushrooms. Presumably animals with a taste for altered states of consciousness have helped spread psilocybin far and wide.

Such a notion would not strike Paul Stamets as the least bit far-fetched. As we stood around the fire pit, the warm light flickering across our faces while our dinner sizzled in its pan, Stamets talked about what mushrooms have taught him about nature. He was expansive, eloquent, grandiose, and, at times, in acute danger of slipping the surly bonds of plausibility. We had had a few beers, and while we hadn't touched our tiny stash of azzies, we had smoked a little pot. Stamets dilated on the idea of psilocybin as a chemical messenger sent from Earth, and how we had been elected, by virtue of the gift of consciousness and language, to hear its call and act before it's too late.

"Plants and mushrooms have intelligence, and they want us to take care of the environment, and so they communicate that to us in a way we can understand." Why us? "We humans are the most populous bipedal organisms walking around, so some plants and fungi are especially interested in enlisting our support. I think they have a consciousness and are constantly trying to direct our evolution by speaking out to us biochemically. We just need to be better listeners." These were riffs I'd heard Stamets deliver in countless talks and interviews.

“I think psilocybes have given me new insights that may allow me to help steer and speed fungal evolution so that we can find solutions to our problems.” Especially in a time of ecological crisis, he suggests, we can’t afford to wait for evolution, unfolding at its normal pace, to put forth these solutions in time.

What strikes me about both Stamets and many of the so-called Romantic scientists (like Humboldt and Goethe, Joseph Banks, Erasmus Darwin, and, I would include, Thoreau) is how very much more alive nature seems in their hands than it would soon become in the cooler hands of the professionals. These more specialized scientists (a word that wasn’t coined until 1834) gradually moved science indoors and increasingly gazed at nature through devices that allowed them to observe it at scales invisible to the human eye. These moves subtly changed the object of study—indeed, made it more of an object.

Instead of seeing nature as a collection of discrete objects, the Romantic scientists—and I include Stamets in their number—saw a densely tangled web of subjects, each acting on the other in the great dance that would come to be called coevolution. “Everything,” Humboldt said, “is interaction and reciprocal.” They could see this dance of subjectivities because they cultivated the plant’s-eye view, the animal’s-eye view, the microbe’s-eye view, and the fungus’s-eye view—perspectives that depend as much on imagination as observation.

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I suspect that imaginative leap has become harder for us moderns to make. Our science and technology encourage us in precisely the opposite direction, toward the objectification of nature and of all species other than our own. Surely we need to acknowledge the practical power of this perspective, which has given us so much, but we should at the same time acknowledge its costs, material as well as spiritual. Yet that older, more enchanted way of seeing may still pay dividends, as it does (to cite just one small example) when it allows Paul Stamets to figure out that the reason honeybees like to visit woodpiles is to medicate themselves, by nibbling on a saprophytic mycelium that produces just the right antimicrobial compound that the hive needs to survive, a gift the fungus is trading for ... what? Something yet to be imagined.
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I crumbled two little mushrooms in each of two glasses and poured hot water over them to make a tea; Stamets had recommended that I “cook” the mushrooms to destroy the compounds that can upset the stomach. Judith and I each drank half a cup, ingesting both the liquid and the crumbles of mushroom. I suggested we take a walk on the dirt road near our house while we waited for the psilocybin to come on.

However, after only about 20 minutes or so, Judith reported she was “feeling things,” none of them pleasant. She didn’t want to be walk-

ing anymore, she said, but now we were at least a mile from home. She told me her mind and her body seemed to be drifting apart and then that her mind had flown out of her head and up into the trees, like a bird or insect.

“I need to get home and feel safe,” she said, now with some urgency. I tried to reassure her as we abruptly turned around and picked up our pace. It was hot and the air was thick with humidity. She said, “I really don’t want to run into anybody.” I assured her we wouldn’t. I still felt more or less myself, but it may be that Judith’s distress was keeping me from feeling the mushrooms; somebody had to be ready to act normally if a neighbor happened to drive by and roll down his window for a chat, a prospect that was quickly taking on the proportions of nightmare. In fact shortly before we got back to home base—so it now felt to both of us—we spotted a neighbor’s pickup truck bearing down on us and, like guilty children, we ducked into the woods until it passed.

Judith made a beeline for the couch in the living room, where she lay down with the shades drawn, while I went into the kitchen to polish off my cup of mushroom tea, because I wasn’t yet feeling very much. I was a little worried about her, but once she reached her base on the living room couch, her mood lightened and she said she was fine.

I couldn’t understand her desire to be indoors. I went out and sat on the screened porch for a while, listening to the sounds in the garden, which suddenly grew very loud, as if the volume had been turned way up. The air was stock-still, but the desultory sounds of flying insects and the digital buzz of hummingbirds rose to form a cacophony I had never heard before. It began to grate on my nerves, until I decided I would be better off regarding the sound as beautiful, and then all at once it was.

I lifted an arm, then a foot, and noted with relief that I wasn’t paralyzed, though I also didn’t feel like moving a muscle.

Whenever I closed my eyes, random images erupted as if the insides of my lids were a screen. My notes record: fractal patterns, tunnels plunging through foliage, ropy vines forming grids. But when I started to feel panic rise at the lack of control I had over my visual field, I discovered that all I needed to do to restore a sense of semi-normality was to open my eyes. To open or close my eyes was like changing the channel. I thought, “I am learning how to manage this experience.”

Much happened, or seemed to happen, during the course of that August afternoon, but I want to focus here on just one element of the experience, because it bears on the questions of nature and our place in it that psilocybin seems to provoke, at least for me. I decided I wanted to walk out to my writing house, a little structure I had built myself

25 years ago, in what is now another life, and which holds a great many memories. I had written two-and-a-half books in the little room (including one about building it), sitting before a broad window that looked back over a pond and the garden to our house.

However, I was still vaguely worried about Judith, so before wandering too far from the house, I went inside to check on her. She was stretched out on the couch, with a cool damp cloth over her eyes. She was fine. “I’m having these very interesting visuals,” she said, something having to do with the stains on the coffee table coming to life, swirling and transforming and rising from the surface in ways she found compelling. She made it clear she wanted to be left alone to sink more deeply into the images—she is a painter. The phrase “parallel play” popped into my mind, and so it would be for the rest of the afternoon.

I stepped outside, feeling unsteady on my feet, legs a little rubbery. The garden was thrumming with activity, dragonflies tracing complicated patterns in the air, the seed heads of plume poppies rattling like snakes as I brushed by, the phlox perfuming the air with its sweet, heavy scent, and the air itself so palpably dense it had to be forded. The word and sense of poignance flooded over me during the walk through the garden, and it would return later. Maybe because we no longer live here, and this

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garden, where we spent so many summers as a couple and then a family, and which at this moment seemed so acutely present, was in fact now part of an irretrievable past. It was as if a precious memory had not just been recalled but had actually come back to life, in a reincarnation both beautiful and cruel. Also heartrending was the fleetingness of this moment in time, the ripeness of a New England garden in late August on the verge of turning the corner of the season. Before dawn one cloudless night very soon and without warning, the thrum and bloom and perfume would end all at once, with the arrival of the killing frost. I felt wide open emotionally, undefended.

When at last I arrived at the writing house, I stretched out on the daybed, something I hardly ever took the time to do in all the years when I was working here so industriously. The bookshelves had been emptied, and the place felt abandoned, a little sad. From where I lay, I could see over my toes to the window screen and, past that, to the grid of an arbor that was now densely woven with the twining vines of what had become a venerable old climbing hydrangea, a petiolaris. I had planted the hydrangea decades ago, in hopes of creating just this sort of intricately tangled prospect. Backlit by the late-afternoon sunlight streaming in, its neat, round leaves completely filled the window, which meant you gazed out at the world through the fresh green scrim they formed. It seemed to me these were the most beautiful leaves I had ever seen. It was as if they were emitting their own soft, green glow. And it felt like a kind of privilege to gaze out at the world through their eyes, as it were, as the leaves drank up the last draughts of sunlight, transforming those photons into new matter. A plant’s-eye view of the world—it was that, and for real! But the leaves were also looking back at me, fixing me with this utterly benign gaze. I could feel their curiosity and what I was certain was an attitude of utter benevolence toward me and my kind. (Do I need to say that I know how crazy this sounds? I do!)

I felt as though I were communing directly with a plant for the first time and that certain ideas I had long thought about and written about—having to do with the subjectivity of other species and the way they act upon us in ways we’re too self-regarding to appreciate—had taken on the flesh of feeling and reality. I looked through the negative spaces

formed by the hydrangea leaves to fix my gaze on the swamp maple in the middle of the meadow beyond, and it too was now more alive than I'd ever known a tree to be, infused with some kind of spirit—this one, too, benevolent. The idea that there had ever been a disagreement between matter and spirit seemed risible, and I felt as though whatever it is that usually divides me from the world out there had begun to fall away. Not completely: The battlements of ego had not fallen; this was not what the researchers would deem a "complete" mystical experience, because I retained the sense of an observing "I." But the doors and windows of perception had opened wide, and they were admitting more of the world and its myriad nonhuman personalities than ever before.

Buoyed by this development, I sat up now and looked out over my desk, through the big window that faced back to the house. When I sited the building, I carefully framed the main view between two very old and venerable trees, a stolidly vertical ash on the right and an elegantly angled and intricately branched white oak on the left. The ash has seen better days; storms have shorn several important limbs from it, wrecking its symmetry and leaving some ragged stumps. The oak was somewhat healthier, in full leaf now with its upturned limbs reaching into the sky like the limbs of a dancer. But the main trunk, which had always leaned precariously to one side, now concerned me: A section of it had rotted out at ground level, and for the first time it was possible to look clear through it and see daylight. How was it possibly still standing?

As I gazed at the two trees I had gazed at so many times before from my desk, it suddenly dawned on me that these trees were—obviously!—my parents: the stolid ash my father, the elegant oak my mother. I don't know exactly what I mean by that, except that thinking about those trees became identical to thinking about my parents. They were completely, indelibly, present in those trees. And so I thought about all they had given me, and about all that time had done to them, and

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what was going to become of this prospect, this place (this me!), when they finally fell, as eventually they would. That parents die is not exactly the stuff of epiphany, but the prospect, no longer distant or abstract, pierced me more deeply than it ever had, and I was disarmed yet again by the pervasive sense of poignancy that trailed me all that afternoon. Yet I must have still had some wits about me, because I made a note to call the arborist tomorrow; maybe something could be done to reduce the weight on the leaning side of the oak, in order to prevent it from falling, if only for a while longer.

My walk back to the house was, I think, the peak of the experience and comes back to me now in the colors and tones of a dream. There was, again, the sense of pushing my body through a mass of air that had been sweetened by phlox and was teeming, almost frenetic, with activity. The dragonflies, big as birds, were now out in force, touching down just long enough to kiss the phlox blossoms and then lift off, before madly crisscrossing the garden path. These were more dragonflies than I had ever seen in one place, so many in fact that I wasn't completely sure if they were real. (Judith later confirmed the sighting when I got her to come outside.) And as they executed their flight patterns, they left behind them contrails that persisted in the air, or so at least it appeared. Dusk now approaching, the air traffic in the garden had built to a riotous crescendo: the pollinators making their last rounds of the day, the plants still signifying to them with their flowers: me, me, me! In one way I knew this scene well—the garden coming briefly back to life after the heat of a summer day has relented—but never had I felt so integral to it. I was no longer the alienated human observer, gazing

at the garden from a distance, whether literal or figural, but rather felt part and parcel of all that was transpiring here. So the flowers were addressing me as much as the pollinators, and perhaps because the very air that afternoon was such a felt presence, one's usual sense of oneself as a subject observing objects in space—objects that have been thrown into relief and rendered discrete by the apparent void that surrounds them—gave way to a sense of being deep inside and fully implicated in this scene, one more being in relation to the myriad other beings and to the whole.

"Everything is interaction and reciprocal," wrote Humboldt, and that felt very much the case, and so, for the first time I can remember, did this: "I myself am identical with nature."

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How to Change Your Mind: What the New Science of Psychedelics Teaches Us About Consciousness, Dying, Addiction, Depression, and Transcendence