



Sometimes, in the smallest of spaces, you get a new view of a new universe — seven thousand times.

The Deer Guard: Planting Trees and Discovering New Worlds in the Upper Calder Valley

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WE STOMP AROUND ON THE hillside in boots and short trousers, wielding knives. It's been around seventeen years since a different tribe of volunteers descended here and began planting seven thousand young trees as part of an ongoing project to reduce flood risk in the valley, roll back soil depletion, and generally help something other than marshy grass to flourish on the slopes. The people who run this thing, the real tree planters, have been in it for two decades.

It works like this: you bid for grants, beg for money, and use that money to buy trees. You scour the local countryside for likely sites and desperately try to engage with farmers, water boards, and other landowners, hoping to plant your new trees on other people's land—in the places it will make the most difference. Depending on where you get your money, there might be particular stipulations about exactly how you can spend it, how you need to measure its impact, or what you ought to finally deliver. Meanwhile the seasons roll around and

planting season comes and goes. When money, trees, land, and season all arrive together, you need volunteers to come and put the trees into the ground.

Some of the volunteers just love trees; some have homes that have flooded before and will probably flood again; some are young adults with a thousand causes to support; some just like to go out on the hills and chat about ecology. Most of the organizers are of the pragmatic variety; there ought to be more trees on the hills, so they're making that happen. "Why would I hug a tree?" one of the ringleaders asks with a laugh during a conversation about a local farmer's disdain for their work. "If I thought it made any difference to the tree, maybe I'd do it." I, who frequently find myself muttering greetings to plants and animals alike, wonder if perhaps the difference it makes is to the person doing the hugging, not the tree, but I don't say anything. We smile and drink lukewarm cup-a-soup, sitting on our coats as we eat lunch. I'm still on the edge of whatever it is that's happening here.

It also works like this: depending on the size and species, you cut away a patch of bare earth, install a wooden stake, make a hole, plant the tree, slip the deer guard over the tree and tie it to the stake. Sometimes you mulch to stop other plants competing with the young tree's roots. Then you repeat that seven thousand times—or five hundred times, or a hundred and ten thousand times, depending on the site—and call the job done. The land is covered with little wooden stakes, and all you can do is wait and see if they grow. It seems, improbably, to work.

New problems emerge later. A disease like ash dieback can wipe out trees; floods and storms can damage sites; and of course, round here, deer can devour everything.

Ten years ago, the tree planters started using deer guards to protect young trees: corrugated green plastic tubes that surround the plant entirely. Ten years on, it turns out that, yes, it worked, but there's more work to do. Now you've got to come back, with no funding this time—because who would fund such a thing—and cut seven thousand deer guards from seven thousand trees. Cable ties included, you then have twenty one thousand bits of impossibly dirty plastic to try and offload somewhere without any money to pay for the privilege. This is the first time they've had to do the work we're doing today. It's a learning experience, and the devil is probably in the details. But the first thing is to get the plastic off the trees and stop it cramping them.

So out we go, knives at the ready. The organizers pick out some examples of trees that are mature enough to have the tubes removed. We briefly discuss first aid, and then we get to work—cutting the cable ties, slicing each tube from top to bottom, and pulling them away from the tree. The work is sometimes lightly social and sometimes entirely solitary. As you move from one fat tree trunk to the next, you find yourself, quite by surprise, completely alone with nothing but the trees and the blue air for company. Then, just as you're getting used to being alone, you realize you've just started work on exactly the tree someone else was heading for, and you strike up a brief conversation. In direct sunlight, the heat is almost unbearable, and within half an hour, everyone's a little tired.

But of course, we're not always in direct sunlight. We're in a space that is beginning to feel almost like it might be a young woodland slope. The contrast between this place and the slopes below nearby Gorpley reservoir, planted with tiny beech saplings last winter, is remarkable.

A decade or so after planting, this hill is already turning into recognisable woodland.

From the top of the site you can look east toward Todmorden where three valleys converge. Roads lead to Rochdale, Burnley, and Halifax. The river starts here and winds its way east. The opposite slope is walled sheep fields dotted with trees; the unseen tops are all bare moorland. On site the walls are barely there any more, and fences replace them at roadside, while further upfield they simply fade into the grass. The pattern continues as the narrow valley winds and widens toward Brighouse and Halifax in the northeast: small pockets of woodland, lots of trees in places low in the valley, and bare hillsides higher up. The place is glorious in summer and grim in winter; snow can stick for weeks at a time on the shady southern side of the valley, long after it's disappeared on the central roads. And it floods. In the summer of 2013 and again in late 2015, Calderdale saw a flood that was first described as a "once-in-two-hundred-years" event, until it happened for a second time eighteen months later. The timetable, it seems, is changing. Trees, we think, can help with that.

Though beautiful on a summer's day and recognisably rural, the proliferation of towns along the valley make this place on the very edge of Yorkshire a part of one of the north's largest continuous urban areas, with road networks linking into Bradford, Halifax, and further toward Leeds. To the south, Rochdale sits on the edge of Greater Manchester. Politically, Calderdale is split between rural and urban concerns. Its seat in parliament is hotly contested—the conservative incumbent held his seat recently by a mere six hundred votes—and it has one of the few councils in the country where no party can claim a majority.

Political leaders have veered between

vocally supporting tree planting initiatives and dismissing such activists as unhelpful hippies, depending on the other issues at play. The work has gained a higher profile since two instances of heavy flooding in 2013 and 2015, but while the council and government are now investing in flood resilience, the business of funding, campaigning, and actually planting these trees has largely been done without relying on the wider world to catch up. If there's a way to do even a small part of it without waiting, so the philosophy runs, start doing it and other people will join in when they're ready. If you wait for everyone to be ready before you start, they'll never be ready, because starting is what makes them ready.

Up here on the slope outside Todmorden, all anyone did was stick seven thousand tiny saplings in wet ground, and yet today there are all kinds of things you wouldn't see on the other, barer, slopes, and that you wouldn't get funding for no matter how bad the floods. There are thousands—and I do mean thousands—of butterflies mating in the sun, bees and hornets are flitting between foxgloves and thistle blossoms, nettles reach up to caress your ankles, and more flies come and go than I could name. The mix of tree species—on this site there are ash, oak, birch, hawthorn, holly, and an occasional crab apple—makes it feel like, if you'll pardon the oxymoron, a young ancient woodland. You can already imagine this place in two hundred years' time, once it's had more time to change.

Compared, again, with the newly planted site in Gorpley just around the corner, this site outside Todmorden offers a new perspective on the work. Whatever the intention, this isn't just planting trees; it's remaking places. It's pulling deep, dormant soil, which has slept beneath scrubby grass for as long as anyone

can remember, back up into the ragged dance of active life and renewal. It's also re-establishing a practice of husbandry that caters as much to the ecosystem's needs as to the needs of the inhabiting humans. Washing myself later I discover the various zings and twinges of scrapes, bites, rashes, and nettle stings. I brush cobwebs from my hair and twigs from my clothes. I wonder if the same process isn't happening to me—my skin being restored from chemical cleanliness to something nearer its proper state: eating and being eaten, my body not only a thing I own but a place where vast collections of natural lives can come together, communicate, and participate in the world's endless remaking.

But, as interesting as all that is, that's not the thing I want to tell you about. The real magic, the reason I'm writing this, is smaller than that.

The project has been running for twenty years, and it belongs to the Calder Valley. Not only are there no plans for expansion or diversification, there is an explicitly stated goal to end the project on its twenty-fifth birthday. Yet, as that date approaches, they're talking about what comes next, who's taking over maintenance of existing sites, what kind of other work might be involved, but the original goal was deliberately fixed and focused. When I think about it, I can easily imagine the ringleaders sitting in a park or a café in Hebden or Todmorden or Halifax, plotting their grand work and daring to promise it twenty-five years of their lives. When this thing started, I was fourteen years old, tidying my room and listening to Radiohead, and I wouldn't have been able to find the river Calder on a map. When I was sitting A levels, they were already here planting trees, and when I was reading *Beowulf*, they were here planting trees. And

when I was living in Manchester for almost a decade, they were here planting trees.

At lunchtime I help load spent tubes in the back of the van for the ill-fated drive to a recycling center where they'll say that the tubes are too dirty—of course they're too dirty—and turn them away. They come in five sizes, and they slot inside one another less well than they did when purchased, but you can make it work, and the back of the van—a high roof Transit, recently purchased with donations and another of those magical grants—accepts them, their ends all aligned, a wall of small circles stacked over and over and over. By the end of the day, I imagine they'll tower to the roof. I think about the new site at Gorpley where they've just planted five thousand trees and are intending another hundred thousand, and realise for the first time that all those tubes, just like these today, are going back in the van in ten years' time for disposal.

Part of the lesson of this kind of work is that details matter. In theory, when you plant a tree, you probably don't—unless you've previously planted a lot of them as practice—think to plan what you're going to do with the plastic tubes ten years later, or how you're going to get the mud off your car's seats, or what's the best kind of insect repellent, or what to do when your stake hits a rock. When you plant a tree in practice you enter into a negotiation with each of these details. The same is true of everything. Do you know, speaking of recycling, what happens to an empty plastic bottle when you send it for recycling? Have you ever done it for yourself? Do you know that it can't ever be turned back into another plastic bottle, and therefore, that every plastic bottle you buy is virgin plastic? These details, when we know them, inform our choices.

Part of the lesson, also, is that the local, the details specific to this place, matters. I

can tell you about the economics: averaging twelve acres of plantings a year since 1998, they've put in around a quarter of a million trees over two decades, which, among other things, if you can find the upper Calder Valley on a map, gives useful perspective on the United Kingdom government's recent pledge to plant fifty million trees in a new coast-to-coast national forest. But until you come on site, slowly planting from a box of two hundred trees while dealing with a horizontal rain, or slowly removing cable ties from an oak that is bursting its tube, or seeing your neighbour's house ruined by floodwater, it's hard really to understand what it means to say "seven thousand trees," or "Calder Valley flood risk," or "planting season." It's hard to think about what it costs to bring all these plants to life before anyone here gets involved in actually planting them. Then imagine repeating all this over a period of twenty years until a quarter of a million trees have gone in the ground, and then seeing that the hills still look bare. It is an immense undertaking. It's the kind of work that convinces me, more than ever, that it is to the local I must look if I want to help the world. The local is already big enough for a lifetime's work.

But that's still not the thing I most want to show you. The thing I most want to show you is smaller even than that—small enough to change a person's life. What I want to show you is what happens when you slice open any given deer guard.

Each time you repeat the task of removing a deer guard, you open a universe. You come up the slope from the road through tall grass and thistles. The black butterflies chase each other across your path, pursuing each other at the mercy of the breeze. Your tree is barely thick enough to justify freeing it, or it fell down ten years ago and has grown sideways, or it's

bursting out of its guard already, or it's been gnawed by deer at its lowest exposed point. It so happens that on this part of the site, if it's big enough to remove its tube this year, it's probably an oak or hawthorn. You find the stake and take the knife to the cable ties, then run a long slice down the deer guard, probably nicking the tree somewhere as you go. If the tree is already forcing its way out, you can sometimes just pull, and a perforated split appears to help you, but most of them need cutting. You lever it away from the tree trunk and the soil at the base—to which it is probably fused in places—and then you get to see what's inside.

The first three trees I "opened" in this way revealed the same things: strange, sleepy hollows, dark and damp with moss and soil of the moss's making halfway up the tube's insides. Tree roots looked to be growing up toward, or maybe down from, the tree's middle, confused by the tube's accumulated soil and the darkness. The spaces caught inside the tubes felt like miniature ancient woodlands of their own. Then I came to a tree growing flat on its side that turned out to be housed in two tubes, the outer pooling water and the inner so tight that the wet trunk inside wore no bark, but only bulged like an arm's muscles under strain. As I moved up the slope and around onto a patch that saw more sunlight, the worlds changed completely. In some cases the trees were dead and gone, and the tubes housed only spiders' webs and grass stalks. In others, where the trees had grown strong, they acted as homes for a contained world of creatures.

When I revealed my first ants' nest, I wasn't sure what I was seeing. In hindsight I remember noticing a lone ant perched near the top of the tube as I cut it, but when I pulled it away, I first thought I was looking at a fungal growth. Then

it started moving, white dots wriggling and descending in erratic panic. I thought it was maggots, but it wasn't; it was a cache of white eggs dug into a hole in the trunk, and they were moving because they were being carried by ants trying to save them. Then the soldiers came, faster than you'd imagine a thing could move. And one huge white thing—what was that? A termite that happened to have been nearby? An ant god? I backed away muttering, "sorry, sorry ants, sorry" and wondering, foolishly but instinctively, if they knew it was my doing and if they would chase me. All of this took place in the same moment as I started to pull away the deer guard. When it was off, I left it lying by the tree, covered in rampaging ants, deciding that someone else could collect it when they came back next year, when the ants had had time to move on.

It seemed then that every tube I opened was swarming with ants for the rest of the morning. Eventually, I worked out how to pull the tube away and let them escape before swinging it into my sack. Sometimes slugs and spiders fell against each other as they tumbled from their plastic, the only home they had ever known, gone in a moment.

Every tube was a place inside which the only world that had ever existed was dim and green, edged on one side by translucent polyfibre and on the other by living wood. Every time I opened a tube, I was altering something enormous: an entire miniature ecosystem that, the moment after I saw it, no longer existed and which would have to try its luck within the wider system around it. Each had been its own universe.

This is the magic of tree planting: not only these trees that were seeds, that deer would have trampled and chewed, but everything they bring with them when they grow, and everything that continues to change. The

thousands of butterflies, so many you can't look anywhere without seeing one in front of you; the monstrous hornets; the ants in their colonies, barely aware of each other's existences twenty yards apart; the nettles hiding beneath thistles and the tall foxgloves dancing with the grass; the flicker of light and shade as you work in the breeze. The way this bare slope becomes, so quickly, a new world of old wood.

It's quite common in many of the circles I know—not only tree planters but city professionals, young academics, job-seeking videogame addicts, middle-aged policymakers in shirt sleeves and blouses, and of course my blood family of teachers and students—to hear people discuss volunteering as a transaction: you "get a lot out of it," or you "give something back." As with everything else in the cosmos, though, the exact terms of that transaction are usually unclear until after it happens, so much so that, I think, it starts to make very little sense to approach it as any kind of trade at all.

When you sign up to plant trees because you think this place is owed something more of your life, or because of flash floods, or for any other combination of reasons, sometimes you only get blisters and bee stings and a word of thanks. Sometimes you get a new friend. Sometimes you get butterflies, sometimes lukewarm soup. Sometimes you come home and, a day later, understand suddenly how you ought to live. Sometimes you only pull a deer guard into the sun and watch as ants scurry, water falls, spiders scatter, slugs slip, young moss tumbles over your knees. And sometimes, in the smallest of spaces, you get a new view of a new universe—seven thousand times. The transaction is impossibly uneven—it always was. And the dirt of it, because there is always dirt, will probably stick under your fingers for a long time to come. ❖