

The Overstory; a novel

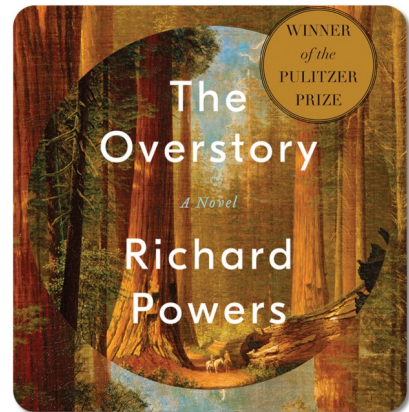
(a summary by Pat Evert)

◆Roots

Laurels insist that even death is nothing to lose sleep over. Your kind never sees us whole. You miss the half of it, and more. There's always as much below ground as above. That's the trouble with people, their root problem. Life runs alongside them, unseen.

◆Nicholas Hoel

That night, drunk on roasted chestnuts, Hoel proposes to Vi Powys, on the edge of Finn Town. They marry before Christmas. By February, they are Americans. They make the overland trip into the settlement near Fort Des Moines in the new state of Iowa, where the authorities give away land to anyone who will farm it. Hoel discovers six chestnuts. He presses them into the earth of western Iowa. The farm is hundreds of miles from the chestnut's native range. But this is America, where men and trees take the most surprising outings. Hoel plants, and thinks: One day, my children will shake the trunks and eat for free. By the time war comes again to the infant country, the five trunks have surpassed the one who planted them. The draft arrives in '63. Jørgen Hoel, at thirty-three, with a wife, small children, and a few hundred acres, gets deferred. Years pass. Only one remaining chestnut goes on flowering. It more than abides; it flourishes, a globe of green health and vigor.



John Hoel buries his father beneath the chestnut the man planted. The trunk has grown too thick for John to embrace. The farm prospers. John turns his camera on the Hoel Chestnut, his exact coeval. Twelve hundred miles east, a killer slips into the country from Asia, in the wood of Chinese chestnuts, a fungus new to man. Trees succumb by the hundreds of thousands. New England's priceless chestnuts melt away. The tree of the tanning industry, of railroad ties, train cars, telegraph poles, fuel, fences, houses, barns, fine desks, tables, pianos, crates, paper pulp, and endless free shade and food —the most harvested tree in the country—is vanishing. On the night before his fifty-sixth birthday, John wakes up at two a.m. Eight minutes later, he's dead. Frank, the younger, needs to redeem his father's decade of obscure research by carrying it forward as stubbornly as the tree spreads its crown. More than a hundred frames along, the oldest, shortest, slowest, most ambitious silent movie ever shot in Iowa begins to reveal the tree's goal. In the Carolinas, boles older than America grow ten

feet wide and a hundred and twenty feet tall. A single tree might yield as many as fourteen thousand planks. Now the gods are dying, all of them. The blight runs along ridgelines, killing off peak after peak. By 1940, the fungus takes everything, all the way out to the farthest stands in southern Illinois. Four billion trees in the native range vanish into myth. Frank Hoel Jr. keeps his promise to his father, month by month, photo after photo. Frank Jr. stops one afternoon to flip through the pictures. The time-lapse tree has changed beyond all recognition. A dendrologist in Iowa City comes out to confirm the rumor: **a chestnut that escaped the holocaust.** A journalist from the Register does a feature on one of the last of America's perfect trees. More than twelve hundred places east of the Mississippi have the word "Chestnut" in them. But you have to come to a rural county in western Iowa to lay eyes on one. Frank Jr. adds seven hundred and fifty-five photos of the solitary giant to the hundred and sixty that his father and grandfather shot. Nicholas Hoel thumbs through the stack of a thousand photos, watching for those decades' secret meaning. **No other family in the county had a tree like the Hoel tree. And no other family in Iowa could match the multi-generation photo project for pure weirdness.** The time-lapse pictures of the chestnut his gypsy-Norwegian great-great-great-grandfather planted, one hundred and twenty years before. There's no farm anymore, just the house on its island rise. All the Hoel land is long-term leased to outfits run from offices hundreds of miles away.

◆Mimi Ma

Ma Sih Hsuin gets his third-class ticket for a crossing to San Francisco, Ma Shouying gazes out into the August sky, staring at all the calamities the Ma Trading Company has survived. Colonial exploitation. The Taiping uprising. The destruction of the family's silk plantations by typhoon. The 1911 revolution and the '27 massacre. "Even the Japanese couldn't break us." Ma Sih Hsuin will travel to the States in four days, one of a handful of Chinese students in all of 1948 to be granted visas. "You're this family's salvation. The Communists will be here in six months. Then all of us . . . Son, face facts. We won't last three weeks, once the end comes." His father presented him with three jade rings. "You live between three trees." And a scroll unrolls into a series of portraits, wizened men whose skin droops more than the folds in their robes. His family is rich, of course—so rich that many of them do nothing anymore. But rich enough to own this? **"You can't come back to something that is gone."** He's going to America, to the great Carnegie Institute, to get a graduate degree in electrical engineering. They dock in Manila, then Guam, then Hawaii. After twenty-one days, they reach San Francisco. He changes his name to Winston Ma. Winston Ma and his new wife plant a substantial mulberry in their bare backyard. It's a single tree with two sexes, older than the separation of yin and yang, the Tree of Renewal, the tree at the universe's center, the hollow tree housing the sacred Tao. Countless nows pass. In yet one more, three little girls eat corn flakes underneath their breakfast tree. Mimi, the firstborn, nine years old, sits among the fruit spatters with her little sisters, Amelia and Carmen. At Holyoke, Mimi is a LUG: lesbian until graduation. She transfers to Berkeley. She takes a job as a casting process supervisor for a molding outfit in Portland, because it offers the most chance to travel. They send her to Korea. She falls in love with the country. In four

months, she learns more Korean than she knows Chinese. In the Ma garage is Winston's invention, a portable, battery operated telephone. It has shrunk down to the size of a hiking boot, so reliable and power-thrifty that Bell Labs starts licensing it to other outfits. In the fall, Winston Ma puts a Smith & Wesson 686 to his temple and ends his life. Mimi, Carmen and Amelia arrive. United, the trio sit together one last time. They have no explanation. There never will be one. They hold a silent liturgy of memory and shock. The three opera heroines hover above a silver plate. On the plate are three jade rings. On each ring is a carved tree, and each tree branches in one of time's three disguises. Amelia has her eternal present, Carmen her doomed past. And Mimi is left holding the thin trunk of things to come. **The things of this world mean nothing, except for this ring and the priceless ancient scroll in her carry-on.**

◆Adam Appich

Dad had chosen and planted a tree for each of his children. Leigh's elm, Jean's ash, Emmett's ironwood, and Adam's maple, for Charles a black walnut, a towering, straight-grained thing whose nuts are so hard you have to smash them with a hammer. A tree that poisons the ground beneath itself so nothing else can grow. But wood so fine that thieves poach it. The tree arrives before the baby, a hole torn out of the lawn's perfect green. Each child's tree has its own excellence: the ash's diamond-shaped bark, the walnut's long compound leaves, the maple's shower of helicopters, the vase-like spread of the elm, the ironwood's fluted muscle. The disease that gets Leigh's tree has been coming their way for decades. Back when Leonard Appich planted his first child's tree in a fit of fifties optimism, Dutch elm had already ravaged Boston, New York, Philly, and Elm City, New Haven. The fungus gutted Detroit while the kids were still small. Then Chicago, soon after. The country's most popular street tree, vases that turned boulevards into great tunnels, was leaving this world. Now the disease comes to the outskirts of Belleville, and Leigh's tree, too, succumbs. At age twelve Leigh is kidnapped and never seen again. An ant colony possesses something; Adam doesn't know what to call it. Purpose. Will. **A kind of awareness—something so different from human intelligence that intelligence thinks it's nothing.** After a while, the time-lapse flow of color-coded ants begins to suggest how signals might get passed along without any central signaler calling the shots. The colony is swift and cunning—as cunning at getting what they need as anything human. At year's end, Adam enters the district science fair, Some Observations of Ant Colony Behavior and Intelligence. They can't believe a kid worked for months on an original idea, **for no reason at all except the pleasure of looking until you see something.**

◆Ray Brinkmanship and Dorothy Cazaly

Thick, clotted, craggy, but solid on the earth, and covered in other living things. Three hundred years growing, three hundred years holding, three hundred years dying. Oak. "Do you think we're going somewhere?" She scrambles up on her elbow to find his face. "We? You mean, like, humanity?" "Sure. But you and me, first. Then everybody." Half a dozen years pass as if a single season. They break up. They get re-engaged, while playing the romantic leads in an Alter Ego Community Theater production of You

Can't Take It with You. Her feet go stone-cold again. They recommit, after walking five hundred miles of the Appalachian Trail together in twenty-eight days. Their average run is five months. The fourth time she breaks things off, it's so traumatic she quits her job and disappears for weeks. Her friends won't tell Ray anything. He begs them for news, a phone number—anything. He tasks them with long letters, which they say they can't deliver. Then a note from her, neither apologizing nor cruel. She won't say where she is. She simply lays out the deathly claustrophobia, the killing panic she feels at signing a legally binding document determining the bearing and conduct of the rest of her life. I want to be with you. You know that. That's why I keep saying yes. But a legal business deal? Rights and ownership? Oh Ray, if only you were a discredited doctor or a bankrupt businessman. A shyster real estate agent. Anything but a property lawyer. Just come back, and we'll live together in sin with two separate cars, two separate bank accounts, two separate houses, two separate wills. **Every year, as close to this day as we can, let's go to the nursery and find something for the yard.** I don't know anything about plants. I don't know their names or how to care for them. I don't even know how to tell one blurry green thing from another. But I can learn, as I've had to re-learn everything—myself, my likes and dislikes, the width and height and depth of where I live—again, alongside you. Not everything we plant will take. **Not every plant will thrive. But together we can watch the ones that do fill up our garden.**

◆Douglas Pavlicek

He will now, forever, be the guy who wouldn't take sides and didn't surrender his blanket, even in a tame little two-week playact experiment. He doesn't want to live in a world where some twenty-year-olds die so that other twenty-year-olds can study psychology and write about fucked-up experiments. He's perfectly aware that the war is lost. But that changes nothing. The next morning, he's out in front of the recruiting center on Broadway when they open. Steady work, and honest at last. Technical Sargent Douglas Pavlicek flies two hundred-plus trash hauler missions in the years following his enlistment. Loadmaster on a C-130, he balances up planes with tons of barrier material and Class A explosives. He puts ordnance on the turf under mortar fire so thick it froths the air. He fills outbound flights with deuce-and-a-half trucks, APCs, and pallets full of C-rations, loading up return flights with body bags. He doesn't care how late or soon they lose this pointless war. All Thailand knows what's coming. They've been forced into this pact with the White Devil, and now it seems they've backed the wrong side. Yet the Thais Douglas meets show nothing but kindness to their destroyer. He's thinking of staying on when his tour and the endless war are over. The bole of the fig put forth branches, and branches built their drip-tipped leaves. Elbows bent from the larger limbs, which lowered themselves to earth and thickened into new trunks. In time, the single central stem became a stand. **The fig spread outward into an oval grove of three hundred main trunks and two thousand minor ones. And yet it was all still a single fig. One banyan.** His body tumbles into the branches of the banyan, that one-tree forest that has grown up over the course of three hundred years just in time to break his fall. Branches slash through his flight suit. His silks tangle him in a shroud. Between lacerations and burns, the gunshot wound and

his pulverized leg, the airman passes out. He hangs twenty feet above the Earth in friendly territory, facedown and spread-eagled in the arms of a sacred tree bigger than some villages. *Tree saved your life.* All his crewmates have survived—thanks in large part, the after-battle report says, to him. And he—he owes his own life to a tree. . . . The Air Force has no use for gimps. They give him crutches, an Air Force Cross—second highest medal for valor they hand out—and a free ticket back to SFO. The soul expands a bit until **the ways of men reveal themselves to be no more than a costume party you'd be well advised not to take at face value.** In fact, it's Dougie's growing conviction that the greatest flaw of **the species is its overwhelming tendency to mistake agreement for truth.** Hundreds of thousands of acres that have vanished on him. The deliberate, simpleminded, and sickeningly effective trick of that highway-lining curtain of trees makes him want to smack someone. He sleeps in tree-planter camps filled with hippies and illegals. Trees fall with spectacular crashes. But **planting is silent and growth is invisible.** Any one of his starts could grow for the next six hundred years and dwarf the largest factory chimney.

◆Neelay Mehta

Patience is the maker of all good things. His father buys Neelay a computer kit. A tiny seed fell on this temple roof. After centuries, the temple collapsed under the seed's weight. But this seed just keeps going and going. There are trees that spread like fireworks and trees that rise like cones. Trees that shoot without a ripple, three hundred feet straight skyward. Broad, pyramidal, rounded, columnar, conical, crooked: the only thing they do in common is branch, like Vishnu waving his many arms. There's something that these reticent things might be made to do, something humans haven't even imagined yet.

Neelay falls from a tree and can no longer walk. Puberty transforms Neelay Mehta. The boy shoots up into a fantastic creature: Seventeen years old, six-foot-six, 150 pounds, and fused to his wheelchair. His hair grows as long as a Kesh-practicing Sikh's, though he doesn't tie it up into a rishi knot. He lets it flow in thick vines that fall all around his elongated face and down his bony shoulders. He lives in his rolling metal rig—captain's chair on a starship forever voyaging through strange regions of thought. Stanford accepts him, two years early. The campus is just up El Camino. Its CS department flourishes, fertilized by extravagant gifts from the founders of his father's company. Neelay has haunted the campus since the age of twelve. Someone says, "We're evolution's third act." It's like they all have the idea together. Biology was phase one, unfolding over epochs. Then culture throttled up the rate of transformation to mere centuries. Now there's another digital generation every twenty weeks, each subroutine speeding up the next. "Chips doubling their transistor count every eighteen months . . . ? The more people steal ideas and computer code from him, the better Neelay feels about his chair-bound life. The more he gives away, the more he has. From his vantage, stranded in his wheelchair in a basement lab, whole new continents swing into view. The gift economy—free duplication of well-shaped commands—promises to solve scarcity at last and cure the hunger at the heart's core. The name Neelay Mehta grows mini-legendary among the pioneers. On the Internet, nobody knows you're a

beached, elongated freak, unable to move without machines. He sees the most mind-boggling organism he has ever seen. He wheels up to the tree and laughs. The trunk looks like a giant upside-down turkey baster. The branches skew and spike out at foolish angles. He reaches out to touch the bark. It's perfect. Absurd. Up to something. A tiny placard reads: BRACHYCHITON RUPESTRIS. QUEENSLAND BOTTLE TREE. The name excuses nothing and explains even less. It's an alien invader, as surely as Neelay. The whole cloister courtyard has changed. One hyper-jump, and he has landed in an intergalactic arboretum. On all sides, furious green speculations wave at him. Creatures built for otherworldly climates. Crazies of every habit and profile. Things from epochs so old they make dinosaurs look like upstarts. All these signaling, sentient beings knock him back in his seat. He has never done drugs, but this must be what it's like. Plumes of cream and yellow; a purple waterfall that evaporates before it touches the ground. Trees like freak experiments beckon from out of eight large planters, each one a miniature starship ark on its way to some other system. **There will be a game, a billion times richer than anything yet made**, to be played by countless people around the world at the same time. And Neelay must bring it into being. He'll unfold the creation in gradual, evolutionary stages, over the course of decades. The game will put its players smack in the middle of a living, breathing, seething, animist world filled with millions of different species, a world desperately in need of the players' help. And **the goal of the game will be to figure out what the new and desperate world wants from you**. And down in cool riparian corridors smelling of silt and decaying needles, redwoods work a plan that will take a thousand years to realize—**the plan that now uses him, although he thinks it's his**.

◆Patricia Westerford

Dad reserves his best gifts for his little plant-girl, Patty. She alone, of all the family, sees what he knows: plants are willful and crafty and after something, just like people. These other creatures—**bigger, slower, older, more durable—call the shots, make the weather, feed creation, and create the very air**. Nothing is less isolated or more social than a tree. Photosynthesis is a mind-boggling magic act. The secret of life: plants eat light and air and water, and the stored energy goes on to make and do all things. Billions of years ago, a single, fluke, self-copying cell learned how to turn a barren ball of poison gas and volcanic slag into this peopled garden. And everything you hope, fear, and love became possible. Plant-Patty becomes Dr. Pat Westerford, a way to disguise her gender in professional correspondence. The wounded trees send out alarms that other trees smell. Her maples are signaling. They're linked together in an airborne network, sharing an immune system across acres of woodland. These brainless, stationary trunks are protecting each other. The biochemical behavior of individual trees may make sense only when we see them as members of a community. **"Trees Talk to One Another."** Something stops her. Signals flood her muscles, finer than any words. *Not this. Come with. Fear nothing.* The opinion of others left her ready to suffer the most agonizing of deaths. She almost commits suicide. Angry people who hated wildness took away her career. Frightened people mocked her for saying that trees send messages to each other. She forgives them all. It's nothing. **What frightens**

people most will one day turn to wonder. And then people will do what four billion years have shaped them to do: stop and see just what it is they're seeing. By decade's end, Dr. Westerford makes her most surprising discovery of all: she may just love her fellow men. Not all of them, but robustly and with enduring green gratitude, at least those three dozen regulars who take her in and make a home for her in the Dreier Research Station, Franklin Experimental Forest, the Cascades, where she spends several dozen months in a row that are happier and more productive than she imagined possible. The whole group of them, looking. Each of them knows innumerable minute, local truths. Some work on projects designed to run for two hundred years or more. This gospel of new forestry is confirmed by the most wonderful findings: beards of lichen high in the air, that grow only on the oldest trees and inject essential nitrogen back into the living system. Subterranean voles that feed on truffles and spread the spores of angel fungi across the forest floor. Fungi that infuse into the roots of trees in partnerships so tight it's hard to say where one organism leaves off and the other begins. Patricia gives herself to Douglas-firs. Arrow-straight, untapering, soaring up a hundred feet before the first branch. They're an ecosystem unto themselves, hosting more than a thousand species of invertebrates. Framers of cities, king of industrial trees, that tree without which America would have been a very different proposition. Douglas-firs run into each other underground, they fuse. Through those self-grafted knots, **the trees join their vascular systems together and become one.** Networked together underground by countless thousands of miles of living fungal threads, **her trees feed and heal each other. Her trees are far more social than even Patricia suspected.** Everything in the forest is the forest. Competition is not separable from endless flavors of cooperation. Trees fight no more than do the leaves on a single tree. **They aren't self-reliant. Everything out here is cutting deals with everything else. There are a hundred thousand species of love, separately invented, each more ingenious than the last, and every one of them keeps making things.**

◆Olivia Vandergriff

Lit by the streetlamp in front of her house is a singular tree that once covered the earth — a living fossil, one of the oldest, strangest things that ever learned the secret of wood. A tree with sperm that must swim through droplets to fertilize the ovule. She has **lived under the tree for a whole semester and doesn't know it's there. She passes it again tonight without seeing.** "Got divorced today," she announces. They did love each other, in their way, even if their way consisted mostly of getting high, reading Rumi out loud, then screwing each other senseless. She smokes some pot and showers. She drops the towel and splays into bed. As her damp hand pats for the switch on the cheap socket, all the current in the sub-code house enters her limb and pours into her body. Her muscles close around the jolt as in some science experiment, clamping her hand around the electricity that's killing her. The whole house dims, the moment she dies.

Nicolas Hoel	A chestnut tree in Iowa that escapes the holocaust. An artist (Watchman & Maidenhair)
Olivia Vandergriff	She dies and comes back w/vision and guidance from universal intelligence (Watchman & Maidenhair). Dies in arson.
Mimi Ma	Chinese immigrant engineer w/precious gifts (Mimi & Douglas). Counselor.
Douglas Pavlicek	Saved by a banyan tree he sees the costume party of this life - Planting trees to make up for our greed (Mimi & Douglas)
Adam Appich	Discovers a distinct kind of intelligence in plants and animals. A psychology professor. Imprisoned.
Ray & Dorothy	Rocky romance, on the wild side. A stroke changes their lives.
Neelay Mehta	Paraplegic by falling out of a tree and gifted w/genius for gaming design of new worlds
Patricia Westerford	Eccentric plant lover and scientist sees the magnificence of trees and their strength in unity (Marries Dennis)

◆Trunk

She's dead for a minute and ten seconds. No pulse, no breath. Then Olivia's body, shucked from the lamp when the fuses blow, spills over the edge of the bed and hits the floor. The impact restarts her stopped heart. **Someone spoke to her when she was dead.** Used her head as a screen for disembodied thoughts. She passed through a triangular tunnel of strobing color and emerged into a clearing. There, the presences—the only thing to call them—removed her blinders and let her look through. Then she fell back into her prison body. **Something's watching—huge, living sentinels know who she is.** They've returned, beckoning. They want her to stand and leave the auditorium. walking without thinking, drawn along by the presences. She drives for a long time, obeying the presences. She makes herself an instrument of their will. It's Indiana 1990. She wakes early, stiff with cold, under a pile of clothing. The car is filled with beings of light. They're everywhere, unbearable beauty, the way they were the night her heart stopped. **You have been spared from death to do a most important thing.** The camera cuts away, to a woman of fifty with pulled-back hair, a plaid shirt, and eyes like beacons. She says, "Some of these trees were around before Jesus was born. We've already taken ninety-seven percent of the old ones. Couldn't we find a way to keep the last three percent?" Olivia freezes. The creatures of light that ambushed her out in the car swarm her again, saying, This, this, this. She rolls out west again. Only now she knows where she's headed. Solace. The air all around sparks with connections. **The presences light around her, singing new songs.** The world starts here. This is the merest beginning. **Life can do anything. You have no idea.**

Ray Brinkman and Dorothy head back home after midnight from the party. Next Friday is Dorothy's forty-second birthday. Over the course of several years, they've spent a hundred and fifty thousand dollars on fertility treatments that turn out to be voodoo. Three days before the play opened, they received the final blow. There's nothing left to try. Dorothy's own job now makes her ill. People suing other people, and she must record every slanderous sentiment with her narrow, chorded keyboard stenotype, word by precise word. All she wants is to have a child. A child would give her meaningful work at last, even after a decade of marriage and other amateur theatricals. Out in the yard, all around the house, the things they've planted in years gone by are **making significance**, making meaning, as easily as they make sugar and wood from nothing, from air, and sun, and rain. **But the humans hear nothing.**

Olivia takes Northern California by the fastest route, before the last trees as big as rocket ships go down. "I'm fine. I'm in Iowa. I've made . . . some new friends. Uh, organizers. They have work for me." **The most wondrous products of four billion years of life need help.** It's simple enough, and self-evident, now that the light-beings have pointed it out. "There's a project, out West. Important volunteer work. I've been recruited." Curious beyond saying: In one life, she dies of electrocution. In another, she's in the world's largest truck stop, explaining to her father that **she's been chosen by beings of light to help preserve the most wondrous creatures on Earth.** Something comes over her, strange and beautiful courage. Olivia Vandergriff holds Nick Hoel's hand for a moment, feeling for an explanation. Then she lets it drop and turns back toward the art. "Almost a decade? And everything . . . is trees?" "Flip it," he mimes the suggestion with his own thumbs. She does. The thing spirals upward into life. "Jesus! That's the tree out front." "Why the giveaway? I don't know. It felt like another artwork. The last of the series. **Trees give it all away, don't they?**" "I've never seen a tree anything like that." "Few living people have."

Mimi Ma reads a bulletin. The city has declared the accumulation of dead needles and bark to be a fire hazard and the trees too old and expensive to clean up, year after year. They plan to replace the pines with a cleaner, safer species. Forces opposed to the removal have asked for a public hearing. Town hall meeting! May 23rd!

Douglas Pavlicek wakes. All his anxiety is trained on the annual allowable cut, and whether, for the last four years, he's been suckered into wasting his life, or worse. **Planting seedlings has done nothing but green-light more colossal clear-cuts.** He stops into a corner grocery to get a bottle of greenish juice, which he drinks while reading notices on a bulletin board by the store's exit. Town hall meeting! May 23rd!

Seven-thirty a.m. Mimi hits the office early. She's standing on the bald patch, the trees she used to look out on for a moment's remembering and peace. The prim clearing denies that anything ever happened. Not a trunk or a branch left behind. Only sawdust and shed needles around the fresh, flat cuts flush with the ground. Douglas writes, in

block caps that run like a wheel around half the circumference, **CUT DOWN WHILE YOU SLEPT.**

Neelay runs the ad in the back of comics and computer magazines across the country. A disc dupe outfit over in Menlo Park pumps out three thousand floppies. He hires two ex-Stanford friends to get the game into stores up and down both coasts. He'll make the world over, the way it was shown to him, in a flash, by alien life-forms in the wild terrarium of Stanford's inner court. The New Sylvan Prophecies tops the charts, even before its ancestor falls out of the top ten. Together, the two games make more money than many Hollywood movies, on a much lower outlay. He rolls into the Stanford inner quad. He spins 360, surveying, **surrounded again by those otherworldly life-forms** the way he was six years earlier. A monstrous redwood, a lone Methuselah that somehow escaped the loggers. He sees, now: it's the tree he must have named his company after. And without a second thought, he knows he must consult it. Like evolution, it reuses all the old, successful parts of everything that has come before. **Like evolution, it just means unfolding.** Once the employees get playing, they want nothing else. They stop sleeping. They forget to eat. Relationships are a minor irritation. One more turn. Just one more turn. The game is called Mastery.

They spend two weeks closing the Hoel house, Nick and his drive-by visitor. The Des Moines Hoels come by to buy Nick's car and take possession of the family heirlooms. They're followed by the auctioneers? It's the Hoel house no longer. **He's going to California with a woman who pulled off the interstate on impulse, seeing his absurd sign.** A woman who hears silent voices. They bury the art. The stack of photos—that flip-book of a century of chestnut growth—goes in, too. Safer there than anywhere aboveground.

The defenders of the forest aren't hard to find. Nick and Olivia live rough, car-camping for a few days, feeling out who's who in a ragtag cast that is makeshift and an organization that is improvised, to say the least. The camp is one of many nerve centers for a chaotic movement without leaders that mostly goes under the name of Life Defense Force (LDF). "A lot of you have been out here for a while," Mother N continues. "Peaceful demonstrations." The new, efficient Humboldt Timber will have killed all the giants by the time the law catches up with them. Here Nick lies, alongside this friend he has known only weeks, joined again after so many lifetimes. Nick and Olivia, now Watchman and Maidenhair.

The woods are calling, and Patricia Westerford must go. Maybe it's useful to think of forests as enormous spreading, branching, underground super-trees. But this millstone book: She's sure to be mocked and misunderstood in the press. Fungi mine stone to supply their trees with minerals. They hunt springtails, which they feed to their hosts. Trees, for their part, store extra sugar in their fungi's synapses, to dole out to the sick and shaded and wounded. **A forest takes care of itself, even as it builds the local climate it needs to survive.** She could use Old Tjikko, that Norway spruce who lives

about midway up the length of Sweden. Above the ground, the tree is only a few hundred years old. But below, in the microbe-riddled soil, he reaches back nine thousand years or more. She remembers the Buddha's words: **A tree is a wondrous thing that shelters, feeds, and protects all living things. It even offers shade to the axmen who destroy it.** She thinks, as she does several times a week, how lucky she has been, to spend these few blessed years married to the one man on Earth who'd let her spend most of her life alone. Game, patient, good-natured Dennis. He protects her work and needs so little. From cottonwoods that top a hundred feet in a decade to bristlecone pines that die slowly for five thousand years. It's her editor, "Unbelievable. Who knew that trees got up to all those things?" "Well. A few hundred million years of evolution gives you a repertoire." "You make them come alive." "Actually, they were alive already."

Mastery should have no more power to surprise him; yet it never fails to quicken his pulse. A click of the mouse, a few keystrokes, and he's face-to-face again with the next virgin continent. His morning appointment with a journalist who wants to interview the infant industry's rising star, the boy still in his twenties who has made a home for so many homeless boys. Mr. Mehta is his father, whom Neelay has tucked away in a tiny palace outside Cupertino complete with pool, home theater, and pond flanked by a rosewood mandir, where Mrs. Mehta does weekly puja and prays to the gods to bring her son happiness and a girl who'll see him for who he is. "I'm not a hermit. It's just—my legs don't work." "I read about that. How do you run the company?" "Phone. Email. Online messaging." "Why are there no pictures of you?" "It isn't pretty." The answer flusters Chris. Neelay wants to say: It's all right. It's only RL. One look at Neelay's grotesque limbs and even this confident, laughing journalist would be disgusted. Yet this man Chris—he loves Neelay's game. "Sure. But soon we'll carry all of that around in our pockets. We'll live and trade and make deals and have love affairs, all in symbol space. **The world will be a game, with on-screen scores.** And all this? Real life?"

"You've seen the news. People up and down this coast are risking their lives for plants. I read a story last week—a man who had his legs sheared off by a machine he tried to chain himself to." Adam has seen the stories, but he ignored them. **"How hopelessly fragile and wrong we all are. About everything."** Who does the tree-hugger really hug, when he hugs a tree?"

Mimi's amazed he managed to get her up here for this protest. Her only previous political action was a grade school vendetta against Chairman Mao. Her grudge is with the city, its scheming nighttime raid against her pines. As for these trees, so far out of town: She's an engineer, for crying out loud. **These trees are calling out to be used.** But a pair of lectures and a visit to an organizational meeting accompanied by this clumsy innocent have broken her heart. For her entire life, unwittingly, she has complied with her parents' first shared principle: Make no noise in this world. She, Carmen, Amelia—all three Ma girls. Yet here she is, asking for trouble. Acting like what she does might matter. Righteousness makes Mimi nuts. She has always been allergic

to people with conviction. But more than she hates conviction, she hates sneaky power. And the people assembled here: **ignorant armies going up against each other as they have forever, for reasons hidden from even the most vehement.** When will it be enough?

It's the not having babies, he thinks. Behold, the husbandman waiteth for the precious fruit of the earth, and hath long patience for it, until he receive the early and latter rain. "Should Trees Have Standing?" She reads the title and frowns. Ray examines the words, puzzled himself. "He seems to be saying that the law's shortfall is that it only recognizes human victims." **What conveys a right, and why should humans, alone on all the planet, have them?** The proposal is bound to sound odd or frightening or laughable. This is partly because until the rightless thing receives its rights, **we cannot see it as anything but a thing for the use of "us"—those who are holding rights at the time.** It is no answer to say that streams and forests cannot have standing because streams and forests cannot speak. **What is it within us that gives us this need not just to satisfy basic biological wants, but to extend our wills over things, to objectify them, to make them ours, to manipulate them, to keep them at a psychic distance?** His whole self is dissolving. All his rights and privileges, everything he owns. A great gift that has been his since birth is being taken away. It's a grand, luxurious act of self-deceit, an outright lie, that claim of Kant's: As far as nonhumans are concerned, we have no direct duties. All exists merely as means to an end. That end is man. The woman he married. Funny, manic, wild, untamable Lady Macbeth. Lover of sprawling novels. Jumper from airplanes. The best amateur actress he has ever known.

Watchman and Maidenhair. "They're so big. Humboldt Timber employs hundreds of people. Thousands of machines. It's owned by a multibillion-dollar multinational. All the laws are on their side, backed by the will of the American people. We're a bunch of unemployed vandals, camping out in the woods."

She looks like someone summoned to help the most wondrous products of four billion years of life. Only now, seventy yards above the ground, can Nicholas gauge the true size of these few old ones, five times larger than the largest whale. **"I never knew how strong a drug other people are."** "The strongest. Or at least the most widely abused." "How long does it take to . . . detox?" He considers. **"Nobody's ever clean."** Trees ten feet thick and nine hundred years old go down in twenty minutes and are bucked within another hour. When a large one falls, even from a distance, it's like an artillery shell hitting a cathedral. The ground liquefies.

Mastery 2 rakes in as much as the annual income of whole states. Mastery 3 arrives just as its ancestor starts to grow stale. Fifty big servers at the start of year two, and five hundred by the end. Mastery 5 surpasses whole operating systems for sheer complexity and total lines of code. The wildest sci-fi of Neelay's childhood failed to predict these miracles. In Mastery 6, It's a daring step, but **in the world game, no daring is fatal. The only thing that will kill you is failing to leap.** The twig-man in the

chair owns twenty-three percent of the company. He has made them all wealthy, and he has made himself as rich as the game's greatest emperors.

Dennis drives Patty the hundred miles to the hearing. There are no individuals in a forest. Each trunk depends on others. "How much untouched forest is left?" Probably no more than two or three percent. "Maybe a square, fifty miles on each side. There were four great forests on this continent. Each was supposed to last forever. Each went down in decades. We barely had time to romanticize! These trees out here are our last stands, and they're disappearing—a hundred football fields a day. This state has seen rivers of logjam six miles long. If you want to maximize the net present value of a forest for its current owners and deliver the most wood in the shortest time, then yes: cut the old growth and plant straight-rowed replacement plantations, which you'll be able to harvest a few more times. But if you want next century's soil, if you want pure water, if you want variety and health, if you want stabilizers and services we can't even measure, then be patient and let the forest give slowly." **People aren't the apex species they think they are. Other creatures—bigger, smaller, slower, faster, older, younger, more powerful—call the shots, make the air, and eat sunlight.** Without them, nothing. A thousand years before the systems are back in place."

Nick and Olivia are twenty stories up in an old redwood. He never knew what blood sounds like, pumping in his ears in the hour after the sun sets. When the wind picks up, there's nothing, nothing at all but wind. It turns them feral—the tarp flapping like mad and the needles whipping them senseless. They have no idea when their next provisions might make it through the cordon, whether there still is a cordon, still an LDF or any earthly institution that remembers the pair of them, high up in a thousand-year-old tree, in need of supplies.

Ray's known for months. For a year and more. That he's still here. Still her husband. Come and go. Be with whoever. Do anything. Just stay near. **No one belongs to anyone, Ray. You need to set me free.** while his lawful wife was off getting her brains fucked out in would-be secrecy.

"Miss Ma?" I'm here to assist your transition from the company." She's been all over the news, criminal trespass. she's also guilty of fighting against progress, freedom, and wealth. She removes, foot by foot, the twelve-hundred-year-old scroll of arhats on the threshold of Enlightenment, rolls it up, and pockets it.

Adam Appich is climbing the air, on a rope as thin as a pencil, dangling from a trunk so wide he can't see both edges at once. The furrows in its foot-thick bark are deeper than his hand. Watchman and Maidenhair, "After all, we only volunteered for a few days, and here we are, almost a year later." The examiner has gotten himself above them in the lookout hammock, which won't stop rocking. He studies their faces for the strains of paranoid salvationism he has seen in so many of the activists he has already interviewed. I want to learn something about people who . . . people who believe

that . . .” “That plants are persons, too?” **You should be studying everyone who thinks that only people matter. We aren’t alone. Others are trying to reach us. I can hear them.** I don’t know. The trees. The life force. I died. I was electrocuted in my bed. My heart stopped. I came back and started hearing them.” Watchman touches her shoulder. **“What’s crazier—plants speaking, or humans listening?”** What are they saying? The trees?” She tries to tell him.

She goes in to the man after the first operation. What’s left of Ray Brinkman lies slack in the adjustable bed. Half his skull has been removed and his brain has been papered back over by a flap of scalp. No one can tell Dorothy Cazaly Brinkman how long he might be like this. She hears the words she shouted at him, just hours before his brain caved in. It’s over, Ray. It’s over. The two of us are over. You aren’t my responsibility. We don’t belong to each other, and we never did.

The plant’s, the planet’s, brain. Nick dreams about the Hoel family chestnut. In that dream, the trees laugh at them. Save us? What a human thing to do. Even the laugh takes years. Adam, Nick, and Olivia are held without arraignment two days longer than is legal. They’re threatened with a dozen charges, only to have everything dropped overnight. Maidenhair says, “I want to see it.” They take Adam’s car, which seems to him now like it belongs to someone else. The loggers are gone; there’s nothing left to cut. They’ve long since headed to fresh groves. The tree that promised her that no one would be harmed is gone.

A year-long dissertation completion fellowship—a gift from the gods—and this is how he spends it. A few more weeks and his thesis will be done. THE FREE BIOREGION OF CASCADIA. “The best arguments in the world won’t change a person’s mind. The only thing that can do that is a good story.” Maidenhair tells that story that the rest of the campfire knows by heart. First she was dead, and there was nothing. Then she came back, and there was everything, with beings of light telling her how **the most wondrous products of four billion years of life needed her help.** Adam, only he can complete his project and describe, in measured facts, why people might care whether a forest lives or dies. But he stays on another day, becoming something new—his own object of study. The protesters commit arson on a machine shed, they target a sawmill near Solace, California. They assemble cascades of five-gallon fuel buckets and timer devices in plastic Tupperware. They mark on Watchman’s maps where each of the devices must go to create the most sustainable burn. They sense they must do all they can to fight for the living world’s most wondrous creatures.

◆Crown

Nothing will be the same. The spruces answer: **Nothing has ever been the same.** People turn into other things. They put Olivia’s body into the fire, facedown. Three of them will remember that. The corpse will be found, of course. Teeth with fillings, the nubs of unburned bone. Every clue will be discovered and read. They aren’t getting rid of the corpse. They’re sending it into forever. Mimi drives in a soundproof bubble. Two

hundred miles outside Portland, Douglas demands that they surrender. Something tells them not to. That alone they'll all remember. Mimi sells the van for a song and pays cash to buy a tiny Honda. "We have to split up. It's safer." The investigators can make no identification. It's easier to live for months high up in the redwood canopy than to pass seven days at ground level. On each of the trunks in the standing barricade that just saved their lives is a bright blue painted X. Next week's harvest.

Bringing the scroll in for appraisal was a mistake. "Four Arts would be willing to pay you something in the middle of that range." The scroll is worth many times his offer. It's a long-lost national treasure. Mimi calls both Carmen and Amelia, for the first time in a year. Mimi mentions nothing about her face. About losing her job. About selling her condo. About being wanted in three states. She apologizes for disappearing. "Sorry. I hit a rough patch."

Ray's half-paralyzed body. Nothing in the world can tell her how many more days like this lie ahead, or how many more she can last. His stroke-frozen face feels stiff to her touch.

IN MASTERY 8, Neelay is 145 pounds and whitish, with hair like Einstein's. He can't remember when the Web wasn't here. That's the job of consciousness, to turn Now into Always, **to mistake what is for what was meant to be.**

Douglas is in his Montana hideaway. Since mid-November, he has been at work on a Manifesto of Failure. He journals the story of how he became a traitor to his species. He names no names except the forest ones. But it's all there: **How the scales fell from his eyes.** While he's on the general subject of Failure, he can't help probing the nearby, related topic of What the Fuck Went Wrong with Mankind. Why this is **so easy to see when you're by yourself in a cabin** on a hillside, and almost impossible to believe once you step out of the house and join several billion folks doubling down on the status quo. A solid ridge collapses beneath him. The first snow-covered rock on the vertical drop bounces him into the air. Two hundred feet of scree drop off in front of him. He screams and manages to snag a savior trunk. For the second time, trees save his life. In the end, it's the dead woman, kneeling beside him and stroking his face, who gets him up. His nose is broken and his shoulder dislocated. His old wounded leg is worthless. She tells him as much, in four more words. 'You're not done yet.'

Past retirement age, Patricia works like there's no tomorrow. Or like tomorrow might yet show up. Honduran rosewood. Hinton's oak in Mexico. St. Helena gumwood. Cedars from the Cape of Good Hope. Twenty species of monster kauri, ten feet thick and clear of branches for a hundred feet and more. An alerce in southern Chile, older than the Bible but still putting forth seeds. Half the species in Australia, southern China, a belt across Africa. The alien life-forms of Madagascar that occur nowhere else on the planet. Saltwater mangroves—marine nurseries and the coasts' protectors—disappearing in a hundred countries. Wild, diverse, uncataloged forests are melting

away. Inside, the vault feels like a chapel crossed with a high-tech library. Thousands of canisters, ordered and labeled with dates, species, and locations, lie in indexed drawers of sealed glass and brushed steel, like a real bank's safe-deposit boxes, except twenty degrees below zero. Standing in the vault, Patricia gets the strangest feeling. She's in one of the most biodiverse regions on Earth, surrounded by thousands of sleeping seeds, cleaned, dried, winnowed, and X-rayed, all **waiting for their DNA to awaken** and begin remaking air into wood at the slightest hint of thaw and water. Dennis is happy working on the facility's maintenance, ensuring that the vaults never vary in temperature or humidity. But mostly he spends his fragmented year waiting for the seed hunter to return with her vials full of species that soon will exist nowhere else but in their climate-controlled tombs. He never objects, yet the project doesn't quite convince him.

Mastery Online is now a mammoth, expanding, ever-evolving enterprise. But it's rotten at its core. "There's no endgame, just a stagnant pyramiding scheme. Endless, pointless prosperity. How do you win? I mean, how would you even lose?" Neelay reads, *The Secret Forest*. Seven million users will need to discover the rules of a dangerous new place. To learn what the world will bear, how life really works, **what it wants from a player in exchange for continuing to play**. Now, that's a game. A whole new Age of Exploration. "**Something marvelous is happening underground, something we're just starting to learn how to see**. Imagine: a game with the goal of growing the world, instead of yourself." He's the sixty-third richest man in Santa Clara County—founder of Sempervirens, Inc., creator of The Sylvan Prophecies, only child, devotee of distant worlds, lover of Hindi comics, avid fan of all rule-breaking stories, flier of digital kites, timid curser of teachers, faller from coast live oaks—learns what it means to be eaten alive by his own insatiable offspring.

This is not our world with trees in it. It's a world of trees, where humans have just arrived. Trees know when we're close by. The chemistry of their roots and the perfumes their leaves pump out change when we're near. . . . When you feel good after a walk in the woods, it may be that certain species are bribing you. So many wonder drugs have come from trees, and we haven't yet scratched the surface of the offerings. Trees have long been trying to reach us. But they speak on frequencies too low for people to hear. **What keeps us from seeing the obvious?** Trees used to talk to people all the time. Sane people used to hear them. The only question is whether they'll talk again, before the end. Tree communication, forest intelligence, fungal networks, Patricia Westerford, *The Secret Forest*. . . . The book is shot through with uncanny echoes of what Doug heard whispered, decades ago, by alien life-forms that now won't give him the time of day. The invitation feels like a test of the honesty she has tried to cultivate since her days as a hobo. Could she possibly tell a gathering of such prominent and powerful people what she thinks is true?

Agents lead their professor away in cuffs. The agents nudge Appich out of the auditorium onto the sidewalk. He is released to house arrest with an anklet.

Dorothy and Ray. There aren't supposed to be more than a handful of mature American chestnut trees left anywhere. This one is almost as tall as their house. They read everything they can about America's perfect, vanished tree. They learn about a holocaust that ravaged the landscape just before they were born. She finds a book at the public library: *The Secret Forest*. She brings it home for read-aloud.

You and the tree in your backyard come from a common ancestor. A billion and a half years ago, the two of you parted ways. But even now, after an immense journey in separate directions, that tree and you still share a quarter of your genes. . .

Everything they thought their backyard was is wrong, and **it takes some time to grow new beliefs to replace the ones that fall**. They sit together in silence and survey their acreage as if they have traveled to another planet. Paper cup. Seedling. On the windowsill. Planted it. The chestnut. Our daughter.

Four short aerial time-lapses—the forests of Brazil, Thailand, Indonesia, and the Pacific Northwest, melting away. Just a little more timber. A few more jobs. A few more acres of cornfield to feed a few more people. You know? There's never been any material more useful than wood. **There's a tree for every purpose under heaven. Their chemistry is astonishing.** Waxes, fats, sugars. Tannins, sterols, gums, and carotenoids. Resin acids, flavonoids, terpenes. Alkaloids, phenols, corky suberins. They're learning to make whatever can be made. And most of what they make we haven't even identified. My whole life, I've been an outsider. But many others have been out there with me. We found that trees could communicate, over the air and through their roots. Common sense hooted us down. **We found that trees take care of each other.** Collective science dismissed the idea. Outsiders discovered how seeds remember the seasons of their childhood and set buds accordingly. Outsiders discovered that trees sense the presence of other nearby life. That a tree learns to save water. That trees feed their young and synchronize their masts and bank resources and warn kin and send out signals to wasps to come and save them from attacks. Here's a little outsider information, and you can wait for it to be confirmed. **A forest knows things.** They wire themselves up underground. There are brains down there, ones our own brains aren't shaped to see. Root plasticity, solving problems and making decisions. Fungal synapses. What else do you want to call it? Link enough trees together, and **a forest grows aware.**

Ray can watch the dozen bare trees in the backyard for hours and see something intricate and surprising, sufficient to his desires, while she—she is still trapped in a hunger that rushes past everything. The best and easiest way to get a forest to return to any plot of cleared land is to do nothing—nothing at all, and do it for less time than you might think.

Trees remember what we've forgotten. Patricia glances back down at a horrified Mimi. A man in a wheelchair rolls up to the right-hand stair. His hair and beard flow

down around his shoulders. **The World - the real one we cannot see. The invented one we can't escape.**

Adam's guilty of arson. Guilty of destruction of private property. Guilty of violence against the public well-being. Guilty of manslaughter. Guilty, the jury of Adam Appich's peers concludes, of domestic terrorism. The court sentences Adam Appich to two consecutive terms of seventy years each.

◆Seeds

Mimi in Mission Dolores Park, San Francisco, many miles south. She sits in the grass surrounded by picnickers, under a knobcone pine, tapping at her phone. The news is a nightmare she can't wake from. An accomplished social scientist with a wife and young son—a man she once trusted with her life—is going away for two lifetimes, for something she helped do. And another man, a man she loved for his earnest cartoon innocence, has sold him out. She whispers into her own phone's mic, "Where's the nearest police station?" A map appears, showing the fastest route and how many minutes it would take her to walk. Five-point-three.

Adam lies in his bunk in a transfer facility, while the overflowing federal system searches for space to house him. There will be no appeal. The wife, two rows behind him, going to pieces. That cataclysm will still come, he's sure of it, long before his seventy plus seventy years are up.

Something in her wants to surrender and go to jail for the next two centuries. Keep hidden, and she must live with the fact that two lives have paid for her freedom.

"It amazes Nick how much the trees say, when you let them. **They're not that hard to hear.**" The man chuckles. "We've been trying to tell you that since 1492." The most wondrous products of four billion years of life need help. Not them; us. Help from all quarters.

High above Adam's prison, new creatures sweep up into satellite orbit and back down to the planet's surface. They begin to link up, to fuse together, to merge their cells and form small communities. There's no saying what they might become, in seventy plus seventy years. And so Neelay gets out and sees the world. His children comb the Earth tonight with one command: Absorb everything. Eat every scrap of data you can find. On a lead-grey afternoon in the brutal hinterlands upstate, an armored van brings Adam back to school. Psych 101. He who understands nothing about people except their innate confusion is driven through the triple-depth, razor-mesh fences of his new digs for continuing education. Off in the distance, surrounded by more razor-wire moats, men in bright orange—his new nation. Adam pictures Lois dragging little Charlie here, for hour-long visits, once a month at first, then a couple of times a year, if he's lucky. Wasteland of cut stone and concrete. A small voice so real says, **You have been spared from death, to do a most important thing.**

by Richard Powers

Neelay thinks: This is how it must go. There will be catastrophes. Disastrous setbacks and slaughters. But life is going someplace. It wants to know itself; it wants the power of choice. **It wants solutions to problems that nothing alive yet knows how to solve**, and it's willing to use even death to find them. Phenomenal, to be such a small, weak, short-lived being on a planet with billions of years left to run.

At Dorothy's feet, on the floor, is *The New Metamorphosis*, by the author of *The Secret Forest*. Dorothy touches the corpse's bewildered face of Ray.

The vaults of seed banks will be thrown open. Webs of forest will swell with species shot through in shadow and dappled by new design. It strikes Nick as strange, how few languages he understands. One and a half human ones. Not a single word of all the other living, speaking things. Satellites high up above this work already take pictures from orbit. The shapes turn into letters complete with tendril flourishes, and the letters spell out a gigantic word legible from space:

STILL

This, a voice whispers, from very nearby. *This. What we have been given. What we must earn. **This will never end.***