

A Single Map

For decades, my favourite thing has been to leave here, with all its ties and routines, hit the road, and make my way to there. But I don't do it because I specifically want to get there; once the novelty wears off, I am soon eager to move on again. For it is the newness and originality that attracts me. I don't like being in one place for too long. I have been lucky enough to cycle a lap of the planet, row and sail the Atlantic, hike across southern India, and trek over Arctic ice and Arabian sands. The open road, spin the globe, and off I go. Home was for family, friends and real life, but not for exploration and adventure.

However, like many people, I have been going through a significant mood shift about travelling. With the climate in chaos and the natural world facing disaster, I can't justify flying all over the globe for fun any more, burning jet oil and spewing carbon in exchange for selfies.ⁱ It feels particularly inappropriate as I write books that specifically encourage both my readers to get out and explore. If I love wild places so much, am I willing to *not* visit them in order to help protect them?

Voyaging to distant lands is still a rare luxuryⁱⁱ on a global scale, with 95% of the world's population not flying in a given year, and more than half of all flights being taken by just 1% of us. Add to that the expense of travel and the time it requires. How can more people enjoy the quest for beautiful places and the mental and physical benefits of getting out into nature? This shouldn't just be for people with the free time to cross continents and the money to buy fancy equipment, nor only for those with beautiful National Parks on their doorsteps, or freedom to travel that is often affected by gender, race or ability. Could there be a way to help put nearby nature into everyday lives?ⁱⁱⁱ

I have been interested in achievable, inclusive adventuring since I began writing about microadventures over a decade ago, encouraging people onto weekend bike rides, overnight camps and wild swims. Family life had curtailed my own travels and saw me settled in a less-adventurous neck of the woods than I had ever imagined for myself on the fringes of a city in an unassuming landscape. I am here for my family, because they like it and I like them. And that's reason enough. It was time for me to accept that we weren't going to move to a croft in the Highlands, a cabin in Montana or a condo in California. But I didn't want that to dampen my curiosity or enthusiasm for exploration. What if this place I live, which has held no surprises for me, was actually full of them, if only I hankered to go out and find them? Not known, because not looked for: this was an opportunity for me to get to know my place for the first time^{iv} and search closer to home than ever before for things I've chased across the world: adventure, nature, wildness, surprises, silence, people and perspective.

I decided to forsake large adventures and spend a whole year roaming the single map that I live on, a square area of land measuring just 20 kilometres across. If you ran around the perimeter, it would be a distance of less than two marathons. It felt like a tiny expanse to limit myself to, but I wondered what was out there, hiding in plain sight, right under my nose.

The first step was to buy my very own adventure map. The Ordnance Survey, Britain's national mapping agency, divides the country up into 403 'Explorer' maps. You can also buy a customised

map with your own home right in the middle of an area of 20 km² on a 1:25,000 scale^v. I visited their website^{vi}, found where I lived, and ordered a map. It arrived a couple of days later and I was excited to see the map spread out before me for the first time, as I always am at the beginning of adventures. Unfolding a map is the ritual that launches all good expeditions. When the explorers Lewis and Clark set out in 1804, their expedition aim was to survey the 827,000 square miles of land that America had recently purchased from France. What was out there? What did their country actually look like, and what opportunities did it offer? I felt a similar call to investigate my own map's modest span. I didn't know what was the highest point, the most remote, or the most beautiful. But I did know two things: they wouldn't be as impressive as on other maps, yet it would still be interesting to find out. I ran my hands over the map to flatten its creases. It was divided into 400 individual grid squares, outlined in light blue, each covering a square kilometre. That's a decent size, about 140 football pitches, but you could still comfortably walk a lap of one in an hour. I decided that each week I would venture out to thoroughly investigate one of those squares. I would do my best to see everything there, to walk or cycle every footpath and street, and to learn everything I could along the way.

Even before beginning, I had an idea how conceited the notion of seeing 'everything' sounded. I guessed I would probably jot down notes, and I definitely wanted to take photographs, for no other reason than the pleasure that gave me. The enforced slowing down would also help me resist trying to 'make an adventure out of something whose most important meaning is altogether more intimate and homely,' as Richard Mabey put it in *The Unofficial Countryside*^{vii}. This was very much at odds with the way I've pursued most journeys in my life. Mabey's pursuit of that intimate and homely meaning, which I interpreted as a sense of belonging and connection, was more likely to be caught 'in lunch-hour strolls, weeds found in a garden corner, a bird glimpsed through a bus window. It was a change in focus that was needed, a new perspective on the everyday.'

How should I choose which squares to visit? Hand me a map and I'll give you any number of ideas for places to camp and watch the sunrise, routes to ride and efficient ways to move from A to B. But I didn't want my confirmation biases to determine where I went. I wanted to see things I would not ordinarily see. So I used an online random number generator to choose the square each week, though I did permit myself to avoid visiting adjacent squares.

From the very first square it became clear how much there was to write about, so long as I acted on the assumption that everything was interesting. And with that mindset, everything *did* become interesting. Professor Sir Terry Pratchett once gave a lecture on 'The Importance of Being Amazed about Absolutely Everything',^{viii} which felt like a fitting mission statement. I investigated so many things I would ordinarily have ignored: not only nature in more detail than I had ever seen it before, but also the history and ephemera I encountered along the way. I was astonished over the course of this year about how much I had to learn. I could tell a daffodil from a daisy, but not a dunnock from a denehole. I never intended to spend a year diving down Google rabbit holes about hundreds of obscure topics, or reading dozens of books about nature, farming and the climate emergency.

Anything clever that you read in the following pages, and almost every fact and figure, was new to me when I began this book. Do not make the mistake of thinking I am a clever person who stands in an empty field and sees biology, geology and every other 'ology', whilst you merely see a field. I too saw only the fields before I began, but paying close attention unveiled so much.

My biggest hope is that you are encouraged to go and explore your own neighbourhood. Buy the OS Explorer map of where you live, or borrow it from the library. Use it as a prompt to get active and spend more time out in nature. Share your discoveries with friends and family, pay attention to what you are motivated to learn more about, and then do what you can to get others to care. This is why I

don't mention any place names: I want this book to be a spark for your ideas, not a recipe to follow. Discover what surprises are waiting for you at the end of your own street. Richard Jefferies explored similar liminal landscapes to mine in the 19th Century. His book, *Nature Near London*^x, did not specify sites 'because no two persons look at the same thing with the same eyes. To me this spot may be attractive, to you another; a third thinks yonder gnarled oak the most artistic... Everyone must find their own locality.'

Many times during this year pottering around my local area, I thought about Henry David Thoreau, whose book *Walden*^x is a reflection upon simple living in natural surroundings. He was a master of paying attention, and chose to step away from the rush of life to live in a cabin in the woods. Appropriately for my book, he was not in the heart of the wild, but on the edge of a town so he could still entertain visitors, go to the shops and eat pies baked by his mum. Nonetheless, he was very clear about his intentions.

'I went to the woods,' he explained, 'because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived.'

In one of my favourite short films, [Of Fells and Hills](#), runner Rickey Gates pondered something that has stuck with me for years.

'In the end I think that a single mountain range is enough exploration for an entire lifetime.'

I love that concept. It became the foundational question during the year ahead. Is a single map enough exploration for an entire lifetime?

The Dark Half

Samhain (November 1)

NOVEMBER

BEGINNINGS

'There is in fact a sort of harmony discoverable between the capabilities of the landscape within a circle of ten miles' radius, or the limits of an afternoon walk, and the threescore years and ten of human life. It will never become quite familiar to you.'

– Henry David Thoreau

I spread my map out on the floor, studied it carefully for a while, and found what appeared to be its most boring grid square. A grid square without road, house or river, just a single footpath, one pond, and the merest flutter of a lonely contour line. Here was nothing at all, neatly outlined within a crisp blue square. It was unremarkable: there was nothing to remark on. And so it was the ideal place for me to begin. My thinking was that if this first outing was too boring for me on my boring map, then

it would certainly be too boring for you, and that would be the end of the project straightaway. I folded up the map and headed out to go and have a look at nothing.

Some time later my car was being hauled out of a ditch by two Punjabi construction workers who were too polite to tell me what a moron I was. I'd flagged down their pick-up to ask for help after my front wheel dropped abruptly off the tarmac, the edge hidden by undergrowth in the lay-by I'd parked in. As their engine revved and bits of my car crunched and cracked and fell off, I reasoned that I was here to look for new experiences, so perhaps this was a good start?

I pocketed the car keys, squeezed through a barrier designed to keep out dirt bikers, and climbed over a block of graffitied concrete hampering incursions by vehicles or caravans. I'd never been down this way before. Somebody had planted a row of spindly saplings along the metal fence, held up by scruffy blue string. Who was it? There were no houses near here, and it would be a decade or more before they amounted to much. Why did they bother? I snapped a quick photo.

I paused again just beyond a discarded burger wrapper, this time to admire the colourful, leaf-strewn path. I took a photo of my feet amongst the golden leaves. The path stretched away into the mist beneath an archway of damp, dark trees. I took a photo of that too. Autumn was making way for winter.

The year's cycle had just entered the period known in Gaelic as the dark half of the year, marked by. I was beginning my year by striding into the darker months. My breath ballooned in the air, and my fingers were cold even in my gloves. Celts used to mark the year's turning with four fire festivals, midway between each equinox and solstice. Samhain^{xi} was the most important of them, an old pagan festival to welcome in the winter. The weakening of the winter sun was a source of anxiety^{xii}, and the fires they lit were an attempt to help the sun on its journey across the heavens.

The Samhain celebrations at the end of harvest were rowdy affairs, filled with gorging, boozing and sacrificed cattle. People took a flame from the community bonfire and carried it carefully home to relight the fire in their own hearth. Smaller fires, *samghnagans*, were lit around farms to protect families from witches and fairies. At this time of year, they believed, the separation between our world and the spirit world dissolved, allowing more interactions between the two. You can imagine their concern at the darkening days, foreboding about the cold, hungry months to come, and the proximity of a closer supernatural world and the intoxicating light and warmth of fires and revelry. The celebrations must have been joyful shenanigans and a real highlight amid the hard year of gruelling toil. In the celebration known as Calan Gaeaf^{xiii}, wild men in Wales danced around fires, tossed burning wood at each other for fun, and blasted fireworks into the dark night sky. Turnips were carved into Jack-o-lanterns, lit from within by glowing embers of coal. The customs I would enjoy on tomorrow's Bonfire Night^{xiv} are not far removed from those older, wilder, pagan rituals whose bonfires and fireworks we borrowed to help us remember, remember Guy Fawkes and the foiled Catholic plot to kill Protestant King James by blowing Parliament sky high.

Once I can put a name to something – a bird song, a tree, a phenomenon – I always seem to come across it more often (the Baader–Meinhof phenomenon), and I appreciate it more for knowing the name. As Rob Macfarlane wrote in *Landmarks*^{xv}, 'language deficit leads to attention deficit. As we further deplete our ability to name, describe and figure particular aspects of our places, our competence for understanding and imagining possible relationships with non-human nature is correspondingly depleted.' I intended to make a conscious effort this year to learn more about the

nature all around me. Addressing my language deficit and general ignorance might help my attention deficit as well, with too much of my time these days frittered on being productive rather than on being.

Paying attention is what teachers nagged me to do in boring biology and geography lessons. It was time now to walk across my map and belatedly learn for myself how to do it. I had studied science at A-Levels and university (both of which were an inefficient, ineffective, uninspiring waste of time), and yet my lack of knowledge was shocking. I learned so little from formal education. A knobbly-kneed kid walking across the fields to school a few generations ago would have been staggered by how unaware I was of the landscape I lived in. Combining these weekly outings with a determination to pay attention, and to fill in some of my knowledge gaps with the help of apps and online research, was my attempt to get a grip on my own nature deficit disorder.

My professor today was the Seek app^{xvi} on my phone that identifies plants or creatures through some unfathomable voodoo magic. I pointed my phone at a common reed, wondering what wisdom the mighty AI would share with me. I had seen these plants countless times before but didn't know their proper name. Drumroll and revelation... the technical name for the plant was actually 'common reed'! But the breakdown of its taxonomy caught my eye. This humble reed nestled in the Family of 'Grasses', the Class of 'Monocots', the Kingdom of 'Plants' and the Domain of 'Eukarya'. The sprawling immensity of life, too complex for me to ever properly grasp, had been ordered and tidied and simplified for this single, seed-covered plant in front of me: *Phragmites australis*. This much I *could* begin to comprehend, and from here I had a starting foundation upon which I could start to layer more curiosities.

The open fields of my boring grid square were a similar starting point of reference on my little map, in a corner of a country that is forever England, that is in the UK (for now), Europe (ish), part of planet Earth in a solar system tucked away in an outer spiral arm of the Milky Way galaxy, and on and on until my head explodes into that memorable picture^{xvii} from the Hubble telescope showing 265,000 galaxies (out of billions), many of which are so far away that their light has taken billions of years to reach us. It is a picture sprinkled with trillions of stars and planets and so much untold mystery. Yet even that photograph has been obliterated by the new James Webb telescope, 100 times more powerful,^{xviii} that is now peering all the way back to GLASS-z13,^{xix} the oldest galaxy we have ever seen. Which means that whilst I stand on a stony path atop deep layers of late Mesozoic and Cenozoic sedimentary rocks and gawp dumbly at this common reed, I can also open my phone to @nasawebb on Instagram^{xx} and gawp humbly all the way back to a mere 235 million years^{xxi} after the Big Bang when our entire universe (this reed, this planet, this galaxy, *everything*^{xxii}) was as small as an apple and a temperature of quadrillion – 1,000,000,000,000,000 – degrees.

In other words, faced with the infinite options for exploration that are out there, I might as well begin right here, right now, on this damp footpath. As I considered all this, I felt a noticeable swelling of astonishment. This single map contains multitudes. I may well dive down dozens of disconnected internet rabbit holes and pepper each page with awkward non sequiturs and dubious segues. I may contradict myself and meander hither and thither. But if nothing else feels connected across the individual, unremarkable squares I visit this year, I hoped I could hold onto this sudden yawning glimpse of wonder and the connection between an everyday observation and the sparking curiosity that spins off from there if you look at it from the right angle or listen to the right enthusiasts.

Who came to this isolated spot to graffiti badly, and why? Who built a bench here from two stumps of birch and a hefty plank. Who lay down a bed of wood chippings around the bench, which was

now dotted with crooked brown mushrooms? Who made the effort to gravel a small path over to this bench and cut branches to line the path and peg them down? I wiped the bench dry with my sleeve, sat down and rummaged for the flask of coffee in my rucksack. I pulled my hood up over my woolly hat and sipped the drink for its warmth rather than the caffeine. My brain seemed to be buzzing quite enough as it was. I stared into the damp fog and wondered who had positioned a bench in front a tangle of brambles and a massive pylon? I have seen beautiful vistas around the world and I was not at all impressed by this one.

But then I noticed a small plaque, inscribed to ‘Brian R Macknish, a tireless campaigner for the canal’ and I realised that I was looking at this all wrong. I was facing the wrong way, for a start. What I *should* have been looking at was behind me. I swivelled round on the bench and looked at the same thing, but differently. What I had dismissed as a stagnant ditch was in fact an overgrown canal in the early stages of restoration. I noticed now what I had missed before. The scrub had been cleared to allow a view of the canal from the bench. There were tall bullrushes like hotdogs on sticks, feathery reeds, blood-red hawthorn berries and a spiked metal security fence. It wasn’t exactly paradise, but this was a framed view of nature, history, conservation and community all rolled in together. Brian’s bench, and the evident fondness and appreciation for this place that had inspired it, gave me permission to love this view too. And as I sipped my coffee I felt weirdly thrilled to be here on this murky, cold November morning.

Whilst taking all this in, my bum growing cold on Brian’s bench, a plump man in his fifties cycled by in hi-vis, the tyres on his bike squashed rather flat. Tom Waits’ unmistakable gravel voice played from a speaker on the handlebars and the cyclist sang along as he rode past without spotting me.

‘I never saw the morning ’til I stayed up all night.’

I smiled at the break in the silence.

‘I never saw my hometown until I stayed away too long.’^{xxiii}

There was little movement or birdsong in the air as I finished my coffee, just the sounds of a busy forklift truck, reversing beeps, and a rattling train somewhere in the distance. Nature seemed subdued in the morning mist. It feels a bit ridiculous to admit this, but I still had not entered my grid square. I was foiled from getting into it by a drainage ditch that was too wide for me to gamble leaping over in my wellies. So I was forced to retrace my steps and try a different way. While walking back down the lane I picked up the burger wrapper I had ignored before. I already cared more for this place.

I pushed through a narrow gap between some bushes and a chainlink fence onto a narrow footpath, taking care not to snag my coat on the wire. At last, I was finally into my grid square and ready to begin this challenge! I followed the hemmed-in footpath until I reached a gap by a fallen fencepost. I stepped over the tangled loops of wire and dropped down a wooded slope to a stagnant green pool. The surface was covered in duckweed, a tiny, quick-spreading plant currently being tested in the US as a stage of treatment for human sewage.^{xxiv} It was peaceful down there amongst the hawthorn bushes, a Carlsberg Export-strewn no man’s land, wedged between a railway line, industrial units, marshland and an MOD firing range. Nobody knew I was here. Nobody I knew had ever been here. I had no idea why anyone else would ever have come here, though the crushed beer cans showed I was not stepping into uncharted territory, like proprietorial flags claiming mountain summits or the North Pole. I stirred the pond with a stick and its mysteries bubbled up from the black depths and stank like a cauldron.

I climbed into a field and waded through wet, knee deep grass, among yellow common toadflax flowers and purple thistles bejewelled with droplets of dew and strands of silk webs. I made my way towards the grazing meadows of the drained marshland that made up most of today's 'empty' grid square. Gigantic electricity pylons marched across the land and the grey sky was striped with lines of cables running from the old coal-fired power station down on the coast^{xxv}. Its 200-metre tall chimney gained some notoriety when six Greenpeace protesters climbed it to paint 'GORDON, BIN IT', a message to Prime Minister Brown. But they were served a High Court injunction before they got any further than a giant 'GORDON'. The activists admitted trying to shut down the station, but successfully counter-argued that their damaging actions were to prevent climate change causing greater damage to the world. This claim had never been used before in a 'lawful excuse' defence. An Inuit leader supported them, chipping in with evidence that climate change was affecting his way of life. And the *New York Times* featured the eventual lawful excuse acquittal in its annual list of life-changing influential ideas.^{xxvi} There is now a small, but growing, movement dedicated to granting landscapes 'legal personhood'^{xxvii}, and increasing their rights not to be persecuted or violated. It is not a new concept: Bogd Khan Uul mountain in Mongolia has been venerated and protected since the 13th Century^{xxviii}.

Beneath the pylons, the land was strikingly flat. I could see an elevated rampart far away in the distance, beyond this square, protecting the marsh from the wide river that funnelled out towards the estuary. A silhouetted pony grazed on the grass banks. A dirt bike revved up and down it, having somehow found a way around the preventative barriers. The noise, the movement, and the human all seemed incongruous on this empty morning as I watched a ship slide from right to left beyond the wall, heading out to sea with smoke billowing from its funnel.

'Where are you going?' I called out to the vessel.

Which foreign port will you make landfall in? What will you see there? How will it smell? What café will the captain go to for a beer and a smoke to stretch his legs upon arrival? I used to travel to those far-off ports, and contemplating the prospect of spending a year here made me wonder whether I was missing out.

One geographical feature marked on the grid square was a tiny mound that had been awarded its own diddy contour ring, a whopping five metres above sea level. It looked nothing more than a grassy wrinkle on the flat counterpane of the marsh. But it was in fact an ancient barrow, a Bronze Age cist burial site,^{xxix} constructed over a stone coffin containing a crouched skeleton and a necklace of beads made from fossilised sponges. Imagining those stories from thousands of years ago added a sense of wonder to the unprepossessing mound and its empty cattle trough.

From my vantage point on the 'hill' I looked over to a field of black cows and another of white sheep. They were separated not by fences, hedges or walls, but by a network of drainage dykes, a landscape I'm not accustomed to seeing in Britain. The livestock were the only clue that this drained marsh was anything other than forgotten ground, in between ground, left behind ground. They play an important role in maintaining it and preventing it from returning to scrub. My habit in life, always, is to hurry. Today though my temptation was to linger. That felt like a helpful gateway into not only exploring my map thoroughly, but possibly even establishing a slower, less manic way of life. I certainly hoped so.

Two crows swooped overhead, calling out as they tumbled and rolled through the cold grey sky. Were they courting? Fighting? Playing? I could hear their wings swoosh as they dropped. I heard also the creaky wings of a pair of lumbering white swans flying by, then the begrudging, cranky

take-off of a heron^{xxx} whose frog hunting I disturbed in a sinuous drainage ditch covered in neon green algae.

I was hungry now, appreciative of the windfall apple I'd pocketed from a tree by the railway line. It was huge, red and flecked with yellow. Lemony sunlight was beginning to burn off the morning's mist. I saw the distinctive swoop of a woodpecker and listened for its laughing call. Less easy to identify was either a weasel or a stoat that dashed across my path and disappeared like magic into the long grass. They do say that telling the two apart is simple: a weasel is weasily identifiable, whereas a stoat is stoatally different...

And that brought me back to where I began, but now with a dinged car, a bunch of photographs, and a whirlwind of first impressions. I had pages of notes to take home and begin exploring all I had found on the internet. I had deliberately selected the most empty-looking square to kick things off on a map I'd been inclined to dismiss as too boring. But what I came away with, knowing that 399 grid squares still awaited, was a sense of abundance and possibility. There was a clear correlation between how much I had paid attention and how much I enjoyed the outing. The government's Foresight programme, which looks at how to improve mental capital and mental wellbeing, set out five actions to improve personal wellbeing. These were:

Connect
Be active
Take notice
Keep learning
Give

That is, if you'll permit me to label this book as giving back what I discovered, a perfect summary of what I was hoping I might accomplish this year. An abundance of new places, of things to learn and beauty to connect with, if I kept active and paid sufficient attention. It was a fine beginning.

FLY-TIPPING

*'Instructions for living a life.
Pay attention.
Be astonished.
Tell about it.'*
– Mary Oliver

After the uplifting experience of the first grid square's open spaces, my heart sank a little upon arriving in my second square a week later to find a boarded-up, closed-down pub with weeds pushing through the cracks in the puddle-strewn car park. A soggy planning permission notice tied on the security fence explained plans to demolish the pub and build six houses. Pubs improve community engagement^{xxxix} and rank as Britain's third most popular tourist activity, yet they are in seemingly terminal decline^{xxxix}, with dozens closing every week. It marks a sad loss in loose community fellowship^{xxxix}, a sense of belonging that I had not yet found on my map, either down the

pub or up the hills.

Across the country, around 30 pubs are closing each week. At this rate the British pub will be extinct by the 2040s, along with the Sumatran orangutan, Amur leopard, Sumatran elephant, black rhino, hawksbill sea turtle, Sunda tiger, and Cross River gorilla. The COVID pandemic accelerated many closures, which is ironic given that the massive number of pubs in Britain^{xxxiv} may be connected to the 14th Century plague. Because so many people died, the survivors found themselves in a noticeably emptier land, with higher wages and a greater inclination to have fun. I like pubs in the way that I like churches: not wedded to the religion espoused, but enjoying the link to the past, the reassurance of the familiar, and the welcoming open doors.

I headed off in search of cheerier discoveries. After last week's parking disaster I had remembered that bikes trump cars almost every time, and so cycled to today's square, as I would do almost every week over the year. Sometimes I cycled around the squares, other times I locked my bike and walked. I rode down a single track lane, shining from overnight rain as it wound between tight hedgerows. I turned onto a muddy track through a birch wood towards an old gamekeeper's cottage. The thinning leaves were yellowing as winter clamped down. A sign cautioned vehicles to proceed slowly. I didn't seem to be struggling to do that this morning, I was pleased to note. I had travelled about 400 metres in an hour and kept stopping to look at stuff.

A channel of trampled grass on the verge caught my eye. I followed it up to a badger sett, where five large holes had been dug into the sticky earth. Badgers are big, beautiful and abundant creatures, but very elusive.^{xxxv} A quarter of Europe's badgers live in the UK, where they live uneasily alongside cattle farm^{xxxvi}s due to problems with transmitting tuberculosis.

The British badger is a different species to the American badger and to Africa's honey badger, which is more weasel than badger. They live in setts made up of interlinking tunnels, with tonnes of soil being excavated to create dozen of entrance holes and hundreds of metres of runs as deep as four metres underground, including ventilation holes, nurseries, latrines and sleeping chambers. Fresh air circulates as the entrances tend to be higher, allowing stale air to pass out like a chimney. Setts may be dug and enlarged by consecutive generations for a century or more.

Last night I had finished reading *The Wooden Horse*, a fascinating escape story from the Second World War. Two prisoners of war contemplated the difficulties of conventional escape tunnels that began inside a hut – beneath a desk, in the showers, under a cooking stove – and then ran all the way underground beyond the camp's perimeter. The sheer length of the project, in both distance and time, usually gave the German guards too many opportunities to discover their mischief. What if, they wondered...

What if we began our tunnel near the perimeter fence? It was clearly a ludicrous idea, but many of life's wonderful projects arise from asking 'what if?' and mulling over madcap possibilities. The idea that came to Eric Williams and Michael Codner was simple and audacious, with pleasing echoes of Odysseus and the Trojan horse. They placed a gymnastics horse in the exercise yard, out by the camp fence. While volunteers practiced vaulting for hours on end, a tunneller concealed inside the horse began digging an escape tunnel, concealing it at the end of each day with a sand-covered trapdoor. The conscientious gymnasts tidied away their horse each evening, carrying it back to their hut with the digger and bags of excavated soil hidden inside.

The gymnasts returned to the same precise spot, day after day, showing admirable dedication to their new hobby, whilst the digger laboured and sweated underground. A fellow prisoner was sure the plan

was ‘crackers’, declaring, ‘I give it a couple of days.’ But they persevered, and a small repeated activity slowly bloomed into something dramatic.

Looking at the entrance to the badger sett, I tried to imagine myself down there, day after day for three months, using bowls for shovels, digging by candlelight, struggling for breath in a 75cm diameter tunnel, whilst other inmates vaulted over the wooden horse to mask the vibration from the tunnelling work. The prospect was terrifying, claustrophobic, and quite mad.

Not only that, once the escapees completed the 30 metre tunnel (longer than a tennis court) and broke out, they still had to cross 150 miles of enemy territory in homemade disguises, without being able to speak German, and then sneak onto a ship to Sweden. The convoluted artifice of modern adventures would seem risible to those insanely bold, courageous men.^{xxxvii} I peered down the dark earth tunnel and shuddered at the thought of excavating something like that.

I was perhaps taking the ‘Slow’ sign too literally now, for I had still barely made it down one flank of the grid square and it was almost lunchtime. I rode through a coppice^{xxxviii} glowing with golden sunshine, back to the road. The only house along the lane was built from brick walls interspersed with decorative flint motifs^{xxxix}. Until bricks became cheap, a century or so ago, most homes and churches in this area were built with flint^{xl}. I took a footpath behind the house and pushed my bike across muddy, undulating fields, past cross country horse jumps, past a pair of dog-walking mums in wellies and sunglasses sipping from thermos mugs and discussing their children’s teacher. An unseen man beyond a hedge sneezed and I called out, ‘bless you’.

This was countryside for use: for work, for living, for strolling. It was very different to last week’s deserted marsh, which I preferred, even though here was more traditionally ‘beautiful’. That went against my assumptions of what was beautiful, natural or wild in our countryside.

On I went, past a plastic lid in the mud with ‘Strawberries and Cream (milk)’ written on it in marker pen, past blooms of yellow canada hawkweed which Pliny, the Roman author, naturalist and philosopher, believed hawks fed on to strengthen their eyesight, past holly saplings sheathed in plastic tubes, past wild bees buzzing from their nest in a hole in a birch tree.

Past a plump little nuthatch pecking a branch as autumn leaves fell from the tree, slower than rain.

Past a snail that I rescued from its perilous road-crossing mission.

Past all these things that distracted me, drew me in, and would send me diving down deep internet rabbit holes when I got back home. Half of my head was saying ‘hurry up’. Half of my heart was asking ‘why should I?’

All these things guided me towards the end of the grid square, and a failed attempt to investigate a small pond marked on the map but sealed off by a high spiked fence. Disappointed, I was about to give up and go home when piles of roadside rubbish caught my eye, strewn along the access road to a Gypsy and Traveller site. This was fly-tipping on an epic scale. Curiosity drew me along the lane which was lined with heaps of trash, culminating in a smouldering mountain of soggy rubbish, maybe 20 metres long and a few metres high, including upturned sofas and builders’ rubble sacks. Some of it had been partially burned. Two workmen were surveying the mess.

‘The fire brigade have just been to put it out,’ one told me. ‘Now we’ve got to get rid of it all. Again.’

The council hired these men, I learned, to manage various notorious fly-tipping sites in the area.

They had driven for an hour to come and sort out the mess. Two men with two flatbed trucks, waiting for a third man to arrive with a digger to scoop up someone else's rubbish: it must cost the council a fortune. Indeed it does: Britain spends more than £67m a year cleaning up public land^{xli} and prosecuting the few people they catch. Almost a million incidents of illegal rubbish are reported each year.

'Have you been here before then?' I prompted.

'This is the third time we've cleared this site in the last two weeks. It's getting silly. Sometimes they dump a fresh load while we're still here clearing up the last lot. They honestly don't care. There's nothing I can do about it.'

'Who does it?' I asked.

'Scumbags.' he replied.

'At least it keeps you in a busy job?'

'Nah, but it's not right, is it.'

A car pulled up alongside us. The two young women from the council had a weary, not-this-again look on their faces. They began to confer with the workmen about how to deal with this latest episode. I wished them all luck and carried on.

Two Traveller children from the community at the end of the lane walked towards me. The girl was thumbing through her phone and the boy twirled a catapult round his finger. They looked to be about twelve.

'Did you make that?' I asked, nodding towards the boy's catapult. It had been carved from a forked stick, with the bark peeled off and the wood polished with varnish. The elastic was secured by neatly whipped twine.

'Yeah, I made it,' he said, hesitantly, though with a hint of pride. I reached out my hand and he let me hold it.

'It's really good,' I said. 'I like it.'

As luck would have it, I had a handful of clay catapult pellets in my pocket (I have a catapult in my shed as a handy procrastination toy) and I offered them to him. He beamed and let me have a shot with his catapult. I took aim at a fly-tipped fridge and missed. Then the boy blasted some dumped flower pots. All this rubbish had its advantages.

'What you doing with that big camera?' the girl asked, looking up from her phone for the first time.

'I'm trying to get out and see more of the countryside round here, like that pond over there.'

'That's private,' she said. 'You'll get a twenty grand fine.'

'That's a bit expensive for a photo of a pond,' I replied. 'I think I'll just leave it.'

'But that's only for kids, to stop us going there and messing around,' said the boy. 'You'll be alright.'

They were warming to me now, and told me a way to sneak through the fence. They also offered to take me to a nearby graveyard or show me a field of their ponies. They were proud of their home and wanted to show me around, but it didn't feel right to go off exploring with two children, so I demurred.

'Why aren't you in school?' I asked, prompting only a shoulder shrug from the girl and a flurry of exploding flower pots from the boy.

'Can I have a go with your camera?' he asked.

I showed him how to use the viewfinder and zoom on my camera, then posed for him to take a couple of shots of me.

'If they run off with your camera, I'm not chasing them.' shouted one of the workmen, laughing.

'Don't worry, I back myself over 50 metres,' I replied, smiling at the boy. They were nice kids.

But one of the women from the council called me over and asked why I was taking photos around here.

'Be careful,' she said, with concern in her voice. 'The people who live here won't like seeing you with a camera. The kids don't ever speak to me; they just tell me to eff off every day.'

My time was up for the day anyway. I shouldered my camera and turned to leave.

'Bye guys,' I said to the kids.

'See you,' they replied with a smile. 'Thanks for the catapult pellets.'

Despite the derelict pub and the fly-tipping mess, I rode home feeling encouraged. I had seen enough plenty to act as a sure and steadfast anchor of the soul, a hope that I could find as much interest as I chose to in each grid square, if only I moved slowly and paid attention.

DENEHOLES

*'To see a World in a Grain of Sand
And a Heaven in a Wild Flower
Hold Infinity in the palm of your hand
And Eternity in an hour.'*
– William Blake

I'd left the house straight out after waking up this week, so still felt morning fuzzy as I sat on a log to settle into the woodland and sip coffee from my flask. The ground in the hollow was covered with a carpet of leaves, brown beech, tawny oak, brown sweet chestnut, yellow maple and emerald moss.^{xlii}

The few leaves that still lingered on the branches of silver birch trees were framed by a dazzling blue sky. This was likely be the one of the last late days of glorious autumn colour, which made it more precious. Winter's onslaught kept being nudged back by occasional autumn flurries, but there would not be many more golden days like this until next year.

I spent a happy half hour trying to take an artistic photograph of a crooked oak tree in a sunlit patch of bracken. I was trying to get the lens flare right, that dazzling effect of light rays you can conjure with a wide lens and a small aperture. I hoped the tree might be home to two nationally rare oak-munching beetles^{xliii} that accounted for this wood being listed as a Site of Special Scientific Interest.

Most of the photos I took, however, were not quaint autumnal scenes, but burned-out cars or the detritus of hunting and clay-pigeon shooting, thousands of smashed orange clays and piles of plastic shotgun cartridges. There were more wrecked cars than wrens in this wood, rusted and graffitied, the windows gone, tyres and interiors burned away, abandoned by joyriders after a night ragging around the nearby city. I got my own small thrill by climbing onto the roof of one to snap a self-timer picture. Then I hid my bike in the trees and stepped away from the paths and the scrunched-up cider cans peppered with bullet holes.

I pushed through brambles into a sunken thicket. It was only a small re-entrant, strewn with fallen, moss-covered trunks, but it was peaceful. Stringy ash saplings raced for the sky, charging for the light. It was a literal race of life or death, for only one or two of all those young trees would win to survive in the long term. Like the stagnant pond from week one, I liked the hidden, unkempt, timeless atmosphere of the glade. But it also saddened me that on this map a mere scrap of woodland felt wild and expansive.

Shifting baseline syndrome is the way change happens so slowly that we don't notice our perception of 'normal' changing.^{xliv} We don't notice a landscape deteriorating until it's too late. You think you look the same in the mirror each morning, until one day you suddenly can't button up your jeans. Three hundred years ago, for example, there were just six million people and half a billion birds in England. Today there are nine times more people and a third the number of birds,^{xlv} (we've lost one in six birds^{xlvi} in my lifetime alone). So much birdsong and empty space would blow our unaccustomed ears and minds today.

Picture the miles of meadow and woodland we have lost, free from traffic, streetlights or billboards. Imagine our forests before they were cut down, and then compare them to my 'nice big wood' today. It would be horrifying and heart-breaking to see clearly what a grey, drab state of nature deprivation we exist in.^{xlvii}

But each generation lacks this baseline understanding of what the natural world used to look like, and so we grow up thinking we have a normal amount of wildness, a normal volume of birdsong, a normal numbers of bugs splattering on the windscreen. Similarly, what you and I consider spoiled will look normal to our children and theirs. Standards are lowered imperceptibly but relentlessly and therefore we don't notice the catastrophe of what we are losing. Without paying attention to our local landscapes, we won't be alarmed by their decline, nor those things on a bigger scale?^{xlviii}

Baselines also complicate our relationship with how land is used. For example, the purpose of our National Parks is to 'conserve and enhance their natural beauty, wildlife and cultural heritage'. This sounds admirable. But their baseline assumptions sit only in 1951, when they were founded. Ought we to conserve those landscapes as they were then? They already looked very different to how they did in 1551, or 1951 BC. We assume our countryside has always been intensively farmed as it is

today. Maintaining that therefore often falls under the banner of ‘conservation’, despite its harmful impact on nature. Asking what is the ‘right’ condition for a landscape to be in would become a regular conundrum as I explored my map.

Some scientists believe shifting baseline syndrome is the biggest challenge in conservation today. Its severity is explained by earth.org who warn that ‘our conservation and policy efforts are becoming less effective with each generation, while we become more satisfied with our diminishing actions because our targets are weaker in terms of biodiversity and habitat variety.

The atmosphere felt timeless as I strolled around my wood, but in reality no tree was more than a couple of hundred years old. It is an evolving and lived-in landscape. Once upon a time there was a Roman road and settlement just down the hill, and this wood had already been managed and shaped for millennia by the time they turned up with their pizzas and noisy Vespas. The wood was still surrounded by an embankment with a hedge on top that had originally been a Mediaeval construction to keep out livestock. Over the ages, this wood has been used to produce timber for construction, wood for tools and households, and charcoal. Early industries, such as ironworks, lime kilns, potteries and brickworks were often established in woodland due to the abundance of fuel. Quarries were dug in them too, rather than losing precious agricultural land, hence today’s overgrown quarry now strewn with exploded clay pigeons. Wherever I walked around here, I was treading on history as well as the cyclical nature of man marking and using the landscape, exhausting it, moving on, and nature reclaiming and rewilding it. This made me feel hopeful, for if we don’t plunder it irrevocably then nature’s powers of regeneration and renewal are astonishing.

I thought I had done a good job of thoroughly exploring the wood, until I came home, researched the meaning of its earthwork boundary, and went on to learn that my wood actually contained a ‘denehole’, something I had never even heard of. After every outing I spent hours online learning about all I had seen. But on this occasion I realised that I needed to return to the square, but this time with a climbing rope and a headtorch...

Deneholes are man-made, underground caves accessed by a vertical shaft. Chalky landscapes were once riddled with them and theories abound about their history – druid temples and elaborate animal traps amongst them. In reality, they were nothing more than tiny mines, sunk to gather chalk to spread on fields as fertiliser. Digging down before excavating the chambers meant no farmland was wasted and prevented the pit from filling with leaves. Deneholes were common in the Middle Ages, though some are so old that they were excavated with bone or horn picks. Pliny described the British doing it as long ago as 70 AD^{xlix}, and in 1225 Henry III gave anyone the right to sink a ‘marl pit’ on their land.

The entrance I found was a small black hole, just a few feet wide, on ground that was otherwise covered in leaves. I forgave myself for missing it on my first visit. Originally this 800-year-old denehole was accessed by a six metre vertical shaft, but that had been covered by a grate to prevent accidents. But at some point one of the pit’s chambers had collapsed, meaning I could slither down through a slanting hole in its roof instead. I texted a friend my what3words^l location in case I did not reappear and needed rescuing, lashed my rope to a tree, then leaned back into learning something new.^{li} I switched on my head torch and then lowered myself hand over hand into the hole. This was certainly more excitement than I had imagined my map would offer.

I am claustrophobic and so squeezing through the narrow gap gave me more pause for concern than I’d anticipated finding in a small suburban wood. Thankfully, the tunnel opened out into a high

chamber with white chalk walls. I shone my head torch around. It was a humbling feeling to stand in pitch darkness surrounded by such history. I looked up the vertical entrance shaft, capped with its grille, and rain pattered down onto my face. I could faintly hear the sound of traffic and the 21st Century, but I felt very far from the world and was glad my friend was awaiting a text message to confirm that I got out OK. It would take a long time for anyone to find me if I had keeled over in that ancient chamber within earshot of a motorway!

The excavations were larger than I had anticipated. There were six domed chambers, each measuring about three by four metres, with the ceiling arching five metres above me. It must have taken a ferocious amount of work to extract all that chalk using primitive tools and lighting. In my torchbeam I saw the walls had been etched with graffiti from visitors across the centuries. The plastic bottles strewn around testified to more recent explorers. Quite how a cow's skull got down there, I preferred not to know.

I shone my torch around for a while, admiring the endeavours of long-gone farmers and enjoying the novelty of my morning. Then, huffing and puffing and hauling on the rope, I wriggled up through the tunnel back into the rain and daylight. I was buzzing to have discovered this denehole just a few miles from my house. It was one of the most interesting things I had seen in Britain, and yet I'd never even heard of them. What other surprises might be hiding on my little map?

GROWING

'There is just as much beauty visible to us in the landscape as we are prepared to appreciate, and not a grain more.'

– Henry David Thoreau

A sweaty man ran towards me, suffering the exertions of his morning run. I stepped aside on the flagstones of the church path to let him past. But he just touched the trunk of the yew tree in front of me and ran back the way he had come. The tree must have been his regular 'turnaround' spot. I wondered if he gave the tree any thought, or if he was more focused on his split times and Strava ranking. If I was the sort of man who had a Top 10 ranking of trees in my head (and I am that sort) then I'd score the yew way down the list. They look gloomy, suck away sunshine, and are hard to climb.

Perhaps I am being unfair. Yews live for an impressively long time. The Fortingall yew in Perthshire is over two thousand years old,^{lii} and the Defynnog yew in a Bannau Brycheiniog churchyard is somewhere up to 5,000 years old. They are amongst the oldest living things in Europe, but have less legal protection than half a million of our listed buildings, which includes a few bus stops and skate parks. Britain, for once, is home to far more yews over 500 years old than any other country in Europe. The Ancient Yew Group has identified well over a thousand here. Compare that with France's paltry 77 or Spain and Germany's risible four.

Long before the Christian tradition of having yew trees in graveyards, the tree was sacred to Druids.

They perhaps revered its longevity and powers of regeneration, for when its branches droop to the ground they can themselves take root and form new trunks. The yew came to represent both death and resurrection, connected perhaps to the notorious toxicity of the yew's needles. The deadly brew that Macbeth's witches concocted included 'slips of yew, silvered in the moon's eclipse'. Lethal too were the Mediaeval longbows made from yew and used with shivering effectiveness by archers in the Hundred Years War, raining down ten aimed shots per minute upon their foes.

Closing the church gate behind me, I made my way to the village green where I came across the usual war memorial for the usual dozens of young men from this village killed in the the First World War. Abbott, Ashdown, Baldwin, Ballard, I read. Beal, Beckett, Blunden... I wondered whether there will be a single village on my map without such a poignant memorial. It seemed unlikely, sadly, given their scarcity. Villages where all residents survived the First World War are known as 'Thankful Villages', and there are only 53 in England and Wales, out of tens of thousands of villages.^{liii}

If I was feeling a little melancholy after the graveyard and the memorial, the bus shelter cheered me up. Someone had donated a pile of books to help pass the time waiting for the hopelessly infrequent bus service, with rural public transport being virtually an oxymoron these days. It is hard for people living in cities to access the countryside without owning a car. Opposite the bus shelter was a pub and a beautiful timber-framed home, a Yeoman's hall, dating from the 15th Century. Such halls were constructed around a large dining hall with a high-ceiling and a hearth for a fire in the centre. They were the mark of a successful farmer who owned his own land, known as a 'yeoman'. What would that yeoman have made of the food on offer up the street from his house today, I wondered? The Indian takeaway's 'Tiffin Box Meal Deals' seemed a long way from Mediaeval pottage, a thick stew made by boiling vegetables, grains, and, if available, meat or fish. Tiffin boxes are traditionally a stack of three or four metal containers like a fancy packed lunch box, though I suspect this takeaway would be using the usual disposable plastic tubs. Mumbai has an industry of '*dabbawallas*' who transport, with incredible accuracy, more than 130,000 tiffin lunchboxes, *dabbas*, across the city every working day because Indians won't put up with a soggy, clingfilmed cheese sandwich for lunch^{liv}.

From the village green with its church, traditional pub and solid old homes, I moved outwards through rings of housing estates, built one by one over the past decades, each in a different style.^{lv} I passed maisonettes, blocks of flats, cookie cutter family homes, a house-proud garden next to a tangle of weeds with an old car up on bricks, and the delightful home of Sheila and Malc, whose names were carved proudly on a wooden arch in the small, but flower-filled, garden of their terraced bungalow. A happy home, I guessed.

This residential rings around the centre of this old village had swelled over the last hundred years, like galls on an oak tree. I enjoyed ambling around the different residential areas and wondering at the sheer number of families and lives and stories there. This sense of 'sonder' is compelling, that 'realisation that each random passerby is living a life as vivid and complex as your own—populated with their own ambitions, friends, routines, worries and inherited craziness—an epic story that continues invisibly around you like an anthill sprawling deep underground, with elaborate passageways to thousands of other lives that you'll never know existed'.

Many of the streets here were named after birds, flowers and trees, a reminder that not so long ago all this used to be countryside. Today I watched a man mowing his lawn five weeks before Christmas, shaving as much nature as possible from his personal square of greenery. Incongruous

amongst all the new homes was a tiny old lodge house, a single-storey sandstone building with two windows, a door between them, and a triangular roof. Once upon a time it stood at the gates of the long driveway to a Tudor country house, the grounds of which were now the focus of arguments over 400 proposed new homes. As I prepared to take a photo, a white van braked hard on the road.

‘Don’t take fucking photos!’ shouted the driver.

‘Why not?’ I asked.

‘Because it’s my house,’ he lied, cackled, and roared off with a wheel spin.

I shrugged and took my photo.

At the heart of one of the developments was a parade of shops, ideally positioned to serve the local community. On offer, as well as a basic convenience store and a Post Office, were three takeaways, a beauty studio and a hairdresser. It is hard to think of another country that has such an appalling approach to community and food with its consequent knock-on impacts on public health. We have become a sessile, overweight, under-active nation, dependent on ultra-processed food, and woefully detached from the land on which it is grown and the implications of our choices. Prevention is better than cure in medicine, which the government seems to agree^{lvi} with in theory, even though evidence of it taking much effective action is hard to find. The environmental, health, and financial costs of our appalling food system must eventually become politically intolerable, but at what cost and with how much delay? The broad costs of ill-health resulting from obesity is set to soar to almost £50 billion per year by 2050.^{lvii} Over half the food we buy in this country is highly processed,^{lviii} for it is generally much cheaper per calorie than healthier foods,^{lix} an important factor for communities struggling with a cost of living crisis. It is much harder to eat healthily when you are poor,^{lx} and rows of convenience stores and takeaways certainly do not help.

Much of this grid square was covered with orchards belonging to a century-old fruit research station. They were fenced in securely out of concerns for biosecurity. Growing an apple tree isn’t as simple as just spitting out a pip; you often end up with a crabapple tree if you plant an apple seed. There’s a lot to be said for the domestication of apples. Even though that curmudgeonly tough guy Thoreau claimed to prefer wild apples (‘of spirited flavour’), even he had to admit that sometimes they were ‘sour enough to set a squirrel’s teeth on edge and make a jay scream.’^{lxi} The apples we enjoy are all cloned by grafting, and this research station produces rootstocks that are now used in 90% of Europe’s orchards.

I sat outside the orchard and ate a banana, looking up at a silver maple tree festooned with large clumps of mistletoe.^{lxii} It’s not surprising to see an abundance of mistletoe around orchards, for cultivated apple is its favourite host. Mistletoe is not as harmful as many people assume^{lxiii} – large trees don’t need much management to survive happily with mistletoe –but apple trees do need protecting from it.

As the research orchards were off limits there was not much else to investigate. I was happy to see my first fieldfares of the season, and I added ‘Large Fries’ to my growing menu of McDonalds’ litter strewn over my map. I spotted the first fish of my map too, a lively school of dace sheltering under a bridge in a stream. Small brown trout nosed into the current, hovering with a gentle flickering of their tails, camouflaged with golden flanks and dark spots. The brown trout is a fierce predator of

smaller fish and insects. It made me happy, after the day's convenience stores filled with packaged food and neatly-ordered orchards, to know that even here I was in the company of fierce predators. Nature is all around us. We are in nature. We are nature.

December

FOOD FOR THOUGHT

'When you change the way you look at things, the things you look at change.'

– Albert Einstein

It is hard to grasp what Britain actually looks like, to understand the proportions of all the different things our land is made up of. I hoped spending time bumbling around my map would help me understand it better. The official breakdown is that 28% of Britain is pasture, 26% arable, 9% peat bog, 8% forest, 5% homes and gardens, and a very precise 0.04% is fruit trees and berry plantations.

On a global scale, the numbers are quite different. 71% of the planet's surface is ocean, of course, not particularly habitable unless you happen to be in a rowing boat with a supply of dehydrated food, and I can't recommend that as a barrel of laughs. That leaves 29% of the planet as dry land, of which almost a third is glaciers and barren land such as deserts, salt flats, rocks and beaches. The remaining area is all that we have on earth to live on and share with wildlife.

Let's break down this habitable land. Only 1% of it is built-up and infrastructure, which filled me with optimism to learn. I have often felt despondent that the world is disappearing beneath a crust of concrete. But we all need to live somewhere, and on a global scale, eight billion of us take up a reassuringly small amount of space. The global population is set to reach its peak at around 10.4 billion, before declining slightly to a new equilibrium^{lxiv} and so population size alone is not the longterm catastrophe some fear it to be. Urban living is also, potentially, the most environmentally-friendly way for most of us to live as it requires fewer resources and less power and space per person.^{lxv} Another 1% of space is taken up by freshwater, 14% is shrub and 38% is forest.

I was stunned to learn that the remaining 46% of the planet's habitable land, however, is used for agriculture. My optimism about humans not taking up much space was crushed! Food production takes up a staggeringly vast proportion of the planet – almost half of all habitable land – and exacts a devastating toll. What we eat and how we produce it is therefore central to tackling climate change, addressing water and pollution crises, rewilding landscapes, and halting the runaway destruction of nature.

We all eat food, so everyone is involved in this issue in ways that are more understandable, interesting, and at the forefront of daily life than, say, whether our pension funds divest from fossil fuel stocks, or where the electricity that powers our employers' offices comes from. And yet food is an emotive topic. If there is anything in these pages likely to goad you to hurl the book across the

room, shout at me on Twitter,^{lxvi} or add to my growing collection of not very glowing book reviews, then it is probably this look at what's for dinner.

This is a discussion about food and farming, but not about farmers. I live next door to a farm, have farmers in my family, and when I think of 'home' my mind turns to the farming village where I grew up. It is important not to turn conversations about the harm of modern farming into a rant against farmers. None of it is their fault, but they are central to fixing all the problems. We need to support our local farmers, and to pay them proper prices for producing proper food, as well as for looking after the countryside. Nor am I criticising nature-friendly farms using methods that champion sustainability and biodiversity.

I suspect the majority of farmers care more about nature than the average citizen. They work hard, in a difficult job, to provide consumers with the food we choose to buy, at prices we insist on, and within the parameters laid down by the governments we vote for. Farmers obviously know more about farming than I ever will. When I wander around my map, I have very little idea of what's actually going on in the farmland I see, and I have to trust them to repair the countryside once we start appropriately incentivising them and making it financially viable.

Over recent decades, most farmers probably haven't often considered the ecological impact of their work. I don't suppose many of us do. They have been too busy modernising and becoming more efficient simply to stay afloat, often at the mercy of government policy and supermarket contracts. The green revolution increased yields massively^{lxvii} and the world now produces enough calories to feed ten billion people.^{lxviii}

Supermarkets demand cheap food from farmers and us consumers gobble it up with little interest or understanding of how unsustainable it all is. Since the Second World War, British families have gone from spending 35% of household income on food to just 10% today (though the lowest income families pay more^{lxix}), whilst the number of calories^{lxx} we consume worldwide has increased significantly.^{lxxi} All this cheap food is the Pyrrhic victory of industrial farming, a Frankenstein monster. Industrial farming has fed so many people, but also spun off into terrible problems. It is cruel,^{lxxii} revolting^{lxxiii} and disastrous for our health, nature and the planet.

There are many issues caused by our farming and food systems. To keep vaguely within the scope of this book, I'm not going to cover the revolting ingredients in processed food (the xanthan gum in your cheap ice cream comes from the slime that bacteria produce to allow them to cling to surfaces^{lxxiv} etc.), the health crisis of excessive cheap calories (over half of British adults are overweight,^{lxxv} which can lead to type 2 diabetes, colon cancer, and cardiac, respiratory and liver diseases etc.), or the cruelty involved in much of animal farming (China's 26-storey pig skyscrapers slaughtering a million pigs a year^{lxxvi}, the poultry farm in Britain with 1.7 million birds^{lxxvii} crammed inside, the egg industry gassing or crushing un-needed male chicks^{lxxviii} etc.). I'm going to stick to three ways that farming affects the planet: emissions, pollution, and land use.

Agriculture and the food system accounts for around a quarter of all greenhouse gas emissions^{lxxix} responsible for global warming. If the world has any chance of meeting its alleged commitment to the totemic 1.5-degree target of the Paris climate agreement,^{lxxx} then this needs to change urgently. Meat and dairy products tend to emit more greenhouse gases than plant-based food, with beef, lamb, cheese and milk being the worst offenders – by far^{lxxxi} – per unit of protein^{lxxxii} produced.^{lxxxiii}

The greenhouse gas emissions from British beef is about half the global average^{lxxxiv}, but the methane emissions of the world's 15 largest meat and dairy companies^{lxxxv} are higher than that of entire

countries like Canada or Australia, and equate to more than 80% of the EU's entire methane footprint. The food we choose to eat has a colossal impact on the planet. And whilst there are many benefits to eating local food,^{lxxxvi} *what* we eat dictates our environmental food footprint^{lxxxvii} much more than where it comes from. We should worry much more about eating beef that is connected with deforestation in the Amazon than the emissions of transporting that food to the UK.

Today, 60% of the mammals on earth, by weight, are livestock. Humans account for 36%, and wild mammals make up just 4%. The number of chickens has trebled since 1990, to over 34 billion,^{lxxxviii} at the same time that half of wild bird species are in decline.^{lxxxix} Our human population is growing at 1% a year, whilst livestock is increasing at 2.4%. Global average meat consumption per person is 43 kg a year, and swiftly rising towards the UK's level of 82 kg.^{xc}

Agriculture is also responsible for soil degradation, pesticide leaching and the pollution of 60% of Britain's failing rivers.^{xc} Animal effluent and fertiliser run-off causes eutrophication^{xcii} and algal blooms. Take one of Britain's loveliest rivers, the Wye, as a tiny example.^{xciii} Two-thirds of the river is mired in ecological crisis, caused by run-off from 44 million chickens crammed into 1420 sheds along the river. Our disconnection with the natural world means that we either don't notice, understand or care about this when we tuck into our roast chickens.

I began this chapter by highlighting that almost half the planet's habitable land is used to feed us.^{xciv} That's equivalent to all of the Americas plus China and South East Asia combined!^{xcv} We would need to farm almost double that amount of land if the whole world adopted a British diet though,^{xcvi} and the planet is literally not big enough to provide everyone with an American, French or Scandinavian diet.^{xcvii} Of all this land, 80% of it is used for beef and dairy production, much of it via the inefficient process of growing food to feed to cattle which then feed us. I find that statistic staggering.

Cattle, and the crops grown to feed them, are the biggest contributor^{xcviii} to global deforestation and habitat loss. The expansion of pasture land to raise cattle is responsible for 41% of tropical deforestation^{xcix} and 87% of global soy output (often linked to deforestation) is used as animal feed.^c

As an interesting thought experiment, were everyone to hypothetically become vegan,^{ci} we could reduce farmland by up to 75%^{cii} and still generate enough calories to feed the world. That equates to saving an area of land the size of the USA, China, Australia and Europe combined!^{ciii} That is an astounding amount of space that could be put towards carbon-absorbing wildernesses and the restoration of nature.

Indulge me with one more pretend scenario. Imagine the whole world was already vegan, and then someone said, 'let's start eating meat and dairy! It's really tasty, although unfortunately it will mean stripping the planet of wildlife, raising the amount of greenhouse gases, and polluting a load of rivers.' What would we do? The status quo bias^{civ} causes us to stick with the way things are rather than considering alternatives.

These are both hypothetical, of course, and there's certainly plenty of small print for people to argue over,^{cv} but the sheer scale of land currently devoted to meat and dairy, on top of all the greenhouse gases and pollution, must be food for thought the next time we contemplate a cheeseburger on the menu.

So how do we fix all this? We need to change what we eat, change how we farm, and change the way we support farmers.

The reason I started mulling over our food systems is because I began today's explorations nosing around a farm shop whose meat was rated as 'Pasture for Life'. The Pasture-Fed Livestock Association promotes a system where animals eat only grass and forage crops. It produces meat that is generally healthier, tastier and less harmful to the planet than animals fed grain (though the pros and cons of pasture-fed meat are still hotly debated).

Pasture for Life trumps the more common Grass Fed label because the latter means only that the animals eat *some* grass, but could spend most of their life eating cereals, or soy grown on deforested rainforest land. The grassland on Pasture for Life farms is important for capturing and storing carbon, is better for pollution, and can be very biodiverse.

If we are serious about sticking to our country's pledges to get to net zero by 2050^{cv} and protect 30% of the UK's land by 2030,^{cvii} then we need to consume significantly less meat and dairy. They need to become occasional and expensive treats, bought only from regenerative farms and those that are improving ecosystems and biodiversity. This will be much harder to do for the poorer in society.^{cviii} For the farm shop's ribeye steak cost £35 per kilogram. It looked red, marbled and delicious. Compare this price though to the £14.62 per kilogram at Lidl or £18.73 at Tesco and you see the impossibility of farming sustainable meat without pricing out most people most of the time. Even Waitrose's was £10 per kilogram cheaper.

As long as meat and dairy products are produced in cheap but unsustainable ways which damage the environment, without appropriate sin taxes for the harm caused, there is little hope for the essential reframing of the way we think about food. These hidden costs, known as negative externalities, need to be factored into the prices we pay to cover the cost of repairing their damage and to accelerate consumer behaviour change. Changing our diets will lower emissions, reduce pollution and deforestation, and repurpose land for sequestering carbon. But appealing to people's goodwill alone will not achieve enough, quickly enough.

Yes, this might mean that most of us can't afford to eat meat and dairy as often as we enjoy doing now. So be it. That was how things were for thousands of years when nature was doing fine, and we weren't in the middle of a mass extinction, public health epidemic and a warming world that will kill millions, impact billions and cost trillions. After all, Indians eat only 3 kg of meat per capita per year,^{cix} and it would be a brave gammon-loving Brit who claimed that our food was more delicious than theirs!

The second thing we must do is change the way we farm. This will not be easy, and it is down to the government to modify its subsidy schemes to make the shift viable. James Rebanks writes eloquently and passionately about both his farming life and love of nature in *English Pastoral*. His grandfather taught him to work the land the old way, but he has witnessed how much has gone wrong since then. He warns that 'the current economics of farming are such that almost no genuinely sustainable farming is profitable at present. Farming for nature is economic suicide.' Farmers like him want to be commercially viable, whilst also caring for the natural land they love. We have to work towards food being a 'byproduct of conservation',^{cx} rather than an apocalyptic obliterator of it.

He points the finger at us as being part of the problem, with our demand for cheap food and being 'strangers to the fields that feed us'. My weekly walks are my attempt to change that disconnection in myself. Of course, my observations only scratch the surface and there is no single answer. But that does not mean we are doomed. For there are many, many different answers and we can each be one of them, if we act.

Farms need to produce food in sustainable ways. This will involve a wide mixture of methods, ranging from intensive greenhouses to nature-led upland farms. The large majority of British farmland is connected with rearing livestock,^{cxix} yet growing plants for humans to eat produces vastly more calories per hectare.^{cxii} The key is to use each varied area of land in the best specific way possible. That means apples here and wheat there. It means rewilding here and organic there. And it definitely means that considerable amounts of land can be devoted to nature, all whilst producing more food in our country and protecting food security.^{cxiii} Imagining so much potential for rewilding makes me very excited.

The good news for the vegan haters is that livestock still plays a small but important role in this. As the regenerative farming slogan goes, 'it's not the cow, it's the how.'^{cxiv} For where farmland is not suitable for growing plants for people to eat, livestock can help with regenerative agriculture, agroforestry^{cxv} that combines trees with crops and livestock, rotational farming and fertilising, and can also help increase biodiversity.

Regenerative agriculture is vital for our future. It swaps ploughing for direct drilling, and uses cover crops, crop rotation, and mob grazing to care for the soil. The wildflower meadows^{cxvi} we love but have almost completely lost, for example, depend upon low density, occasional mob grazing from livestock. A good example of farmer-led regeneration that improves both business and nature is the Pontbren Project,^{cxvii} led by a group of neighbouring farmers in mid-Wales. It is an innovative approach to using woodland management and tree planting to improve the efficiency of upland livestock farming.

Thirdly, and vitally, we need to support farmers and pay them to safeguard our natural capital and provide public goods that include not only food, but other things we value highly such as nature, beauty, heritage and connection. Farmers are the custodians of most of our countryside, responsible for far more land than our National Parks or nature reserves. If we are to fix our nature-depleted land, farmers are the ones who will do it.

Farms have been subsidised for decades according to the amount of land they farmed, regardless of damage done, and the world still subsidises harmful agriculture and fossil fuel industries to the tune of £1.3 trillion^{cxviii} (*trillion!*) each year. It makes much more sense to subsidise farms to fix nature rather than wreck it. Subsidising positive work and keeping costs down is the other side of the treasury's coin to taxing harmful practices and foods. This is vital if healthy, sustainable food is to be affordable for everyone.

Policy decisions therefore need to act through a combination of laws, subsidies and taxes. Ban the pollution of rivers. Subsidise hedgerow restoration. Tax unsustainable foods. It is not easy to grow food, reduce emissions, plant trees, clean up rivers and rewild land to mop up carbon, so farmers really do need meaningful backing. Though the government has increased its commitment to subsidies for environmental work and sustainable food production^{cxix}, farmers point out that the numbers involved often don't add up^{cxx} and can at times be little more than greenwashing. There is now a new system of environmental land management schemes (ELMS) to help sustainable farming, landscape recovery and countryside stewardship. If they get them right, they could be excellent. Many are sceptical, but the funding of farmers to rescue nature is hopefully heading in the right direction^{cxxi}.

It is amazing to think that when we sit down for dinner this evening, we are making personal choices related to the public health crises caused by poor modern diets, directly impacting the earth, rivers, forests, nature and climate, and also sending a message to supermarkets and policy makers about

what matters most to us in terms of food, farming and the planet. Enjoy your meal!

Many traditional farming techniques, like Pasture for Life, were used worldwide for millennia before science revolutionised fertiliser and farming turned into industry. For aeons, yields had been limited by the amount of nitrogen available to crops in the soil. Farmers could boost this a little by planting nitrogen-fixing plants such as clover or soybeans. But other than that, their only hope to radically improve productivity would have been to stand in a thunder storm with a long metal pole and hope to get their field zapped by lightning. And so there had always been a cap on productivity yields and meat was therefore an expensive treat because it was much less efficient to produce than crops.

Enter Fritz Haber, a genius who discovered how to extract nitrogen from the air,^{cxxii} convert it into fertiliser, and feed the world.^{cxxiii} He was a hero and a Nobel Prize winner.^{cxxiv} He staved off hunger and boosted productivity. But the nature-led farming of history gave way to lashings of fertiliser, pesticide run-off, greenhouse gas emissions and continent-sized land clearances. Many problems span off from the green revolution and now we need to look differently at how we produce our food. Haber's friend Albert Einstein once said, 'we cannot solve our problems with the same thinking we used when we created them.' And he also said, 'look deep into nature, and then you will understand everything better.'

Somewhat overwhelmed by all the issues connected with buying such, I bought a local apple and left the farm shop. My biggest hope when I saw today's grid square on the map had been the opportunity for a bracing winter dip in a lake formed from an old flooded quarry. I headed there from the farm shop but was disappointed to find the lake barricaded by fencing and barbed wire. Signs every few yards warned of Lake Safety, Danger Deep Water, No Swimming, and No Unauthorised Fishing.^{cxxv}

I turned away, disappointed. Later research revealed that I *could* actually have swum in the lake, in a neighbouring grid square, so long as I followed lots of rules, signed some paperwork, paid £30 for an induction course and then another £7.50 for my dip. That's not my kind of swimming, although I certainly acknowledge that the venue is a fantastic regeneration project and a sign of the growing appetite for people to swim, SUP and canoe. This map was making me consider the many different sides involved in land access arguments.

I was searching for nature, but kept being forced onto roads or sandwiched on narrow footpaths squeezed between high fences. I wanted to get into an area of woodland where old pits had naturally scrubbed over since the local quarry closed. But it too was fenced-off and I had to make do peering through the fence at a spot where someone had lobbed an old TV and a raw chicken into the bushes. I turned my curiosity to the human world instead. Amongst the KFC cartons and Monster cans on the pavements was a discarded prescription box of tadalafil, a medicine used to treat erection problems. It cautioned, 'Check with your doctor before taking tadalafil if you have a curved penis.'

Sellotaped to lamp posts were adverts for a circus, a cat that had now been missing for 18 months, a music event from last summer featuring a 'barn dance in a barn', a tattoo artist in the city and the local branch of Slimming World ('your slimming success starts here'). And I smiled at an angry note propped against a discarded dog poo bag ('WHO LEFT THIS HERE IS AN IDIOT. THE BIN IS 50 YDS AWAY.')

I was close to conceding defeat on this grid square where over two-thirds of the open space was sealed off. I turned towards a patch of overgrown thicket, bashing my way through birch saplings

and nettles until I forced my way out of the chaos into a field of barley. A margin of fallow land had been left around the edge, for even a metre-wide strip really helps wildlife. As if to prove this, I came upon a fox deep in thought. I stood stock still and it was several seconds before the fox noticed me. Then it too froze, eyeballing me from 20 yards, as we dared each other to make the first move. My furry friend cracked first and dashed away into the safety of the undergrowth.

Birds like grey partridges, whitethroats, yellowhammers and corn buntings nest in these wild margins, as well as of harvest mice and voles that benefit kestrels and barn owls too. These small hunting grounds away from roadsides also decrease the number of barn owls killed by cars.

I followed a sunken track up into the woods. I heard a squirrel chatter, a buzzard mewing and – as always in these shires – the thrum of a motorway. This morning I had made the foolish mistake of checking my emails before coming out. I sat down to drink my flask of coffee beneath a majestic beech tree, so huge it had shaded out any nearby rivals, after having a quick play on the rope swing hanging from a high bough. But thinking about my emails overshadowed my appreciation of the crisp, peaceful morning. A message from my accountant had warned of a steady downturn in my fortunes. I was still earning enough, so my brain was not really worrying about cash, but rather my dwindling motivation to hustle, to chase, to ‘succeed’.

I’ve been doing the same sort of thing for so long now (I hesitate to call it ‘work’). Go on adventures, write about them, earn some money. But what would happen if I changed tack? What if I do something else entirely? Should I keep going or change course? I had no idea. Which was probably why I was sitting on my own in a wood with no whomph to do anything except concentrate on enjoying this morning and this place. My priorities had been evolving for a while, suggesting it was time to change direction. But I was not yet sure which way to go, nor brave enough to find out. There was a hollow inside me that my expeditions used to fill, and I wasn’t sure yet what would take their place.

I seemed to be languishing through this season of my life, wintering like this beech tree I was leaning against. Maybe it might teach me something if I sat long enough and listened? I thought of the unusual Old English word ‘dustsceawung’, a ‘consideration of the dust’, or contemplation of what has been lost and the transience of things. It reminded me not to fret too much about my email worries, and instead to savour this hot coffee, this cold morning, and this enormous tree reaching out above me and around me.

MUDLARKING

‘Without willing it, I had gone from being ignorant of being ignorant to being aware of being aware.’
– Maya Angelou

One motivation for committing to explore a square each week, come rain or shine, was to make being out in nature part of my routine. I hoped becoming intimately connected with where I live,

with its weather and seasons, would keep me attuned to the seedlings pushing through pavements, the migrating birds passing overhead, the provenance of the food I eat, and reveal some fun new running routes too. Taking just a few minutes every month to climb a tree, which I'd done for the past three years,^{cxxvi} had certainly made me happier. The transformation around my tree surprised me every month when I returned to it. So too did my year of full moon forays^{cxxvii}, getting outdoors for a run, ride, walk or swim on every full moon of the year, and a year of enjoying coffee outside at least once a month.^{cxxviii} Hospital gardens help people heal, doctors now prescribe exercise in nature, and the 'Natural Health Service' addresses a range of conditions. So committing to 52 decent outdoor missions sounded like a sensible undertaking.

It was a flat, grey day beneath a flat, grey December sky. The river was flat and grey, barely rippling as the tide nudged ever lower. My mood, however, was neither flat nor grey: I was looking forward to this one.

A few off-limit jetties jutted out into the current, jetties for pipelines and industry. A conveyor belt rumbled along one, filling a barge with gravel, but all else was quiet. My legs were stiff from last night's late run. Every year I seem to turn to running once the evenings draw in. My legs felt heavy and my hamstrings hurt. But it was worth it for the fun of watching huge clouds of my breath billow in the torchlight and the thrill of a large white owl swooping across the road in front of me.

This was, perhaps, a grid square that only a map nerd like me could love. More than half of it was bright blue on my map, but that was an incongruous representation of the muddy, intimidating industrial estuary spreading out before me. I certainly didn't dare swim out to explore it. Behind me, the remainder of the square was fenced off by a shooting range, an electricity terminal filled with fizzing cables, a cement factory, a slime-covered canal (featuring a sofa tipped into the water whose lurid colour perfectly matched the algae), and a police firearms training centre complete with replica streets, shops, houses, a pub, stadium and life-size sections of planes and trains.^{cxxix}

And so, in terms of my exploration, the square was effectively reduced to little more than the footpath along the embankment's flood defences, plus whatever muddy beach was revealed as the tide fell. I had studied the tide timetable and arrived a couple of hours before low tide, past a yard filled with ship's anchors, ten foot tall and tonnes galore. I was here to go 'mudlarking' amongst the slimy green rocks, brown seaweed and thick grey mud of the foreshore.

A mudlark is someone who scavenges in river mud at low tide, looking for valuable items. It was a way of life in London during the 18th and 19th Centuries, when mudlarks searched the shore for anything of value. They earned little, but enjoyed an unusual amount of independence for the period and they got to keep whatever they found or earned. I had recently devoured the fabulous book *Mudlarking: Lost and Found on the River Thames*^{cxxx} (and the author's enticing Instagram posts), and was fascinated by the prospect of treasure, Roman roofing, Tudor shoes and messages in bottles. Lara Maiklem explores the ancient, murky, tidal foreshore of Thames, whose ebbs and flows constantly churn objects to the surface which have been hidden and preserved in the mud for centuries.^{cxxxi}

I donned wellies and waterproof trousers, climbed up and over the graffiti-covered embankment wall, and dropped onto the foreshore. Its lowest reaches were a lethal gloop of deep, sloppy mud, stinking, grey and cloying. I settled for making my way along the line where rock and mud meet, picking my way gingerly over mounds of slippery bladder wrack, a brown seaweed covered with air bladders that help it float upright and absorb nutrients when submerged. The seaweed exposed at low tides forms dense beds, which theoretically provides shelter for many creatures. But I'm afraid I saw

not a single living thing. A few gulls bobbed on the river, and some feral ponies grazed on the embankment behind me. But the water was pretty grim.

Only a few pearly white oyster shells amongst the mud gave any suggestion of life. Over the last 200 years, habitat loss, pollution and overfishing slashed the oyster population by 95%, though they are thankfully now on the increase again. Across the country, things are definitely improving from the low-point of 1957 when the Thames was declared biologically dead and the river was no more than a foul-smelling drain. It is a travesty, however, that even today not a single river in the UK is free from pollution.

I had fully intended to find Roman treasure within minutes of beginning my mudlarking. Instead I found a rusty chair frame and plastic galore, including a label saying 'BAG IT AND BIN IT, DON'T FLUSH IT'. I found a 1980s milk bottle with 'PLEASE RETURN BOTTLE' embossed on the glass. All interesting enough, but where was that jewel-encrusted sword when you needed it?

Truth be told, my patience began to wane within about 20 minutes, as I had known it would. This was actually one of the reasons I had decided to try mudlarking in the first place, to remind myself to slow down, to savour the process of searching carefully, and not to be so hung up on productivity or getting things done. So I persevered, picking my way amongst rusty bits of metal, crisp packets and drinking straws. We threw away 4.7 billion plastic straws, 316 million plastic stirrers and 1.8 billion plastic-stemmed cotton buds each year until they were banned recently: examples of the immediate impact that quick, simple law changes can have.^{cxxxii}

The foreshore Lara mudlarks on in London has seen an astonishing history of ships over the ages, dating right back to the Romans searching for a site to establish their new settlement, Londinium. All that river traffic was a good source of the artefacts she uncovers. I love watching ships setting sail, filled with the romanticism of imagining all the places they may be bound for.^{cxxxiii}

My maritime musings have become more accurate since I downloaded the Marine Radar app which gives you information about any ships you see. The Maltese cargo ship *Celestine* slid past me down the estuary with a cargo of cars. Heading in the other direction, a Dutch Trailing Suction Hopper Dredger slurped up the same gloop I was searching through. They work like giant vacuum cleaners, sucking up sand, mud and gravel from the channel to store onboard and be discharged later. I wondered what treasures had been unknowingly sucked and dumped through its pipes.

I bent down again and kept searching. Now I found a metal fork, a white comb and the compulsory shopping trolley. How did these things end up in the river? A discarded condom, unopened, told its tale of a disappointed date lobbing it off a bridge on their unplanned lonely trudge through cold rain to the night bus home and an empty bed. A golf putter, green with slime, had me imagining a Pitch and Putt rage, a day out soured with a tantrum and the golf club arcing through the summer sky into the water. All these banal discoveries were grist to the mill as I learned to be an enthusiastic amateur. Annie Dillard^{cxxxiv} once said she was 'no scientist. I explore the neighbourhood. An infant who has just learned to hold his head up has a frank and forthright way of gazing about him in bewilderment. He hasn't the faintest clue where he is, and he aims to learn.' I felt the same way.

What else did I find? A pair of red pebbles caught my eye. A smooth, worn fragment of green bottle.^{cxxxv} Two symmetrical shards of tile. A fragment of white porcelain decorated with blue and white lines, dots, and circles. That was about it. But still, I was 99% certain that Christopher Columbus dined off that very plate way back in the 12th Century, enjoying a final meal as his ship set sail from England on his way to discover Australia. One can always dream...

Even though I found no verifiable bullion or antiques, I had really enjoyed trying to imagine stories for all the humdrum objects I found. I was like the young Calvin in the comic strip, digging up the garden with Hobbes, his pet tiger. Hobbes asks Calvin what he has found.

‘A few dirty rocks, a weird root, and some disgusting grubs,’ answers Calvin from deep in his hole.

‘On your first try??’ asks Hobbes in delight.

‘There’s treasure everywhere.’ exclaims Calvin.^{cxvvi}

LITTER

‘This month taxes a walker’s resources more than any... You can hardly screw up your courage to take a walk when all is thus tightly locked or frozen up and so little is to be seen in field or wood.’
– Henry David Thoreau

December is a quiet month. I looked out over a rolling landscape of empty fields broken into squares by long, straight hedges. The only sounds were distant cars. When did it become normal to hear more traffic than wildlife? Everything felt flat and drab. But I was glad to be beginning this project at the tail end of the year so that I could experience everything perking up in the brighter days to come.

With practice, a map becomes as clear as a picture, and as full of imagined detail. This week’s grid square looked to be as hilly as almost any on my map, a rare treat in this flat, sanitised region. I love land with contour lines, curvy and sensuous, filled with possibility. A lone farm at the top corner was the only building. One small road shaved the left hand side. A hilltop ran along the eastern edge of the square with 600 metres of bridleway which was the only legally-permitted access on the square. The rest was empty and I was looking forward to that.

Even so, I found it hard to escape the tyranny of my mobile phone’s frivolous temptations as I began walking.

‘I’ll just quickly check,’ I thought. ‘My emails... my social feeds... the news...’

I had to force myself to put it away, reminding myself that I was here to pay attention to the world, not to ignore it. That included the ugly things too, acknowledging their widespread presence, and trying to find something interesting in them. First up was a heap of fly-tipping, a plastic McCafe Iced coffee cup (the latest addition to my McDonalds’ Menu of Litter) and a Coca-Cola bottle (the world’s biggest plastic polluter most years).^{cxvii}

People had lobbed litter from their cars in every passing place on the narrow road. As well as all the bottles and sweet wrappers, someone had tossed away a banana peel. That’s far less of a problem than plastic, certainly (consider, after all, that every toothbrush you have ever used still exists), but fruit can still take a couple of years to decompose. Discarded banana skins are strewn across

Britain's mountains and the John Muir Trust recently removed 1000 from the summit of Ben Nevis during a clean up. This matters because in the arguments surrounding increased public access to the countryside, litter has taken on a totemic significance.

Of course you shouldn't allow the filthy public to roam at will: think of all the litter they'll drop!

Of course you should allow the public to roam: only a few people drop litter, and that is because they are disconnected from the landscape. Educate them to care and everybody wins!

And round it goes.

Litter and disconnection were already recurring issues as I explored my map, looping round and round in their own grubby version of a circular economy. Would tackling one stop the other? Are they keystone indicators of major problems in the way we treat the landscape, or are they red herrings that perhaps distract from more important aspects of the debate?

It is interesting (or interesting to me, at least) to consider the history of littering. After the First World War, American industry really began to thrive. But this required needed consumers to buy more and more stuff in order to keep up with the pace of production and ensure profits stayed high. Since there is only a finite amount of junk we need, manufacturers began finding ways to make us throw things away and buy more: advertising, new trends, built-in obsolescence and encouraging a disposable culture.^{cxxxviii}

And so began our pandemic of littering and single-use plastic, which leads on to the terrible problems of plastic breaking down into contaminating, polluting microplastics that end up in the oceans (and everywhere else).^{cxxxix}

People litter for many reasons, including the social influence of how other people have previously treated the area, a lack of education, that it is easier to litter than not to do so, and a lack of enforcement. Littering increases^{cxl} when people don't feel a personal responsibility for a location or feel alienated, whilst it decreases with a sense of community. Littering encourages more littering and makes landscapes less appealing and these negative perceptions then make people care less about that landscape.

There are broader issues too. We see the crisp bags but are blind to the overgrazed fields stripped of wildlife. And putting your crisp bag in a bin rather than lobbing it into a forest means only that it will be carted off to a landfill site or incinerator, often in a distant poor country. Its toxic impact to the planet is no less than the crisp bag in the forest.

So is the culprit the unthinking / uncaring / uninformed individuals lobbing coffee cups out of their windows, or is it our throw away, buy more society hooked on consumption and single-use plastic? Could the idea that littering is someone else's problem be linked to our apathy about the climate and environment in general?^{cxli}

How can we build pride within communities so that people do not want to live on litter-strewn maps, and how can the problem be dealt with from the top down as well the bottom up? Those who believe allowing access to the countryside will result in a pestilence of litter are quick to harrumph and shame the kids dropping drinks bottles, yet few are showing them alternative ways to forge a powerful, emotional connection with nature and where they live.

The other side, who argue that access for all will be fine once litterers are educated, also don't have magic bullet solutions to reach the masses. And does littering really matter in the grand scheme of things, or is it another example of 'micro consumerist bollocks' that divert us from more pressing issues?^{cxlii}

What is certain is that the issues of litter and thoughtless behaviour continually exhaust and infuriate landowners. There are countless examples of public-spirited souls opening up their land, only to end up with burned-out cars, piles of litter, torn-off branches and trampled bluebells. Increase the number of permissive access routes to create circular walks for people, and they end up with off-roaders roaring around and cutting through sheep fences, turning peaceful and biodiverse woods into

noisy, muddy trackways, with sheep being killed and saplings snapped.

A farmhand in his tractor cab didn't notice me walk past while he flailed a hedgerow to within an inch of its life. He was the only person I saw all afternoon. I waited for his tractor to turn away from me and then pushed through a thin strip of woodland into a field. I emerged at the top of a valley with what felt like a relatively huge expanse of open space before me. This was the closest I had come to 'proper' hills on my map and I felt a happiness and a peace well up inside me. I have a yearning for space and solitude that I tend to underestimate until moments like this remind me what I've been missing.

A few crows flew across my eye line. Although we don't say a 'few' crows, of course, for we have the eccentric convention of animal collective nouns to enjoy. Thus it was a 'murder' of crows that flew across my eye line. Most of these collective nouns date back to the 15th Century^{cxliii}. They include a wake of buzzards, a commotion of coots, an asylum of cuckoos, a curfew of curlews, a crown of kingfishers and a conspiracy of ravens.

But how was I to know whether I was watching a murder rather than a conspiracy? How do you tell the difference between rooks and crows? The secret is to remember the old saying, 'a crow in a crowd is a rook and a rook on its own is a crow'. The lonely 'caw' of a crow is synonymous in my mind with cold winter days. Rooks, by contrast, are sociable and noisy birds that nest in colonies and feed and flock together. In winter these groups can number hundreds, even thousands of birds. A mouthwatering sight, I imagine, back in the day when rook pie was a popular rural food.

It was a weighty winter's day, grey, damp and two-dimensional. But from up on this viewpoint the foggy haze felt cozy and private. Although I had never been here before, the landscape felt familiar and reassuring. Green fields are a classic British pastoral snapshot. I grew up amongst hills and fields such as these. In the years I spent away from Britain, my nostalgic memories were often of the traditional rolling hills of home. But much of this lush, fertilised landscape is un-natural: much is planted with grass seed mixtures specifically designed to maximise nutrition for cows and reduce additional feed costs. but at a cost in biodiversity.

After I read *Feral*, with its bold claims that 'the sheep has caused more extensive environmental damage in this country than all the building that has ever taken place' I began to look at our countryside through a different lens, seeing a 'sheep-scraped misery' on those hills I loved and a sad emptiness to our bald green hills.^{cxliv} The ecologist Frank Fraser Darling labelled our uplands as 'wet deserts', such was the lack of wildlife on the overstocked, over-grazed, damaged land. But I am so accustomed to neat countryside that when I visited the Knepp estate (the pin-up trophy of the British rewilding movement), I was initially disappointed by how scruffy it looked.^{cxlv} We have deeply engrained ideas about the countryside and farming, dating all the way back to the picture books we enjoyed as children with happy farmers and their happy animals. But the truth is that many modern farms are factories not fairy tales.

Although these fields were grazing pasture, I couldn't see any cows. They had been moved into winter sheds to avoid damaging the ground and would now be fed a high protein diet to boost their milk production up towards anything as high as 8000 litres per year. As farms got bigger it became easier to start taking the grass to the cows rather than the other way around. When I walked past the farm later I had to wade through deep slurry that oozed under the vast cowshed doors. Keeping animals indoors, as opposed to grazing outside all year, is time consuming and has high fossil fuel costs in terms of making silage, feeding the animals, and removing slurry, which is also a pollution hazard.

I did eventually see some cows towards the end of my walk through endless fields of rye grass. About 20 ran towards me on the footpath to say hello. I'm fond of cows and like having a chat with them, but I erred towards caution as they galloped my way. I hurdled a fence with a yellow sign

‘Warning Bull in Field’ and said hello to the cows from the other side of the fence, preferring to take my chance with the lone, disinterested bull, rather than the flighty females. They chewed the cud lugubriously and peered at me with big brown eyes.

Apart from that minor excitement, the rest of the walk was pleasant but uneventful. I hiked down a hill, up the other side, down another hill, and then back up. I wasn’t used to such exertion! I loved it though, my muscles warming with the effort and my eyes greedily taking in the ever-changing views.

I stopped for lunch at the highest point of the square, sheltering under a scrubby hawthorn tree to keep off some of the drizzle. Millions of water droplets, tiny shining globes, gleamed on the field’s blades of grass. I pulled the thermos flask from my rucksack and poured a mug of steaming, bright red homemade beetroot soup. It was hot and colourful and the perfect antidote to the day’s monochrome weather.^{cxlvi}

On average, there are over 400 people squashed into every square kilometre on my map. And here was I, on the quietest of hilltops, with almost a whole grid square to myself, slurping soup. I felt very lucky to have got off the busy and beaten track today. And all these hills and fields disappearing into the mist around me were sufficiently beguiling to help me resist the habit of reaching for my phone to ‘just quickly check...’.

CREEKS

‘When we try to pick out anything by itself, we find it hitched to everything else in the Universe.’

– John Muir

I live far from the cascades of contour lines, miles of moorland or rushing rivers that I love. Could I scratch my adventurous itch on this tame map, sadly bereft of mountains, oceans or dragons? I sometimes doubted it, and wished I was exploring Siberia rather than suburbia. I could argue that out of all the country’s maps, mine is down in the relegation zone of rubbish adventure potential. But it also made this project a fairer and more universal one than if I lived, say, on Map 402 in the Scottish Highlands or Map 24 in the Peak District.

There are lots of other places where I would have preferred to try this experiment. But I suspect this is true for many of us, that a perceived overfamiliarity with where we live leads to either contempt or, at least, ‘unseeing’. We tend to suffer from this place blindness when we spend a lot of time in familiar environments without paying close attention. What might happen instead, I asked myself, if I worked on the ‘slow and difficult trick of living, and finding it where you are’?^{cxlvii} To cherish the changing seasons as I did when I was cycling across continents, and to relish the rough and ready backstreets and everyday life as I always do in foreign lands. Perhaps it might even help me manifest a sense of belonging that I had been missing for a long time.

Litter was strewn across today's grid square like wrapping paper on Christmas morning. I didn't want to be disheartened on every outing, but nor did I want to *not* see these problems, or accept them as normal and just shrug my shoulders. Fortunately, I glimpsed my winning lottery ticket in a skip: an old masterpiece painting tossed out with the trash.

Lying on top of the loaded skip was a four foot painting of a waterfall, forest and mountains in a shiny gold-painted frame. When a leaky roof caused a homeowner in Toulouse to repair his attic in 2014, he discovered a lost painting by Caravaggio, valued as being worth up to £100,000,000. Granted, the painting chucked in the skip was not an easy picture to love, and the frame was particularly tacky. But I resolved to take my discovery home with me at the end of today's stroll, and then retire to Monte Carlo.

The estate of modern rectangular homes and flats stood on the site of one of England's first paper mills. Apart from the name of Paper Mill Lane and an artificially straightened river, there was no trace of the bustling riverside wharf with its waterwheels and industry that thrived here for 450 years until closing recently with the loss of over a hundred jobs, and many more stories. In its place today were residential cul de sacs and an enormous supermarket transit depot.

I learned about the mills from a retired fireman / Royal Marine / school truant who saw me photographing the skip, said hello, and then poured forth a stream of proud facts about his neighbourhood, like a territorial robin singing on the garden fence.

That the river here used to be 60 feet wide and full of boats.

That Elizabethan bricks were really small.

That the historical site was dug out overnight by developers and filled with foundation cement to pre-empt archaeologists protesting the proposed residential development.

That the street down there (he gestured to a row of smart old semis) had been for the mill managers.

That the street had been lined with trees ringed by wrought-iron fences which were removed in the war to be turned into munitions at nearby factories.

That he and his mates used to run across the road over there for dares (now a busy dual carriageway) until one of his mates misjudged it a bit and got killed.

That another of his classmates robbed an abattoir and was shot dead by the police.

And that he then joined the Marines to escape all this.

'I arrived with my hair down to here; they gave me a Number 1 all over.'

That he climbed ropes, ran assault courses, and came home to his Mum on leave with muscles galore and a new sense of hope for his life.

'It sorted me out, the Marines did. There's nothing for the kids to do here anymore. No youth clubs, no sports fields, even the churches are locked six days a week. Anyway, good luck to you, son. There's so much history for you to find round here. Merry Christmas, too.'

This week marked the midwinter solstice when the earth's axis is tilted the furthest away from the

sun. The sun is at its lowest point in the sky, and we have the shortest days and longest nights. Many of our modern Christmas celebrations have their origins in the oldest of midwinter celebrations and activities like slaughtering animals, sowing crops and monitoring winter food reserves.^{cxlviii} It remains a time to hunger down and huddle round fires with our families.

I caught a whiff of apple *shisha* from an open window. The smell of the sweet smoke whisked me away from Christmas back to Beirut, to warm evenings strolling under palm trees along the seaside Corniche. A long way from the cold, empty bowling club I was peering at over a high fence. The neat green lawn held its own appeal though and I looked forward to being old enough to justify taking up the game!^{cxlix}

Opposite a shop advertising ‘The Ultimate In Mens Outsize Clothing’ I cut down a ginnel through some industrial units, past a sewage works, and out onto the flat fields by the dual carriageway and the distribution warehouses. It was a damaged and abandoned land. Artificial but empty. There was nothing here, no nature, but no man-made purpose either. Soggy short grass stretched thinly towards the riverbank, patterned by the skids and swerves of dirt bike tyres. Crushed cider cans. A McDonalds Sweet Curry Dip (whose ingredients began ‘Water, Glucose-Fructose Syrup, Apricot Puree Concentrate, Sugar, Spirit Vinegar, Modified Maize Starch’). Artificial but empty.

I followed a large metal pipe from the water treatment works to its discharge point in the creek. Nothing felt very Christmassy today. A fence was wrapped not in tinsel but in blue and white POLICE LINE DO NOT CROSS tape that flapped in the cold wind. Graffiti on a concrete barrier urged ‘Fuck Boris Big Up NHS’. Another cautioned ‘You aware Covid Bill Gates hoax +5G’. Even allowing for the tenuous segues and questionable meanderings of these chapters, I couldn’t bring myself to dive down the online rabbit hole of that zany conspiracy theory.

The river flowed slowly beneath the dual carriageway, and I followed it out onto the marshland on the other side of the road. It felt as though I had crossed a boundary, passing from the scraggy wasteland on the edge of town out into a wilder, forgotten world. The river was about ten metres wide and stretched straight across the flat marsh beneath strings of pylons and a clear blue sky.

At high tide, the river was sedate, blue and calm. By the end of my walk the tide was falling fast, the water was murky and churning, and the banks sheer, slippery hazardous mud. This scrap of freshwater marsh, surrounded by industry, was a complex mixture of wet grassland, ditches and scrub that was a haven for breeding and overwintering birds. Marsh harriers, bearded tits and warblers abound in the summer. There were rare wetland plants here and an important population of the threatened water vole. There were flocks of wading birds today, redshanks, lapwings, dunlins and oystercatchers. Greylag geese and shelducks grazed on the grass whilst teals, wigeons and cormorants dried their wings in the sunshine.

Clouds of terns rose as one from a large pond formed from a flooded industrial excavation. They swirled in the wind as I walked past and then settled again once they had sussed me out and deemed me safe. I have grown to love birds in recent years, but for some reason I still haven’t got very interested in ducks, geese or gulls, even after relishing Adam Nicolson’s book *The Seabird’s Cry* about these ‘wind-runners, wind-dancers, the wind-spirits, alive with an evolved ability to live with the wind, in it and on it, drawing out its energy to make their own feathered, mobile, ocean-ranging magnificence’. I’m not sure why. I suspect my unfair scorn for ‘seagulls’ comes, like pigeons, from associations of flocks swirling around to steal my chips with scornful indifference, and so seeming more like parasitic pests than free-living, freewheeling wildlife.

That prejudice continued here when I turned left and followed a different creek up to the council's 'waste reception centre and transfer station'. The tip, in plain English. I watched through a security fence as men in big diggers shunted heaps of stinking bin bags around and herring gulls squabbled over nappies and pizza boxes. One gull was trapped in the narrow space between two wire fences, unable to take off vertically enough to be able to escape. I watched it flap in distress but could not reach it to help.

A heron took flight from the bays of rotting rubbish, also preferring the tip's easy pickings to the effort of organic hunting in the creek. The tempting distraction of cheap calories. I watched the bird bend its spindly knees, flap those 6-foot grey wings, and launch itself skywards to circle away over the marsh. Seeing that huge, prehistoric-looking bird scarfing junk food in the tip dismayed me. It seemed undignified somehow.

A sturdy wooden sailing barge with tall wooden masts was moored a little further up the creek. I googled her name and learned she was almost 150 years old. I wondered how she had ended up moored here next to the roar and stink of diggers and landfill. [These sailing barges](#) were common sights on the river for 500 years, being the largest vessel that could be handled by just two men. Their shallow draught made them ideal for nosing up narrow tributaries and creeks to the mills and small factories that abounded. ^{cl}

I scampered across the dual carriageway back into residential streets whose windows shone with Christmas trees and fairy lights encouraging the return of the sun. A sign taped to a fence offered a reward for a 'missing grey parrot (microchipped)'. A billboard advertised a church [ministry](#) where 'young and seasoned professionals are groomed to become urban missionaries in their careers and businesses. They display unique dimensions of divine excellency in the very heart of the marketplace'. A small handwritten sign directed 'funeral flowers this way'. And a naked plastic doll sat with outstretched arms on the roof of a garden shed. It stared down at me as I completed my circuit of the grid square, lifted the abandoned painting out of the skip and headed home for a mince pie or two, the daylight already leaking from the cold midwinter sky.

January

GARDENS

'Each new year is a surprise to us. We find that we had virtually forgotten the note of each bird, and when we hear it again it is remembered like a dream, reminding us of a previous state of existence. How happens it that the associations it awakens are always pleasing, never saddening; reminiscences of our sanest hours? The voice of nature is always encouraging.'

– Henry David Thoreau

The darkest hour may be just before the dawn, but the darkest mornings come long after midwinter, when the jollity of Christmas has long faded. The latest sunrise comes almost three weeks after the

December solstice. I find this time harder to get through every year. It might be a new calendar year but, as I cycled out today, it felt like one of the bleakest weeks of the year, with barely eight hours of daylight. The mountains may have been calling, but they felt further away than ever.

The January sun, when it eventually showed up, skulked low and reluctant across the sky. There had been a roaring in the wind all night, the rain came heavily and fell in floods. And in the morning I made my way masochistically to what looked to be one of the most nature-depleted grid squares on my map. There was scant need for the cartographer's green ink here; the whole square was a grid of boxes representing buildings. Colour came only from two busy roads, marked yellow. There were just four scraps of footpath on the grid square, barely a couple of hundred metres in total, all cracked tarmac, broken glass and dog mess. I was feeling in more need than usual of nature's gladness, but what could I find of it here?

My crowded map lies on the outskirts of a large city and there are many different demands on its space, including farming, transport, industry, quarrying, housing and recreation. Great Britain is one of the most nature-depleted places on the planet.^{cli} Everywhere you look, you see a massive human impact on the landscape, ranging from landfill sites to relaid hedges.

The tragedy of the commons^{clii} suggests that humans cannot manage a common resource. Why do we care so little for the earth? Is it because there is too much to take in that we assume it is limitless? Why do we care so little for nature and its tragic decline? Is it because we have stopped noticing it? But can it be done? It is not that we have a short time to live, but that we waste a lot of it. It is not that the world is too small, but that we miss so much of it.

As I rode up and down today's terraced streets, I passed a stout tree sawn off at thigh height. A dog pressed up against a window barked incessantly, desperate for fresh air and bigger horizons. I empathised and sympathised. Many houses had concreted their gardens, prioritising ease of maintenance and parking spaces. Others had replaced front lawns with artificial grass which looks tidy and is easy for busy people to deal with. It has become a huge industry, worth a whopping £2 billion per year. But the green plastic is unfortunately not very green, for it blocks access to the soil for insects, starves creatures living in the soil, and provides no benefits for nature. This is concerning in view of the dramatic decline in insect species.

More than 40% of insect species are declining and a third are endangered. In the UK, we are already missing the targets we set ourselves^{cliii} for protecting natural places. It is a reflection of our disconnection with nature that though we like to look out on a lawn and enjoy the idea of green expanses, we don't mind too much whether it is natural or plastic. But children can't make daisy chains on plastic lawns.

Fortunately, as my ecological grief^{cliv} grew about the mayhem we are often inadvertently wreaking on the world, my eye was drawn by an evergreen hedge, bursting with yellow and orange berries: firethorn. The owner saw me photographing it.

'The birds love it too,' he said from his driveway. 'It's fantastic. I planted it to stop the kids sitting along my wall, like birds on a wire. Shouting, dropping sweet wrappers, all that carry on. Birds don't do that. It's been great has that hedge.'

His firethorn hedge opened my eyes to other gardens as I pedalled up and down. A fair number of people had made concerted efforts to remove all trace of the natural world from their properties then hung baskets of fake plastic flowers that looked pretty but didn't help nature. But many gardens did

have grass, plants and bushes in them. Now that I was paying attention, it was apparent what a significant area all those gardens added up to.

Together, the UK's gardens are larger than all our National Nature Reserves combined. These tiny oases are vital havens for wildlife amidst the concrete urban jungle and the sterility of our farmland. We each have an opportunity to make our gardens as wild as possible and help provide corridors for wildlife to move along. That is why Wild East,^{clv} a regional nature recovery alliance, have put together a 'Map of Dreams'^{clvi} showing everyone in the area who has pledged to rewild their garden, church, school, farm or business and make more space for nature.

Nudged to notice, I kept searching for nature throughout my ride. I found noisy starlings, black headed gulls and a fox's path pushing beneath a fence. There were clusters of the weed called annual mercury, also known as girl's mercury or boy's mercury because, according to Pliny (our regular correspondent), pregnant women could use it to help select the sex of their child. Ants and bullfinches enjoy the seeds, and in Germany some people boil the leaves to eat, for its acrid taste apparently dissipates as it cooks. But in France the plant is known as *mercuriale ou la foirille*, and '*la foire*' means diarrhoea. A German's delicacy, perhaps, is a Frenchman's laxative. The choice is yours.

As the t-shirt says, you can't buy happiness but you can buy a bike, and that's pretty close. It was a pity then that I didn't see any kids riding bikes around town and the only adult cyclists were the fast-food cycle couriers with enormous 'Just Eat' or 'Deliveroo' bags on their backs. One of the town's numerous boarded-up shops was a failed bike shop, just down the road from the closed-down public toilet that was literally disappearing beneath a shaggy mane of ivy that cascaded down from the roof. Urban rewilding makes me happy (unless I need the loo).^{clvii}

Pleasing also was an ornate granite drinking fountain and water trough, built in 1903 in memory of someone's husband 'for the benefit of horses and dogs'. These days it is marooned on an island in the middle of a busy roundabout, surrounded by a world unimaginably faster and noisier than the one it was built to serve.

As I pedalled around, I mused that one of the contributing problems to the issues I'd encountered today was cars. If you could magically get rid of them, there'd be a lot more space for nature as well as for children to ride bikes. Most houses had two cars parked outside and every road was lined with cars.^{clviii} Removing cars might sound radical and unsympathetic to people's needs. But our car dependency is a fairly new phenomenon and our assumption that it is unavoidable is another shifting baseline.

When that water fountain was built, these streets were not jammed with cars and the gardens were more likely to be covered with vegetables than plastic grass. So I found myself feeling oddly hopeful as I considered whether it might just be a brief blip of a few decades where every adult 'needs' a car. Could it fade away into a new era of fewer, self-driving, electric cars with more of us making our local journeys by bike, foot and electric public transport?

Typically, households with two vehicles use each car for less than 5% of the time. Unmanned electric cars could one day^{clix} drop you off at work, take your family somewhere else, and then pick you up again in the evening. Share that vehicle with your neighbours and both the cost of commuting and the number of cars drop radically. We could then increase green space and community facilities.

Hungry now, I looked for somewhere to buy a snack. Someone had left an old toaster^{clx} on their garden wall, offering it to anyone who wanted to take it. But I had neither bread nor plug, so I rode on to a parade of shops. The car park was congested and the bike racks were empty, despite the shops specifically targeting local residents. Food has such a direct impact on two subjects I care deeply about: the environment and our physical fitness and activity, so I was interested to see what was available.

The array of shops available on the four separate parades in today's busy residential grid square was depressingly, predictably unhealthy, with hardly any fresh food available compared to all the takeaway food and booze. Locals therefore need to drive or wait for a bus to visit a big supermarket, both of which are hard for low incomes short on time and more likely to not have a car. The area has become a fresh food desert.^{clxi}

It's a sad twist of craziness that our society is being harmed simultaneously by too many cars, too much consumption, too many calories, *and* by the rising poverty levels that mirror these food deserts where more than a million people live. The result is obesity, poor health and food insecurity meaning that 15% of British families can't always acquire an adequate quality or sufficient quantity of food in socially acceptable ways, with more people than ever before being forced to turn to food banks^{clxii}.

This was all a lot to take in on one small grid square. I had begun the day with my mood matching the winter gloom, and at times felt sad about our lack of nature, crowded car culture and the costs of our terrible food system. But I had also realised that even in the depths of winter, there were plants everywhere, ready to let rip if we just leave them be. Insects and birds would soon follow along behind.

It was not an affluent area and the gardens were small. But nonetheless nature was still there, willing to take any chance it was given. My favourite gardens had been those that crammed in a tree or a few bushes, leaving enough space for a couple of chairs and a summer barbecue once the weather warms up. Gardens like that can be brimming with life, require little maintenance, cost less than tarmac and be good for the soul.

STILLNESS

'Look, and look again.

This world is not just a little thrill for the eyes...

You have a life – just imagine that.

You have this day, and maybe another, and maybe

still another.’

– Mary Oliver

Busy days and rain falling. Chasing my tail and going nowhere. Horizons closing in. And so when I got an opportunity to escape, I bolted for the woods that the random number generator ordered me towards. I hustled around grabbing my camera, rain gear and thermos flask. I sloshed a can of tomato soup into a pan, added a can of chickpeas, a handful of frozen peas and sweetcorn, and a glug of chilli sauce. By the time I was swaddled in waterproofs my improvised lunch was hot, I was out the door and onto my bike with a smile returning to my face.

I ducked out of the rain into a beech wood. The trunks were slick and black and the dark mesh of silhouetted branches was stark and tangled against the grey sky. Dead leaves had blown into heaps around the old parish boundary marker stone. But for the first time this year there were also signs of rebirth. Soft green moss^{clxiii} squelched as I walked over it, and the first green primrose shoots were peeking out of the ground. The name derives from the Latin ‘*prima rosa*’ meaning the first rose of the year, although it’s not actually in the rose family. The world was beginning to wake from its hibernation.

I’d been out planting trees^{clxiv} over the weekend and my shoulders still nursed a satisfying ache from the work. Walking through woods on a sunlit summer morning is a pleasant experience, a simple hedonic happiness. But grafting away in winter to plant dozens of trees that one day will become a wood worth walking through generates what is called a eudaemonic happiness as it is also filled with meaning and purpose. Combining the two has the maximum impact on your levels of nature connectedness as well as a positive impact on society.

When I entered the woods I had passed numerous threatening signs hammered to trees, shotgun-pocked and rusty: ‘NO TRESPASSING’, ‘DANGER SHOOTING’, ‘KEEP OUT’. I was still in the early stages of this project, and already the amount of land that I was forbidden from exploring was beginning to rile me.

Compared to most people, I suspect I have a relaxed approach to land access laws. I grew up in a village in the Yorkshire Dales and spent my childhood roaming the fields and woods and rivers with my brother and our two best friends, who were farmers’ sons. We didn’t leave litter or start fires. We didn’t knock down walls or harass livestock. Of course we didn’t. But we did explore absolutely everywhere. And nobody minded.

I am looking at the Ordnance Survey map of that village now and it seems strange to see it all laid out formally, with just a few dotted green lines of public footpaths allocating the limits of where my childhood should have been technically allowed to roam. I would know that landscape so much less and care for it less (and have missed out on so much fun) had we heeded those restrictions.

From Yorkshire’s green hills, I moved on to university in the emptier landscapes of Scotland. There were official footpaths there too, and I was thankful for them on the difficult, ankle-twisting terrains of Rannoch Moor or the steep valleys leading to the mountains around Torridon. The difference is that those paths helped me access places I wanted to explore, rather than restraining me from all the places I was not allowed to go. For Scotland has much wider access rights than England, so long as you exercise them responsibly and don’t do daft stuff like walking through crops or gardens.

Whilst Scotland enjoys a successfully implemented Outdoor Access Code that gives people a right to roam responsibly, the majority of England and Wales' countryside is out of bounds for most of its population. 92% of the countryside and 97% of rivers are off limits^{clxv} to the public.^{clxvi} Across most of the country, you are a trespasser risking expulsion if you amble through a wood, paddle in a river, or otherwise explore the landscape.

It strikes me as ridiculous that once upon a time somebody said, 'This wood is now mine. This river and this hillside too. I am claiming it. It is mine. You are not allowed to come here any more.'

There is both an injustice and an absurdity to being so excluded from almost all our wild places. We have an excellent network of footpaths, but they are mere threads across the beautiful canvas of our country. A public right of way is literally just that: a right to make one's way from A to B, but with technically no right to do anything else along the way, and heaven forbid that should included lying down and sleeping. As I write this, a millionaire hedge fund manager is challenging the wild camping provisions in the 1985 Dartmoor Commons Act for his 4000-acre estate on Dartmoor,^{clxvii} A region that had been the last vestige of land in all of England and Wales where wild camping was officially tolerated.

Scotland filled me with a love for the countryside and an understanding of my responsibilities to tread lightly. This sent me off onto adventures in wild, open places where you can pretty much do what you like, so long as you're able to take care of yourself and move safely through the landscape. I cherished travelling in the expansive freedom of Greenland, Siberia, Yukon, Alaska, Oman, even the frozen surface of the Arctic Ocean. These are places where you feel part of a landscape, at best, but certainly never a master of it.

It is perhaps not a surprise then that I have found living in the crowded southeast of England claustrophobic. I find it jarring to live in a culture that does not connect with the land in ways I have always taken for granted. It has played a large part in me making few friends or nurturing much sense of belonging. Nobody I know here would consider running across miles of open ground for the fun of it, camp on a hill or make coffee in a wood. Barely anyone, except dog walkers, even uses the footpaths, let alone laments how limited their access is.

And yet, despite the dearth of tree-huggers or cross-country-runners, I have never seen so many intimidating KEEP OUT signs festooned across a landscape, nor so many piles of rubbish dumped on byways and in the woods. If people do not feel responsibility towards the land, then I'm not surprised a few are more inclined to drop litter and leave gates open.

As I try to survey my map more thoroughly than just running and cycling the official paths, I have been surprised how much the issue of access impacts on the experience. How can I learn to love this landscape if I am not allowed on it? How will I be motivated to care for the natural world if I don't feel I'm part of it? I had always taken roaming across the land to be an inherently normal thing, like breathing, until I began to get to know this map.

I had not caused anyone inconvenience or distress today, nor caused any harm. And yet I was trespassing, and I didn't like how that made me feel. I didn't believe I was doing anything wrong or going somewhere I ought not to be, and yet I have been conditioned to feel that trespassing is naughty and that I should feel guilt rather than pleasure at being here.

I didn't want confrontation and I certainly didn't want to damage the landscape. But I did want to wander in these empty woods, and I objected to the majority of our countryside being inherited and fenced off through the generations, rolling back to the time when the rich and powerful first fenced enclosed the commons and declared, 'right, all this is now mine. Get off my land.' Nobody 'owned' forests or hills or lakes until the day they were first claimed by someone richer or more powerful than their neighbour.

Signs threatening that 'trespassers will be prosecuted' are mostly meaningless. Trespassing is

generally a civil rather than a criminal matter, so long as you don't damage any property. I decided over the course of this year to do my best not to be flustered by aggressive signs, to explore with consideration and care, but also a degree of freedom. If anyone got angry with me I'd try to have a polite chat about it and then heed the perennial wisdom of *Three Men in a Boat*, written way back in 1899.

'The proper course to pursue is to offer your name and address, and leave the owner, if he really has anything to do with the matter, to summon you, and prove what damage you have done to his land by sitting down on a bit of it. But the majority of people are so intensely lazy and timid, that they prefer to encourage the imposition by giving in to it rather than put an end to it by the exertion of a little firmness.'

And so, regardless of whether or not I was in these woods illegally, I continued up the path. I knew that if anyone did challenge me^{clxviii} I would most likely be able to smile, chat and bumble my way out of any problems. I knew too that I might be treated differently if I was a person of colour or a woman. In that sense, the outdoors are still not equally accessible to all of us, whether commoner, land owner, or of different ethnic or socio-economic groups.^{clxix}

I had been voyaging around my map for ten weeks now, which meant I'd covered just ten of its 400 grid squares, a paltry 2.5%. The vastness of my little map was becoming ever more apparent to me, as each week I discovered new places in what I had considered to be a familiar landscape. I would wager I know my map's bridleways and footpaths better than most, and yet it was patently clear now how little I really knew and that I was now seeing the place almost as if for the very first time. It made me really appreciate the ancient network of footpaths that helped guide me around the area.

Almost every path on my map has been around for centuries^{clxx}. Some have been walked for an astonishing 7000 years, since they began as connections between Bronze Age encampments. Such ancient green ways tend to follow the contours of the land. Then came the Roman routes, striding efficiently across the province, moving troops and connecting infrastructure. After that were the Anglo-Saxons, settling down, working the land, and establishing many of our current towns and villages. It feels precious to walk in those long chains of footprints.^{clxxi}

Our pathways have a magnificent history yet, unless action is taken, 49,000 miles of lost footpaths in England and Wales could soon disappear, exacerbating our lack of access to the countryside. Reinstating these rights of way would boost our path network by a third. But the government has set a cutoff date of 2031,^{clxxii} after which any rights of way that haven't been reclaimed will be lost forever. The Ramblers Association^{clxxiii} urgently need online volunteers to help apply for these thousands of miles of paths to be restored, protecting them for generations to come.^{clxxiv}

I left the wood and pedalled past a pair of pale blue shepherds' huts to a compact 14th Century church and churchyard. Gravestones stir my imagination and I like meandering amongst them. I calculate people's ages, feel sad about those who died young, look for my birthday on the dates, pause at those who died around my age, and wonder about all those couples 'reunited at last'.

Today there was "Mick", Micheal [sic] Miller, Lost Not Forgotten' with a statue of a fat, smiling Budai in this Christian graveyard^{clxxv}. There were well-tended plots with little white railings, heaps of flowers or photos of Mum and Gran. There was Bill and his 'old sweetheart' Jean. Danny's gravestone celebrated that he 'enriched our lives with his courage, humour, goodness and love. A real nice guy.' A tragedy then that he died at the age of just 31. Another epitaph read, 'He that wins knows no quitting'. A freshly-filled grave was mounded high with earth and covered with red roses

and white lilies. A note lay on the flowers.

‘Thank you for 61 happy years together. Goodbye my love.’

Lying on wet leaves alongside one grave was a rain-soaked envelope addressed, ‘To My Darling Neil’, the writing smudged like teary mascara. I imagined the contents of the letter, perhaps things left too long unsaid, a broken heart, regrets, apologies, making peace, or consoling memories.

Yet even in a graveyard the stories do not live forever. These are places of immanence but not permanence. There were upright headstones, flat headstones, kerbed headstones and table tombs. They were polished, part-polished, honed or pitched. But, further down the rows, they were faded, moss-covered, and then fallen over, with each story slowly fading away and eventually forgotten. Older tombstones were ensnared by green fingers of ivy that climbed and entwined and reclaimed, as the wild world marched remorselessly over our fleeting presence.^{clxxvi}

I wondered why, if I love graveyards, do I hope my ashes are one day sprinkled into a swift stream or tossed into waves on a sunny morning and that’s the end of that and everyone goes home with a smile to get on with their lives. In the words of Brian Doyle, ‘these memories do not make me sad or nostalgic but rather thrilled and happy that I had those hours. No man ever savoured those hours in the game more than I did, no man in the history of the world; and rather than sigh at their loss, I sing at their gain’.

Birdsong in winter is easier to single out than at noisier times of the year. All I had heard today were the usual robins boisterously defending their patch, blackbirds’ indignant flurries and wood pigeons repeating over and over their plaintive cry of ‘my toe hurts, Betty’. A sudden flurry of bird calls in a hedge caught my attention. It was a raucous outburst of disagreement between half a dozen chunky pale mistle thrushes, according to the Merlin app, a genius way of identifying birds by sound. Sure enough, they bounded out of the hedge, across a soggy ploughed field, and then flew to perch right at the top of tall trees and continue their fluty song.

From looking at my map beforehand, I’d anticipated that today would be a free roam through woods and empty fields. But most of the square turned out to belong to a country house and was fenced off for horse livery and crosscountry eventing. Horses enjoyed more freedom on this map than I did. Public footpaths feel a cop out when they are tightly fenced on both sides, as though the letter of the law has been grudgingly heeded, but very much not the spirit. Rather than helping me to enjoy the countryside, these footpaths were just funnelling me to go somewhere, anywhere, but not here.

I sat on a log in a wood to drink my soup. I thought about how much I’d rushed to get out here today, how dissonant it was to be hurrying and clamouring to get into the stillness and calm of nature. In *The Runner*, Markus Torgeby wrote, ‘I must do something about my restlessness. One day I put on several layers of clothes, sit down on a tree stump and do nothing. I must get over this hurdle, I must learn how to do nothing.’ That time, he concluded, ‘was a good investment. Life became greater after that. Food tasted better and the song of the birds in the woods was even lovelier.’ I decided to give it a try myself.

Spending time alone in nature is a staple part of Outward Bound training for young people in the United States. The extended ‘wilderness solo’ experience, as it is known, derives from ancient traditions across indigenous cultures. Moses, Jesus and Buddha, as well as Gandhi, John Muir and

Thoreau, all went into the wild in search of understanding and transformation. It has been an element of many societies' initiation rituals and helps people clarify their strengths and purpose.

Today, aspects of these experiences have become part of wilderness therapy and outdoor education. Scientists have shown that silence plays an important role in our development, and a wilderness solo experiences can help counter the loneliness, stress and depression of modern lifestyles.

I spend a lot of time by myself, but almost none sitting still without distractions or something to do. I decided to start with just an hour. Attempting even that felt somewhat daunting as I switched my phone to Airplane mode and set an alarm to rescue me in sixty minutes (if I stuck it out that long, which I doubted). I sat down on a log and waited.

With pen and paper in hand I would be more than happy to sip coffee and sit on a stump all day. Give me a book to read and this would feel like a holiday. But with no way to record my thoughts, I instead became aware of the gentle maelstrom of nonsense inside my head. There was no escape.

One hour on a wet log included me racking up a dozen practical plans and a handful of emotional mood swings, whilst every minute involved noticing something new around me. I was bored. I fidgeted. Nothing happened. Minutes dragged. My brain was on overdrive, yet I also dozed off for brief moments. I pondered how odd it was that I love being in woodland, yet now that I was here, I really wanted it to be over.

Most animal species have around a billion heartbeats in an average lifespan. It is up to me whether I expend them feeling uptight about things largely beyond my control, or by savouring the everyday nature around me and doing what I can to change what I can. Every hour is a substantial chunk of time and too precious to waste. The fabulous summer shriek of swifts will one day go out of my hearing range. I will one day put down my child and never pick them up again. I must not waste my minutes.

To my surprise, when the alarm eventually sounded, my first emotion was of disappointment rather than relief. It had been a surprisingly cathartic experience. From feeling flustered and uptight about the shortness of time and how little I was achieving, it was reassuring to have watched an hour of time flow out before me like a river, and to have consciously chosen to be OK with that.

Settling in for a second hour would have been far easier than that first one. I felt relaxed and buoyed, and resolved to return to my sit spot and try this again soon. As the monk Thomas Merton reflected upon meditation and solitude, nothing can be said 'that has not already been said better by the wind in the pine trees.'

RAINDROPS

'I think that I cannot preserve my health and spirits, unless I spend four hours a day at least – and it is commonly more than that – sauntering through the woods and over the hills and fields, absolutely free from all worldly engagements.'

– Henry David Thoreau

My voice sounded small as I sang to myself beneath the enormous concrete bridge rumbling with overhead lorries. I hid my bike in a hedge and set out to explore the grid square on foot, keen to see what the world was going to offer to my imagination today. The solitude I experience in nature is very different to the loneliness that often keeps me company in daily life. It is one of the appeals of swapping WiFi for wellies and going for a wet schlep through a muddy, empty landscape.

My outings had reassured and recalibrated my fears about how much of the land was covered with concrete and shown that much still lent itself to vigorous, solitary hikes. Moulded by man – absolutely – but the countryside is definitely not irrevocably wrecked, even in this crowded corner of the world.

I had sheltered from the rain beneath the motorway bridge, hoping that it would ease. Old habits die hard. Back when I was cycling around the world, I spent a lot of time hiding under bridges from rain or heat. There were piles of nitrous oxide canisters, shiny and slippery like ball bearings. This gloomy underpass, miles from a town, had recently been someone's chosen spot for getting high. I unscrewed my thermos flask and poured a scalding cup of coffee down my throat. That's my drug of choice these days. Hot black coffee on cold grey mornings also brings back memories from the open road. Instinctively I began to sing,

*'One more cup of coffee for the road,
One more cup of coffee 'fore I go.'*

I gave up waiting for the weather, returned the flask to my bag, pulled up my hood, and got going. I followed the road for a short distance to access a footpath. Once I was away from the shelter of the bridge and the noisy road that neatly bisected today's square, there would be no buildings or roads, no walls or people. Just a muddy footpath crossing a dozen flat fields marked by hedges.

The hedgerows felt empty at this time of year, until a chirping cloud of long tailed tits livened things up, more tail than bird, undulating and noisy as they flew by, gossiping and jostling. The hedge was dotted with the bright red globes of rosehips^{clxxvii} and the motorway sounded like a rushing river. These tiny birds build fabulous nests from moss. They are dome shaped, camouflaged with cobwebs, and then lined with up to 1500 feathers to make a cosy home to return to on cold winter days.

Their nests may have been too camouflaged for me to spot, but I did find an old football in the hedge, deflated and tattered. More curious was that it was lying on top of an even older ball, almost buried now beneath ivy and twigs. Losing one was unfortunate, but losing two was surely careless. A wine bottle lay on a drain cover ^{clxxviii} beside a soft heap of rotting windfall apples, a muddy rendition of Cézanne's Basket of Apples still life. Then I noticed several more wine bottles dumped in the hedge. There was a lot going on in this hedge. Intriguingly, they were all bottles of Pinot. I tried to imagine the sort of litterer who stopped on a country lane to discard the evidence of a heavy night and a preference for a very specific choice of grape.^{clxxix}

What else was keeping me company out there in the rain and the mud once I left the well-stocked hedge behind to roam the fields? I saw a jay, a pair of magpies, plenty of pigeons (as always) and a couple of partridges that had so far evaded being shot. Dozens of sheep grazed on a lime-coloured field of grass amongst all the dark stubble fields. These were the sum of my companions for the morning, beyond of course the staggering wealth of life below my feet.

I had walked over soil almost every day of my life, but only rarely crouched down to rub some between my fingers and give it any thought. Soil is not only home to the worms of which the great naturalist Gilbert White noted,^{clxxx} ‘though in appearance a small and despicable link in the chain of nature, yet, if lost, would make a lamentable chasm’, it is utterly vital to much of life on earth.

Today’s empty space emboldened me to wander at will across the fields, for they had not yet been ploughed or sown with crops. In the fog and gloom the muted greens and greys felt like being immersed in a rural Rothko painting. At one point I even took a compass bearing with the app on my phone, perhaps the first I have ever taken within earshot of a motorway, and surely the only one I will need on this map. I certainly hadn’t needed to do anything so extreme back when I spent a whole week walking a lap of the M25 in the fields and tracks that ran alongside it. I followed my bearing due west towards a large sycamore tree until I intersected the footpath again.

The wind was strong and heavy rain lashed against my waterproofs. I chose to enjoy it because the alternatives were miserable. The Dutch word ‘uitwaaien’ literally means ‘out-blowing’ and refers to the urge I often experience of getting outdoors to clear your head with a walk in bracing wind. I used a hedge as a windbreak alongside a vast pile of horse manure, the third such steaming mountain I had seen today. Sloe berries on the hedges shook and trembled in the wind. Tractors must drive here daily to dump all the waste from a stable yard.

Dealing with manure is not a new headache. By the late 1800s, cities around the world were ‘drowning in horse manure’. London had 11,000 horse-drawn carriages, plus thousands of horse-drawn buses which each needed 12 horses a day. 50,000 horses were ferrying people around the city (never mind all the tradesmen’s horses and carts). Each animal produced up to 16 kg of manure per day, with a lot of mess, flies and disease following along behind.^{clxxxi} *The Times* predicted that ‘in 50 years, every street in London will be buried under nine feet of manure’. New York hosted the world’s first international urban planning conference in 1898. The manure problem was discussed, but no solutions were found. Was modern urban civilisation doomed?

And then along came Henry Ford and invented the motor car. By 1912, the impossible horse poo problem was nothing but a nostalgic memory. Hooray! Civilisation was saved. Today, the ‘great horse manure crisis of 1894’ is an analogy for supposedly insuperable extrapolated problems being rendered moot by the introduction of new technologies.

Typical humans: we do everything to extremes, whether that is fending off starvation through farming and ending up with more people dying from over-eating than hunger, harnessing the power of fire and eventually throwing the planet’s climate into chaos, or sheltering from rain so effectively that children now spend the majority of their playtime indoors in front of a screen, spend less time outside than prisoners, and can identify more Pokémon species than real ones. What, I wonder, and hope, will be our solutions to ‘the great crises of the 2020s’?

The crisis of excess manure was solved by the arrival of machines which now play a big part in today’s climate crisis. We live in a tangled web of unintended consequences and it sometimes feels hard to do anything that does not cause harm. I distracted myself from these gloomy thoughts with another cup of (climate-hurting) hot coffee from my thermos flask, and watched shining water droplets gather, grow, and then fall from a lichen-covered branch. The largest raindrops ever recorded were almost 1 cm across, observed in clouds above Brazil and the Marshall Islands. That is about the largest that raindrops can physically become. Raindrops are more than just water, for cloud vapour needs something to condense around. Tiny particles, called condensation nuclei, are at the centre of each tiny droplet forming in a cloud. Without these, there would be no rain.^{clxxxii} I seem to

have spent a lot of outings on this map being doused by such marvels of science.

The square's only footpath ran straight and true, a smear of white chalk through the brown mud. My map showed it heading tantalisingly towards an Anglo Saxon burial mound, but that lay in the neighbouring grid square. I would have to wait for another occasion to return. Yet knowing how way leads on to way, I doubted if I should ever come back, tempting though it often was to follow my nose onto the next square and on and on. But there are a lot of grid squares for me to explore before I began covering any adjacent ones.

Despite the wind and the rain and the noisy motorway, this grid square was surprisingly charming in a stark, monochrome kind of way. My boots were heavy with mud and my nose was numb. The wind whipped and moaned in telephone wires and my hands became claws. I was definitely earning those beautiful summer mornings to come, and yet I also enjoyed today, now that I was out there. It offered a sense of harsh, wild solitude that I had not anticipated finding, but certainly welcomed, empty but teeming with invisible life, and the cold, wet rain that reminded me to savour every sip of hot coffee.

ENCLOSURES

'There are no unsacred places; there are only sacred places and desecrated places.'

– Wendell Berry

Rain was still falling hard a week later as I cycled down Roman Villa Road (2000 years of history in one overgrown road sign), alongside a garden with two life-size sculptures of giraffes and past a modern red brick Catholic church, whose footing in England had begun long before this one was built.^{clxxxiii} The church wall had a statue of a bored-looking St George stabbing down at the dragon, with about as much enthusiasm as a convicted roadside litter picker.^{clxxxiv}

I turned right at the church into a maze of terraced streets. The name plate on one house, 'Cosy Nook', caught my eye, with a dozen trophies shining in an upstairs window. A child's bedroom, I guessed, proud of their efforts and achievement. Overshadowing many of the streets, quite literally, was an enormous railway embankment that towered above the houses. It led on to an impressive viaduct whose ten arches were visible from grid squares for miles around. I was starting to understand the lie of the land better now, getting a better idea of how all these different places fitted together.

Passing beneath the viaduct, I turned onto a footpath along the river. The stream was only small, but it was swollen and swift after all the rain. Although the day was cold and damp there was, I thought optimistically, a hint of spring in the air, and more birdsong than last week. My bike clogged with mud as I slipped and slid along the riverbank. A cloud of winter gnats danced around like will'o-the-wisps, making the most of their single week of life. Wrens, the most common bird in the UK, bustled

around the base of hedges and the first shoots of early daffodils pushed through the wet earth. We have several million wrens (although compare this to 145 million chickens), which sounds surprising because they lurk and skulk and so remain relatively unobtrusive. The Latin family name of *Troglodytidae* comes from the bird's fondness for foraging in dark crevices.

Wrens are not particularly noticeable until you learn their song. Once you do, they become unmissable. I got the hang of it once someone told me they end each riff with a rat-a-tat-tat of 'machine gun fire'.^{clxxxv}

A row of houses, built with the viaduct and railway station 160 years ago, had strangely long, narrow gardens, reaching out like tendrils to the riverbank with enough width for a patch of decking and a barbecue. The fields had been ploughed a deep, dark colour, sprinkled with white flint. In other fields, hop poles stood tall like washing lines. In the summer they will hang with spindly vines for producing beer.

I rode across a sodden recreation field, dotted with dog shit and empty except for a solitary wonky football goal in an island of mud, minus its net, and a lone swing missing its seat and chain and therefore its entire point. Recreation fared better elsewhere on the grid square, with a bowls club (the car park sign had been donated 'in memory of Alan') and a football ground whose sheltered viewing area had been brightened up with a wall of colourful graffiti. Someone had left a bag of fizzy drinks and Jammie Dodger^{clxxxvi} biscuits there. I was tempted to nick them, but instead had a play on the outdoor gym equipment installed by the pitch.

Returning to my bike, I found a feisty robin perching on my handlebars, singing lustily. Its red breast burnished the grey day, though to my eyes it was more orange than red. The explanation for that is that the word 'orange' didn't exist in English back in the 15th Century when it became popular to give creatures human names, hence 'robin redbreast'. When the first orange trees arrived in England, with their startling fruit, it was no longer enough to name that colour yellow-red.^{clxxxvii} A new colour was born. I waited patiently for the little bird to leave my bike, then schlepped onwards through the mud.

The busy, bubbling river had been the original catalyst for a community settling here long ago. Once upon a time, the stream powered small flour mills, generating sufficient footfall to also keep a forge in business. A paper mill was built in the 19th Century, whose brick chimney no longer billowed smoke, but still towered over the community. It must have looked so impressive when it was built. There was an astonishing energy in the country back then. Yet it also reminded me how quickly things come and go, in the grand scheme of things. Today, the mill buildings have been converted into a retirement community centred around a small supermarket, and mill apartments for commuting millennials, with a whiff of weed coming from a second floor flat.

Today's square promised lakes and a river, which I had been particularly looking forward to as my map has disappointingly few. But my attempts to get to the lakes were foiled by high hedges, private property signs and a spiked fence. I shook the railings futilely. Most of the problems in my life, small though they are, are connected to not spending enough time in wild places. And I am one of the lucky ones: I am writing a book about nature and I earn my living from playing around outside. So I am very aware how much nature has become disconnected from many people's lives.

There is the glaring disconnection that 90% of adults want their children to learn about wildlife, but half cannot identify a sparrow and only 1% of families can recognise our most common trees. Most of us feel nature is important, yet don't spend enough time in it, nor have special 'wow' moments in

our local areas. Being disconnected from nature impacts people's happiness in many ways. Today's lakes were flooded gravel quarries that had been converted into fishing lakes. They were fenced off as fiercely as a prison, but looked lovely and restful through the chainlink fencing. I saw a few men sitting on the shore, hunched beneath enormous green umbrellas and surrounded by all their paraphernalia to try to outwit the carp, perch, chub, tench, roach, bream, eels and dace. I met a fisherman by the exit as he was leaving. After pushing through his wheelbarrow of fishing equipment, he locked the tall gate carefully behind him. I asked him if the occasional loud bangs I heard were intended to scare herons away from the lake.

'Cormorants,' he answered. 'Horrible things. They've moved in from the sea and taken over. We had 80 of them on the lake once. They'll go for anything, even fish too big for them to eat. They need to be culled.'

All of which made my head spin a little. What is the best way to 'control' nature? Do we heed the bird lovers or the fish lovers? To cull or not to cull? To evolve or to preserve? Does prior presence give priority? The only thing I was sure of was that whenever humans get involved, nature gets messed around.

I moved on from cormorants to ask the fisherman about the fences. 'I wish I could walk round the lakes, but why are they all fenced off?'

'I don't like it either,' sympathised the fisherman. 'But we need them, sadly. Sometimes I love to just go for an evening walk round the lakes. I don't even bring a rod. Just enjoy it. They all used to be open like that, but it was chaos. Dog walkers and anglers don't really get on. Dog crap everywhere. Dogs running around, their noses in the bait boxes. Jumping in the water. Getting hooked in the mouth. Chaos! But it worked, just about. It was all still open until, oh, less than 20 years ago.'

'Then what happened?' I prompted.

'I'm not racist, but...'

My ears pricked up. Here we go, I thought. What on earth does fishing have to do with race?

'But it was poaching that did it. When all the Polish people came here about 20 years ago. Nice people, don't get me wrong. But they eat carp. They even eat it for Christmas dinner.'^{clxxxviii}

'You see them all down in the town,' he continued. 'Catching fish under the road bridge, slipping them into their bags. Our lakes were getting rinsed by poaching. So we had to put up all these fences.'

The rub of different cultures meeting and mixing and disagreeing and learning to live with each other is not simple.

'If you want the real problem though, you've got to blame the enclosures acts. That's when all this began. Hundreds of years ago.'

For centuries, English agriculture had operated on a system of common land. Some of that was privately owned, but people still had a right of access to it: our word 'commoner' originates from someone who benefited from the commons. Although there were specific rights, in general everyone was permitted to use common land and wasteland for crops, grazing, foraging, gleaning (gathering leftover grain after the harvest), and sometimes even fishing or hunting. It was a custom more than a

right, for the idea of ownership equating to exclusion came later. It was not an easy life, and rural poverty was severe, but it was relatively democratic, fair and sustainable.

Between 1604 and 1914, over 5000 acts covering open fields and common land were passed by Parliament. The laws allowed landowners to enclose their land and forbid commoners from freely using it. Previously, farming had been based on large, open fields where yeomen and tenant farmers cultivated strips of land alongside each other. The acts affected 20% of the area of England and were motivated by landowners looking to maximise rental income. Farm workers suffered from these higher rents and many were forced to leave their ancient common grounds and seek work in towns and cities. The enclosure acts^{clxxxix} led to an economic crisis for many and altered our country's relationship between the people and the land forever.

The other side of the argument was that landlords could now introduce farming innovations which led to the agricultural revolution^{cxc}, increased productivity and boosted profits. Consolidating holdings led to more economical farming systems. Property rights had originally been a Roman idea, resisted by both Greeks and Celts, who could not see how nature could be owned by humans. Centuries after the Romans left Britain, however, the balance of power, ownership, and access tilted severely away from the common man with the enclosure acts.

Today, half of England is owned by less than 1% of the population, which means that I now found myself peering over a fence at a little lake I'd like to have paddled in but which was somehow 'owned^{cxcj}' and therefore off-limits. Only 9% of England is built upon, which leaves huge swathes of countryside hidden away behind walls and wire. An 18th Century folk poem protested the enclosures that started it all:

*'They hang the man and flog the woman
Who steals the goose from off the common,
Yet let the greater villain loose
That steals the common from the goose.'*

Imbolc

February

COPPICING

'It is remarkable how little we attend to what is passing before us constantly, unless our genius directs our attention that way.'

– Henry David Thoreau

'Right, Humphreys. Stop procrastinating. You haven't even started yet.' I rebuked myself and stepped out into the rain to begin. As always, *solvitur ambulando*. I solve things by walking.

It is the gloom that does for me at this time of year. Seven of my past eight grid squares had been grey and wet, in a winter where the rain never ended and the sun never shone. I was sagging like a feeble houseplant, pale and etiolated due to lack of light. If I could hibernate until the sun returned, I would. I dearly wished to dig out my passport and head somewhere far away where nobody knew my name, and the sun shone hot on my back. California called. Emigration enticed. Marrakesh, maybe? I feel this way every winter, that I can't stand the gloom any more, and I feel it more as I get older. But every year, just when I am about to crack, I notice tiny changes heralding the approach of spring and the return of all good things.

So I was encouraged to notice a definite increase in birdsong this morning, a ratcheting up of woodland activity. Perhaps life was returning, perhaps my own life was too. For today was Imbolc, the Gaelic festival celebrating the onset of spring, halfway between the solstice and the equinox.

The word 'Imbolc' may come from the Old Irish '*i mbolc*', 'in the belly', referring to lambing season and pregnant sheep. It is a festival that has been celebrated in Ireland since Neolithic times, with some tombs aligned to Imbolc's sunrise and the usual excellent ancient celebrations revolving around fires and feasts.^{cxcii}

I walked through a motorway underpass that led into the grid square like a personal portal into today's explorations. The dark, echoing tunnel had been decorated with spray-painted murals, including a blue tit and a soaring albatross. An albatross aloft is a spectacular sight, for their 11-foot wingspan is the greatest of all birds and it allows wandering albatrosses to soar and glide over the stormy waters of the southern ocean. Confined to my small map, in this rainy, restricted season, I envied their freedom.

As well as the usual scrawl of graffiti tags and swearing, there was also an all caps exhortation to 'DO A BETTER JOB' sprayed on the wall beside a painting of someone carefully examining a beetle under a magnifying glass. I resolved to get my Curiosity Hat on and do just that.

An early landmark of the new year for me is the lovely little snowdrop flower, once called Candlemas bells, death's flower, Eve's tear, February fair-maids or Mary's tapers. Bunches of them were popping up amongst the green dog's mercury^{cxciii} leaves that covered the floor of the country park woodland. The 'drop' in the name refers not to snow but to its shape like an 'eardrop' or earring. I'm not sure whether my fondness for them quite qualifies me as an out and out 'galanthophile', but I do like snowdrops. They are relatively recent immigrants to our shores from southern Europe, arriving only four centuries ago and taking another two to establish themselves as wild plants. How long must an immigrant be here before they belong and we claim them as our own?^{cxciv}

I sat on a wet bench in my waterproofs and looked around. Most of the branches were bare, except for the crispy, rustling leaves of a few small beech trees that had held on to their leaves through winter, known as marcescence. A woodpecker rattled nearby as the rain rattled on my hood and I listened to a noisy great tit calling over and over, 'teacher, teacher!'^{cxcv} Red rosehips offered some colour, each berry hung with a shining raindrop like Vermeer's famous pearl earring painting. Colourful too were the yellow winter aconites and the flowers of a prickly gorse bush. Gorse used to be gathered from common land for fuel, fodder, making floor brushes and chimney brushes, and also to paint eggs yellow for Easter.

While I sat on the bench, I was passed by a steady trickle of dog-walkers wearing wellies and swinging long-armed ball launchers. The dogs, like their owners, were all shapes and sizes and boasted a quirky variety of names. I wondered when Britain became so obsessed with having

pets.^{excvi} For there are 24 million cats and dogs in the UK, with almost a quarter of households having a pet dog. The world's pets weigh almost as much as all the planet's wild animals. Pets are lovely, but they are another accidental nail in the nature coffin.

Farmers striving for higher level stewardship by creating fallow field margins that thrive with wildlife, are often disheartened by dog poo and trampled ground. For dog walking reduces bird numbers and biodiversity in an area by over 35%. Cats too kill over 200 million mammals, birds, reptiles and amphibians in the UK each year. Sir David Attenborough has argued that because they kill so much wildlife, they should have to wear bell collars. Our much-loved pets also eat huge amounts of meat, the production of which on a global scale takes up a land area twice the size of Britain. Just America's cats and dogs alone generate the same emissions as 13 million cars.

February is a drab month, but a few flowers do still choose to bloom, including hazel trees with their thousands of yellow catkins. The name derives from the Dutch word for kitten, since the catkins resemble fluffy tails. Some places call them lamb's tails, a more obvious connection to spring, perhaps. Catkins are unusual-looking dangling flowers (there are actually 240 flowers per catkin) which produce huge amounts of pollen. They rely on the breeze for dispersal and hope that at least one grain from the cloud of billions of microscopic pollen grains will reach a female hazel flower. That is plant fly-tipping on an epic scale! The difference, I suppose, is that it's not single-use plastic.

I had been selecting each week's grid square at random. But today I had cheated and chosen the square with deliberation, looking for an environment to cheer me up. I picked woodland, my current favourite landscape. Yet a blob of green on a map doesn't adequately represent the land it shows. That's why we need to go out and explore for ourselves, I suppose, rather than rest contentedly in the world of maps. Despite promising, ancient names on the map – Broad oak wood, Great wood, Birch wood – the wood I walked through today had been recently and viciously coppiced.

Coppicing involves felling trees and then allowing new thin trunks to regrow from the base. These grow back more quickly than replanting, as the trees already have established root systems and so are less vulnerable to grazing, shading or drought. Trees can be coppiced indefinitely and it is a technique that has been used for thousands of years as a regular source of timber and firewood: a Neolithic track across boggy ground in Somerset, known as the 'Sweet Track', was constructed from coppiced wood.

The technique works with most species, but the most commonly coppiced trees in the UK are hazel, sweet chestnut, ash and lime. Woodland is often managed as coppiced-with-standards, where scattered trees, typically oak, are allowed to grow uninterrupted as 'standards' before eventually being felled for timber (traditionally for building houses or ships), while the under-storey is coppiced every couple of decades.

Although it appears destructive, rotational coppicing promotes biodiversity and slows the spread of invasive species like rhododendrons and grey squirrels. Coppicing small areas at a time helps generate a patchwork of open spaces and scrub thickets, as well as broadleaf woodland. Long ago, it was large herbivores like red deer, boar and auroch that kept woodland clearings open. But because we killed them all off, coppicing has become a severe but necessary part of woodland life, as well as a useful forestry system. A coppiced wood goes through felling cycles, so a sizeable chunk of today's walk unfortunately felt like I was walking through an Amazonian clearcut.

Without coppicing, woodlands become uniform, with few clearings and little diversity beyond the big dominant trees. The full canopy starves resources from smaller plants, leaving the earth beneath the trees bare and reducing biodiversity. The enormous successful trees are all the same age and so

when they die at roughly the same time, you are left with a barren landscape that has to begin again. Many species would struggle to survive without coppicing.

When an area of woodland is coppiced, many new plants germinate and flower in the sudden abundance of sunlight. Their seeds have lain dormant in the soil since the canopy last closed overhead or drift in on the breeze. Insects and butterflies are then attracted to these open areas, and they are followed by birds and bats. A few years later, as the new coppiced shoots grow back, the area is likely to be taken over by fast-growing brambles, bracken and honeysuckle, generating tangled havens for muntjac deer, foxes, stoats, weasels and nesting birds.

Finally, once the coppices in the woodland grow back to about 20 feet tall, they once again begin to out-shade and out-compete everything else. Songbirds nest in the high branches and the ground beneath thins out once more. After twenty years or so the trees are ready for coppicing once more and the cycle continues.

Though these woods were not currently as beautiful as I had hoped when browsing my map. Nonetheless, I was aware as I circled round to the end of the grid square that I had hiked myself happy again. My murky reluctance at the start of the day had been replaced by shoots of recovery. Spring was on its way, there was new life in all these coppiced stumps, and we would both soon rise and flourish again.

SNOW

'We too have our thaws. They come to our January moods, when our ice cracks, and our sluices break loose. Thought that was frozen up under stern experience gushes forth in feeling and expression.'

– Henry David Thoreau

There are two types of people in the world. Those who love snow and those who do not. There is no such thing as a child who does not like snow. A few people have valid objections to snow: broken hips and confounded commuters, for example. But anyone else whose heart does not leap at the first falling snowflakes is a miserable curmudgeon. There, I've said it! I get as excited by snow today as I did back on those glorious rare occasions at school when someone in the classroom yelled, 'it's snowing!' and happy pandemonium broke out.

The south of England being a mild sort of place, the best I hope for each year is a covering of a few inches, a couple of sledging outings, and a day or two of jolly disruption. After weeks of rain I was excited to get out into the snow today, not least of all because I had also noticed the dawn arriving a little earlier. Snow makes everything feel more adventurous, though the sprinkling here did not really compare to the majesty of hauling a sledge across Greenland's vast silence, relishing being self-contained with a couple of friends and very far from civilisation. But I was still very happy.

'As the days lengthen, the cold strengthens' goes an old proverb, with a nod to scientific veracity. Earth receives its least sunlight on the winter solstice, yet the coldest temperatures are yet to come, a

seasonal lag caused by more solar energy continuing to leave the atmosphere.^{excvii} The blanket of snow muffled the world and made the day quieter. I could hear a buzzard and the cawing of rooks, but the usual motorways and sirens sounded softer today.

I paused in a field to admire a newly-laid hedge. We lose thousands of miles of hedgerows every year,^{excviii} so this new work was good to see. The prickly trunks and large branches had been sliced partway through, then bent over and woven amongst each other. Over time it will grow back into an impregnable barrier. The hedge was made up of a healthy variety of species, including hawthorn, blackthorn, hazel and maple.

Laying hedges is a country craft that has been practised for hundreds of years.^{excix} as I learned from the very niche National Hedgelaying Society^{cc}. They play an important role not only for aesthetics and tradition, but also for shelter, food and movement corridors for wildlife. Hack too much off a hedge each year and over time it degrades, becoming hollow at the bottom and useless for sheltering wildlife. Yet if hedges are ignored entirely, they eventually grow too tall and collapse. ‘Hedgelaying preserves the past and protects the future’, the society therefore declares, proudly.

As I followed the hedge, I noticed the tracks of a pickup truck in the snowy fields, the swish of a sledge, the gait of a runner, the hop of a rabbit, the strut of a pheasant, and the heroic efforts of a mole hauling its way through the cold soil beneath us and excavating an impressive row of fresh molehills, black against the white field. Moles are the only mammal to live solely underground. They survive in that low oxygen environment by having high numbers of red bloods cells. They certainly cope with the darkness better than I do in these long winter months! Moles are light sensitive and not blind, but they do also have sensory hairs over their body to help navigate the darkness. Their ears are inside their bodies, behind their shoulders, and their snout acts like a sound tube.^{cci}

Bare branches stood out on a sycamore tree like the veins and vessels of a heart, silhouetted against the low sunlight and framed by a dark and heavy snow front moving my way. I like watching weather approach. The sky was hazy, as though draped in gauze, and all that falling snow was soon going to reach me. I hoped for those giant, soft snowflakes that fill the sky and cover the land with countless numbers of magical six-pointed stars.

Hardly any scientific finding is more widely known than the uniqueness of each snowflake. Johannes Kepler was perhaps the first to pay inquisitive attention to them, perhaps as an idle diversion from his revolutionary study of the planets which changed our understanding of the cosmos and landed his poor mum in a witchcraft trial. He once made a booklet as a Christmas gift for a friend titled ‘*The Six-Cornered Snowflake*’, which pondered explanations for their shapes.

But as the weather front reached me and it began to snow heavily, the fields were soon covered in a fresh layer of what looked like beanbag pellets. From this mystery, I learned a new word. These soft, small pellets were ‘graupel’, formed in a process called riming when supercooled drops of water (water that remains liquid at temperatures below zero) freeze around already existing snow crystals in the sky. I walked on, wondering whether I might spot all eight official categories of snow: column crystals, plane crystals, a combination of column and plane crystals, aggregation of snow crystals, rimed snow crystals, germs of ice crystals, irregular snow particles, and other solid precipitation...

Trudging contentedly through the white world felt like taking a trip back to slower, quieter times. I saw a village church in the distance and black rooks swirled through the white sky. Partridges flew by in a whirr of short, fast wings, no pear trees in sight. A woodcock burst suddenly from cover. There may have been less to see in this blanketed grid square, but there were different things to feel.

I gave thanks for my modern winter clothing (and the homemade scarf that I was very proud of learning to knit) and made sure to savour my flask of soup, particularly as today I had my own home-baked bread to accompany it.^{ccii} The loaf was so easy to make,^{cciii} cost only pennies, and tasted so blooming good that I scoffed almost half of it in one sitting, amongst a billion falling flakes of snow, happily eating my own bread and catching snowflakes on my tongue like a kid who still really loves snow.

MARINA

'And this our life, exempt from public haunt, finds tongues in trees, books in the running brooks, sermons in stones, and good in everything. I would not change it.'

– William Shakespeare

Historical names for February include the unappealing Old English terms 'Solmonath' (mud month) and 'Kale-monath' (cabbage month).^{cciv} I'm pretty sure the Hawaiian word for February, 'Pepeluali', refers to neither mud nor cabbage. In Finland, February is 'Helmikuu', the month of the pearl, when snow melts on branches and forms droplets. In Poland it is 'Luty^{ccv}', meaning freezing cold. For Macedonians it is the month of cutting wood, 'Sechko', and the Slovene word 'Svečan' originates either from icicles or the month of cutting down of trees.

I was definitely in a mud month here, rather than a pearl month. The snow was gone and the world was drenched. The month of cutting down trees also felt relevant as I arrived in today's grid square to find swathes of cleared land, stripped and flattened ready to build more flats and houses.

The UK has a chronic housing shortage and housebuilding has almost halved in 50 years^{ccvi}. The government therefore pledged to build 300,000 new homes a year in response to the demand^{ccvii} (before giving up on that promise). The country needs more home. But on the other hand, land is a finite resource and this map seems destined to disappear beneath industrial parks and cul de sacs. We need houses with green areas and space to stretch our legs, but low-density, sprawling developments seem to assume that there is infinite space to spread out across. It is a conundrum to which I do not have a solution.

An orange digger was carving away the soil around one of the few remaining tall trees, leaving it marooned and isolated. Scoop, spin, repeat. Scores of saplings had been planted along the verge, but they were crowded so tightly together in their plastic protective tubes that few would reach full size. It was a quota-filling exercise to be able to say 'we planted hundreds of replacement trees', rather than any meaningful compensation for the uprooted habitat. Encouragingly, however, the new policy of biodiversity net gain (BNG^{ccviii}) will compel developers to try to avoid habitat loss, and if this is not possible then they must recreate the habitat, plus 10% extra, elsewhere. Such systems are still flawed and evolving, certainly, but I find this to be an exciting time for conservation. We have caused so much destruction, but we finally now live in a time with an ever-growing appetite and momentum to fix it all. We have the opportunity to be the first ever generation to leave the

environment in a better state than we found it.

The constructors had fenced off the footpath along the river for the next four years, and sent me on a detour along a road instead. I had my first flush of irritation that this project was pointless. It frustrated me to be stuck in the crowded southeast of England and pined for wilder landscapes. But if I don't explore close to home, as everyone used to do, and neglect my local landscapes in favour of exotic places, then I risk forgetting about the nature that this year was showing me to be more abundant than I realised. Losing that connection would be a further slide into being unaware about my environment, and then not caring or being aware about its demise, and so doing nothing to step in.

Needing a fresh perspective, I changed direction and climbed down onto the stony river beach in front of a row of new apartments. I crunched down to the water's edge. The river was wide at this point, silty and swift. The sky was the same shade as the water, a sulphurous hue like cold tea.

Pootling up and down the shore soon calmed me down: the gentle lapping of the water and the colours of the beach – dark flint nodules, white lumps of chalk, broken red bricks, green slime, glossy black seaweed and a child's pink Raleigh bicycle in the mud. A flock of redshank probed the mud with their long bills. I indulged in a spot of mudlarking, finding a steering wheel and a football amongst the usual flotsam and jetsam of broken bottles, flip flops, traffic cones and shopping trolleys.

Thriving amongst all this junk was a pulsing mass of sandhoppers. They look like a cross between a shrimp, a woodlouse and a flea with semi-translucent bodies and giant back legs. Sandhoppers are less than a centimetre long but can leap 30 times that distance by rapidly flicking their rear end. They scavenge and eat almost anything which helps break down the dead and decaying matter washed up on the shoreline. But these amphipods also contribute to the microplastics crisis in our oceans as they can shred a single plastic bag into millions of microscopic fragments which then disperse throughout the food web and become virtually impossible to remove.

I pedalled onwards, along the river's bulky flood barriers. Someone had walked this way before the concrete had set, leaving a set of footprints as a ghostly reminder of their passing. So many footsteps have walked this way over time, the local history linked to the river for thousands of years, piling new buildings onto old ones, history on top of history, always changing and evolving and beginning again. Ghosts and footprints, beginnings and endings and more new beginnings.

Take, for example, the grand old house perched on a grassy hill at the end of a boulevard I was surprised to discover amongst all the modern developments. Its history reached back to the 14th Century, when the manor was home to nuns, before becoming a country house for Henry VIII, and eventually on to today's owner: an oil billionaire, his Cameroonian model wife and their eight kids, as featured on the reality TV show 'Britain's Flashiest Families'.

There was once a nautical training college^{ccix} down this way too, preparing cadets to serve in the Merchant Navy and on the famous *Cutty Sark*. In 1883, *Cutty Sark* sailed for Australia on what would become a record-breaking voyage. After loading 4289 bales of wool and 12 casks of tallow in Australia, she turned swiftly for home, arriving back 25 days faster than any other ship of the age. Suddenly Australia did not seem quite so far away and our perception of the world shifted a little.

Having both sailed and rowed slowly across the Atlantic Ocean, I can imagine how this sudden shrinking of great oceans felt like a seismic change in the order of things. In order to make the most of the trade winds, Captain Woodget travelled further south than other commanders were dared to do,

way down into the latitudes of the Roaring Forties.^{ccx} They faced tremendous gales, massive waves and frequent icebergs, but *Cutty Sark* dominated the wool trade for a decade.

On such a built-up grid square, I had not thought to look closely on my map for the symbol for 'cliffs', but there they were. The jagged little lines marked white chalk cliffs in a wooded park, dotted with follies whose entrances had been locked with metal grilles, creating safe homes for the local population of pipistrelle bats. Although the common pipistrelle is so small that it can fit into a matchbox, they can still eat 3,000 insects in a single night.

Pigeons coo-ed on the cliff faces that had been their original habitats before they discovered the vertical cliffs of urban buildings. I had thought this grid square was going to be an uninspiring write-off, but there was so much here that I never knew existed. A woodpecker drummed in a tree and mistle thrushes sang their enthusiasm for approaching spring.

Feeling cheerful now, I pedalled through a new housing development into a gloomy landscape of tired and crumbling industrial units. Plastic flapped in the wind, snagged on barbed wire fences, and there was so litter everywhere, beer cans mostly. It was the sort of no-man's land where you'd be wise not to hang around taking photos of scaffolding businesses run out of portakabins with gleaming black Range Rovers lined up outside.

I was lured beyond the industrial estate to the very edge of my grid square by the sight of a pylon. But this was no ordinary pylon. It soared skywards over the salt marsh and dominated the sky. I rode through a strange, empty edgeland to reach it, the relics of an old concrete works that was now covered in scrubby thickets, muddy footpaths, grubby grass, potholed tracks with Keep Out notices, silver birch saplings, stonechats, graffiti tags, bright flowers like the celandines' 'scalloped splashes of gold^{ccxi}', and the constant glimmer and sparkle of broken glass.

The 190-metre-high pylon I found held a 400kV electricity cable that stretched far over the river. Its base was fortified with CCTV cameras, spiked railings and electric fences. Its stark, simple symmetry was beautiful in its own way. It seemed an ideal model for Pylon of the Month for the fans of the Pylon Appreciation Society. I had intended to turn around when I reached this giant pylon, but beyond the undergrowth I now spotted the tall mast of a wooden boat. Intrigued, I pressed on further towards what was to become one of my favourite hidey-holes of the entire map.

I stumbled upon a creek tucked away from the surging flow of the main river, and folded tightly into the marshy shore like a shirt cuff. It was low tide so the creek was just a muddy river bed lined with reeds. The creek was home to a fantastic, ramshackle flotilla of boats. 'Marina' is far too grand a term for the dilapidated walkways hammered from pallets, for the driftwood cabins and the craft in various states of disrepair. In my opinion, this discovery was far more alluring than a shiny, impersonal marina anyway.

An old keg of beer had been dumped in brambles, a speedboat turned into a flowerbed, and a hand-sprayed sign warned 'Beware of Dog.' The peeling wooden hulls, scuttled fishing boats and wobbly homemade jetties felt like the swamps of North Carolina, the bayous of Louisiana, or a fishing village in somewhere like Haiti.

Moored amongst the crumbling houseboats in varying degrees of what I suspected were eternal 'repairs', were two beautiful wooden barques, both around a hundred years old, the kind that used to carry cargo to Spain or ferry cement to Cornwall, returning loaded with granite or china clay from the 'Cornish Alps'.

The only sound came from a small man with a wizardy face, a goatee beard, and a flat cap. He was whacking a rusted trailer wheel with great determination, his hammer-wielding watched patiently by his young grandson. He told me he was renovating a small motorboat so the two of them could go out fishing. I admired the idea but hoped the lad could swim.

‘We go right out, far out. There’s cod out there. Whiting. Flatties, too. Flounders and that.’

As people tend to do when you express an interest in their place, he began to share his stories in between blows of his hammer. He spoked fondly about the owls that lived on this scrappy marsh, both barn and tawny, the hovering kestrels and the nightingales that churred their famous song on late summer nights. He also lamented that all this liminal nature was the scene of a planning battle between conservationists and developers with ideas to modernise the place.

I said goodbye to the man and left him to his repairs. I’d be sad if all this was paved into a parking lot. I walked down to the riverbank to find a spot to set up my camping stove, make coffee and take all this in. Yes, there were shopping trolleys in the mud and shocking amounts of plastic rubbish. But I was in high spirits as I sheltered behind a large concrete block sprayed with ‘AHOY’ and a smiley face. At the beginning of today I had been questioning what I was doing. The grid square had answered, with so much history and beauty. Maybe I was not yet done with this project after all.

GOLF

‘The man who is often thinking that it is better to be somewhere else than where he is excommunicates himself. If a man is rich and strong anywhere, it must be on his native soil. Here I have been these forty years learning the language of these fields that I may the better express myself.’

– Henry David Thoreau

Today was a landmark day of the year: my first bike ride without wearing gloves. I woke to a softer, earlier, warmer sunrise and cycled out to a grid square that began on a heath of bracken, gorse and heather. It needed an auroch or two to control it. I continued into a wood whose highest branches were swaying in the breeze. Twigs rattled against each other like squabbling fingers, occasionally snapping and cracking.

Trees keep a small but distinct gap between their crowns. Lie on your back in a wood (as I was doing), and look up at the canopy: the slight spacing between each tree is clear to see, like a mosaic. This ‘crown shyness’ is probably caused by the kind of reciprocal pruning I was watching that helps trees remain healthy and share resources. The gaps improve each tree’s access to light and can deter the spread of diseases, parasitic vines and leaf-eating insects.

A jay screeched as I looked at oak galls growing on a row of young trees. You often spot jays near oak trees and their relationship is a nice example of mutualistic symbiosis. A jay can gather 5000 acorns^{ccxii} in its life, and though they are its primary food source, the bird also helps the trees pioneer new ground by burying the acorns in open spaces. This habit helped oaks spread rapidly after Britain's last ice age, 10,000 years ago.^{ccxiii}

The oak galls that had caught my eye were linked to a different creature. These were parasitic wasps that induce the host tree to form galls^{ccxiv}. Galls are smooth dark balls, like large marbles, protruding from the tree's twigs with a tiny wasp larva growing inside each one. These pendunculate oak galls were caused by a wasp deliberately imported from the Mediterranean 200 years ago because the high tannin content of its galls was important to the leather-tanning industry.^{ccxv}

I followed a path past an abandoned digger whose flaking blue paint, red rust patches and orange lichen^{ccxvi} created a beautiful palette.^{ccxvii} As I walked deeper into the wood, the air rang out with chainsaws, diggers, and there was a strong smell of smoke. Trees were being felled and burned left, right and centre. I crossed a busy road to get away from the destruction, whereupon the catseyes caught my eye, as they're supposed to do, I guess. Their inventor, Percy Shaw, was a Yorkshireman who worked laying tarmac driveways. He enjoyed a pint or two in Queensbury's Old Dolphin pub after work and, whilst negotiating a twisty road home one foggy night, the reflection from a cat's eyes warned him that he was in danger of driving off the edge of the road.

Inspired by this, Shaw began tinkering in his spare time. He patented his invention and established a company to sell his new 'catseyes'. His big break came with the black-out during the Second World War which made driving at night more treacherous and led to a huge increase in sales. Today, catseyes are used throughout much of the world.^{ccxviii}

This was an area of expensive homes tucked discreetly into individual padded envelopes of woodland behind tall gates with security cameras. There were very few visible houses on today's square, apart from a terrace of 150-year old cottages following a lane up a narrow hill. A footpath ran behind their back gardens, and in one I glimpsed dozens of statues of Buddhas, Chinese dragons, and carved lions. They had also opted for a hedge of bamboo, unusual in England, but rampant across much of the world.^{ccxix}

Spring is an exuberant time of year, filled with 'sounds with all the sweet sorrow and reckless joy of freedom.' Starlings chattered merrily in an ash tree. They are beautifully coloured, with an oil-like iridescence and speckles (or stars) on their winter plumage. There is the beautiful 'murmuration' collective noun for starlings, but they are also sometimes referred to as a chattering, a scourge, a vulgarity, a filth or a clutter due to their noisy and messy habits. Starlings are Britain's most talkative birds and can perform up to 35 songs, plus 14 additional clicking sounds. They are excellent mimics, learning new sounds and then passing them on to their offspring. Henry Mayhew, the founder of *Punch* magazine, described them as 'the poor man's parrot' on account of their mimicry and plumage.

Huge murmurations of starlings, such as those seen on winter dusks on the Somerset Levels, are the greatest natural spectacle I have seen in Britain. The poet Coleridge described in his diary a murmuration in London that we no longer see. 'Starlings in vast flights drove along like smoke, mist, or anything misty without volition... some moments glimmering and shivering, dim and shadowy, now thickening, deepening, blackening.' And 'Starlings in Winter' by the poet Mary Oliver sings the praises of their starry beauty in flight.

*'This wheel of many parts, that can rise and spin
over and over again,
full of gorgeous life.'*

The emergence of daffodils is a sure sign of spring. Mentioning Coleridge and daffodils so closely together inevitably leads to Wordsworth. In 1795, he became friends with Coleridge and they published *Lyrical Ballads* together, a volume of poetry said to have ushered in the Romantic Age of Literature. By the 1820s, it was selling well and Wordsworth managed to earn money from poetry for the rest of his life.

Nobody paid much attention to 'I Wandered Lonely As A Cloud' at first, but it became Wordsworth's most famous poem,^{ccxx} with its rhythmical language that captures nature's peace.

*'I wandered lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host, of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.'*

Daffodils grow across Europe and North Africa in a wide range of habitats. They were first planted in gardens around 300 BC and the enthusiastic botanist and philosopher Theophrastus described many types in his whopping *Enquiry into Plants*. Daffodils made their way to Britain with the Romans, who believed the flower's sap contained healing powers, but it in fact contains irritant crystals.

I followed a footpath lined with the yellow flowers into a field of winter wheat seedlings, busy with fieldfares. I got a buzz as a buzzard launched from a hedge and flew into the woods. Its partner took flight from the ground, swerving its bulk into the trees as best it could, for they are built for power, not poise. Buzzards have a four foot wingspan and weigh up to a kilogram, with fearsome hooked beaks and sharp talons. They are plentiful these days, but almost disappeared from our skies in the 1950s following persecution by gamekeepers and pesticide use.

In the spring, male buzzards fly acrobatic displays to impress potential mates. Their trademark 'rollercoaster' move involves them flying high then plummeting downwards, twisting and turning and looping as they fall. Learning to beware of the dangers of shifting baselines has become a regular and depressing feature of this project. But there are occasional pleasing examples of positive shifting baselines too. I still get excited when I see a buzzard soaring overhead even though they are commonplace on my map today, for their population has risen four-fold in my lifetime, thanks to receiving legal protection.

A large proportion of today's square was taken up by a golf course. Pleasant enough, if somewhat artificial and dull. The landscape I mean, not the game (although now I come to think about it...) I strolled down a footpath that ran alongside the 16th fairway, glancing only idly at an oak tree speckled with lichen. But then I stopped to use the Seek app to identify what I was looking at. Soon I was totally drawn in, noticing more and more, so many colours and textures, falling down the tunnel

of fascination.^{ccxxi}

The app identified rough speckled shield lichen, bushy cartilage lichen, monk's hood lichen and the bright yellow shore lichen. And there I had been thinking this golf course was a bit boring and empty. There was so much life to see on the trunk of this one tree that I had almost dismissed with a single glance.

The more I pay attention, the more I notice. The more I notice, the more I learn. The more I learn, the more I enjoy. The more I enjoy, the more I pay attention. This positive feedback loop of learning and loving is what schools dream of generating in the classroom, but in my case didn't take hold until I began mooching around with a camera, a notebook and a handful of apps on my phone.

Family circumstance has brought me to live on this map, but it wouldn't be my first choice. There are no forests free from litter, no hills to raise the heartbeat, no rivers to swim in, no ocean with crashing waves, no town bustling with people who enjoy similar things to me. But the days when I set out to explore my map, to cycle, walk, photograph, sit, think, were becoming the highlight of my weeks. Out here I did not notice what I was missing, but celebrated all that I was finding.

March

RENEWAL

'I hope you love birds too. It is economical. It saves going to heaven.'

– Emily Dickinson

I was drawn by the distinct, fresh smell of cold lake water. It's such a fine, uplifting odour. 'Long enough in the desert a man, like other animals, can learn to smell water,' wrote Edward Abbey in *Desert Solitaire*. 'Can learn, at least, the smell of things associated with water – the unique and heartening odour of the cottonwood tree, for example, which in the canyon lands is the tree of life.' Here, just across the railway tracks behind the industrial park I could smell a misty, moody, monochrome fishing lake, lined with rushes.

A heron circled overhead, stately and assured. Black and white tufted ducks careened in to land with a waterski skid. Coots drifted over the smooth surface. They always draw a wry smile from me, for a thousand lifetimes ago I studied the 'agonistic communication' of coots as my university dissertation. Cooperation and competition have a fitness face off in the economics of game theory. But my heart had already clocked off from academia by then and was getting ready to hit the road. I struggled to summon any enthusiasm for questions like, 'if natural selection is survival of the fittest, why isn't everything a competition?'

I had requested to do my fieldwork in Africa, sniffing the opportunity to wangle an adventure out of a degree. But instead I was unceremoniously packed off to sit by a chilly Edinburgh pond for weeks, much like the one I'd discovered today. I smiled at my youthful disappointment and turned away

from the coots.

Beyond the lake lay a river. From studying my map, I held out hopes it might be the first swimmable span of water I had found so far. Once glance disavowed of me that idea. The banks were sheer and muddy, dropping ten feet or more to low tide mudbanks and a swift, broad waterway. No good for swimming, perhaps, but good for wildlife. Three herons were chattering and squabbling in their tree-top heronry. They gather sociably together for three months in early spring to breed. These communes of up to 40 nests are sometimes re-used for many generations. Another solitary heron was poised as a silent, solitary sentinel on the riverbank, with its bayonet beak and stoically hunched shoulders atop stilt legs.

Also on the riverbank was a hexagonal pillbox from the Second World War, its thick concrete walls now wreathed in ivy and vines, but still standing strong in the fog.^{ccxxii} Or was it mist, I asked myself? The difference, it turns out, is only in the eye of the beholder.^{ccxxiii} Such ambiguity felt like excellent advise. I could choose to see this as a day of warehouses and portakabins, or I could consider it a new exploration and a chance to visit somewhere I had never been before...

I pedalled past fulfilment units and the kinds of logistics businesses that I don't really understand but which keep the country running. Little sunshines of colt's-foot flowers grew unobtrusively in the gutter amongst padlocked shipping containers, access barriers and tattered office chairs placed outside fire doors for cheeky fag breaks. I cycled over expanses of concrete strewn with litter, razor fencing, diggers, heaps of gravel and men in overalls with Eastern European accents. I saw a shopping trolley upended in a stagnant pool of water rainbowed with oil, and another one wedged overhead into the legs of a pylon.

A few fragments of public footpath survived amongst this impersonal concrete and barbed wire, narrow paths hemmed in by chainlink or spiky hawthorn, lined with brambles and beer cans. Someone had mysteriously garlanded a tree with strings of seashells, a rubber duck, the head of an Action Man toy, and an upturned traffic cone. I followed the path behind the warehouses then crossed a railway line on one of those unguarded crossings you occasionally find in quiet places. Other than a sign warning you to be careful, you're very much on your own. I like those crossings: they feel exposed, trusting you to make your own judgements.

The eastern half of the grid square was a confusing, higgledy-piggledy area of blonde reedbeds. These are transitional habitats between water and land, waterlogged yet covered in vegetation. They are home to reclusive bird species like the bearded tit and the bittern. Reeds specialise for this wet habitat with modified stems, called rhizomes, that spread horizontally and shoot up into tall stems which help aerate the underwater roots.

I found myself thinking about the stillness of the reedbeds with words like 'peaceful' and 'uplifting', very different in tone to the industrial yards just a few hundred metres away. The way environments affect your mood is linked to the notion of nature connectedness, or people's sense of their relationship with the natural world. Such emotional connections perhaps run even deeper than our greedy instincts to use and control the natural world, and they are less definable than our impulse to categorise and learn. By tuning in to nature, and then enjoying and protecting it, nature connectedness helps individuals and society build a healthier and more sustainable relationship with the natural world.

When Professor Miles Richardson began a nature connectedness research blog, his first mission was to demonstrate that noting three good things in nature every day for a week could lead to a long term

increase in nature connectedness. The same principle applies to the Wildlife Trusts' annual 30 Days Wild challenge, and I feel confident that paying attention this year has helped me forge some strong positive habits. Indeed, research has shown that how much you pay attention in nature affects your well-being more than simply how long you stand out in the rain.

It is common when considering the challenges of 'nature connectedness' to bemoan our addiction to screens and the digital world. But I prefer to embrace technology and celebrate the challenge of geocaching, games like Pokémon Go and apps such as 1000 Hours Outside for encouraging kids to get outdoors and run through the woods. The various apps^{ccxxiv} I used in this book to learn more about nature and my landscape have been invaluable (see page XXX for suggestions), despite the irony of needing my phone to remind me to notice the world around me.^{ccxxv}

Today's grid square was memorable for containing a rare error on my usually-flawless Ordnance Survey map. A small but convenient footbridge across the river turned out to be some sort of chemical pipe. It was wrapped in barbed wire so I couldn't trespass my way across the river and had to cycle downstream for several miles to the nearest bridge. On the other side of the river, at last, I found a modern sort of farm: a solar farm.

The expanse of blue-black panels was spread over a few hundred square metres, facing south and angled optimistically towards a sun still well-hidden by mist. Solar energy is an important tool in addressing the climate crisis as it is limitless, free and clean. Although the first solar panel was invented in 1883, the technology capable of harnessing significant amounts of energy took off from the 1950s. But until recently it was prohibitively expensive for mainstream adoption. The cost per watt has plummeted since 2010, however, and now plays a prominent role in our transition away from fossil fuels. Cover a quarter of the Sahara desert in solar panels, hypothetically, and you'd harness the entire world's energy needs for 2030. It is a real shame then that the UK government has recently cut its support^{ccxxvi} for solar power.

I tried to figure out what this area had been used for previously. Because, away from the solar farm, bushes and saplings were steadily reclaiming a landscape that had evidently once been covered by buildings. I learned later that it was the site of a Victorian brick factory. Two centuries ago, this square had been filled with railways lines, kilns, brick-drying sheds, warehouses, riverside wharves, and chimneys belching smoke. It would have been a whirlwind of industry, noise and money-making. Yet all that has been razed to the ground and almost nothing remains. All that thriving enterprise was now long gone, covered in grass, scrub and young trees like an English Ozymandias. Nature had returned, making this grid square the wildest I had visited so far. The fact that it was reclaimed wildness cheered me even more.

Amid all the things I've worried about in the dark first half of the year, a beam of sunshine which has warmed my heart as I approached the light half of the year was how reliably nature bounces back each year. In the gloom of winter, and perhaps shadowed by my pessimism at consigning myself to a year on a map I didn't much love, maybe I half wanted to be disillusioned? If that was the case, then I had been disappointed. For I had really enjoyed the wildness in some of the places I found, and now spring was embracing us with all its exuberant life.

If we don't wreck things too much, environments can recover and we can make our landscapes wild and wonderful once again. That's no consolation, sadly, for the thousands of species currently disappearing each year thousands of times faster than the natural extinction rate. Experts argue over

how many species there are, and whether 0.01% or 0.1% of them go extinct each year. Either way, we are destroying between 10,000 and 100,000 species every year.

Whilst 99% of species that ever lived have already died out, the fact that we are responsible right now for the sixth mass extinction event in history means I don't feel mollified that extinction is part of the natural order of things. I am deeply ashamed and angry that over half of British species have declined in my lifetime. We have lost so much.

Although, as naturalist Chris Packham pointed out in his passionate manifesto, 'lost means inadvertently misplaced. No, our wildlife has been killed, starved, poisoned, ploughed up or concreted over.' This is happening not because we are evil, but because we look on and do nothing. And yet, despite all this, nature bounces back every spring and thrives if allowed to do so.

Nature's potential for recovery fills me with hope.^{ccxxvii} During the COVID lockdowns, civets returned to once-busy streets in India, deer roamed the roads in Japan and monkeys enjoyed a splash in a swimming pool in Mumbai.^{ccxxviii} Chernobyl, off-limits to humans for three decades, has become a haven for wildlife, with lynx, bison and deer roaming through regenerated forests.^{ccxxix}

I like the simple notion of doing nothing for nature. Just stepping back and creating wild spaces in gardens, verges and un-needed farmland allows nature back in. This is what the Knepp estate did on its way to becoming England's most famous rewilding project, allowing 3,500 acres of unprofitable farm land to return to nature. Knepp was a failing farm, stripped of nature, inefficient and struggling financially. Today it is home to populations of nightingales, purple emperor butterflies and turtle doves. It is a thriving success story of nature tourism, with safaris, places to stay and sales of wild range meat from the free-roaming herds of Old English longhorn cattle, Tamworth pigs, and red and fallow deer which help create new habitats for all the wildlife.

I pushed through undergrowth to a reservoir that had been fenced off by the water board. It seemed I was not the only person sorry to be denied access, for one of the fence panels had been pushed over and a well-worn footpath led down to the shore. If you ignored the bottles of cheap imported vodka and discarded fishing tackle, then it was a beautiful spot, especially now the sun had come out. I had been practising this mindset a lot during my wanderings across the map, focusing on having the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference.

In this case, that involved me ignoring the litter, enjoying the view and appreciating having a lake to myself on a spring day, with clean water and the cheerful sound of birdsong. I stripped off and waded in for my first wild swim of the year. It was, in equal parts, nippy but invigorating. And when I departed, I filled my rucksack with as much litter as possible, to try to leave a positive trace of where I had been and to do my bit for the cause of opening up the countryside and treating it responsibly. There was little wilderness on my map, but there was plenty of wildness, that messy energising sense of the living world being all around us, and pushing hard to make itself felt.

BLOSSOM

'I feel as if I had got a new sense, or rather I realise what was incredible to me before, that there is a

new life in nature beginning to awake... It is whispered through all the aisles of the forest that another spring is approaching. The wood mouse listens at the mouth of his burrow, and the chickadee passes the news along.'

– Henry David Thoreau

'March, month of "many weathers"', grumbled John Clare and I thought of him as I sheltered from a sudden shower beneath a church's lych gate. Lych is derived from the Old English 'lich', meaning corpse. The lych gate at the entrance to a churchyard was where a group bringing a body for burial would traditionally meet the priest, as decreed in the 1549 Prayer Book.

These were mad March days of rain then sun then wind then rain then breakfast. I spent all of yesterday's sunshine indoors, working on a book and looking forward to today's outing. It was foolish of me to have expected that the weather today would still be mild and warm.

We are told to expect March winds from the old proverb that 'March comes in like a lion and goes out like a lamb'. Germans used to welcome the month's thunderstorms, believing they'd lead to a bountiful harvest, 'When March blows its horn, your barn will be filled with hay and corn'. Yet the Portuguese and French disagreed, fearing thunder in March heralded a sorrowful year.

Once the shower passed, I wandered round the churchyard for a while, looking at the gravestones. I preferred the biographical graves that tell a little about the life lived in the dash^{ccxxx} between the birth and death dates, rather than just bland tropes.

'For many years a well respected local veterinary surgeon.'

'Loving mum, nurse, entrepreneur, publican.'

Another celebrated 'a generous and respected friend', which seemed a fine epitaph to aspire towards. A fresh grave bore a wreath from the Kano State Government in Nigeria. Intrigued, I looked up the name of the lady buried here in blustery England, far from the millet and sorghum fields of northern Nigeria. But all I could find about her life were links to the expired video streams of her socially-distanced online funeral during the pandemic lockdown.

That global drama was very different to the one that claimed the life of George, an 18-year old pilot born in this tiny village and buried here. He was killed in the Second World War in an accidental collision with a pilot from the spectacular Deep Cove inlet in distant British Columbia. George's gravestone was marked with a red ceramic poppy, close to his brother, Alfred, who was killed in Germany in the final few months of the war. I thought about the terrible reverberations of that war, rumbling all the way around the globe as I stood before their father's grave who had outlived his sons by many years.

One grave quoted William Blake's famous words that are a fine guide to exploring a single map:

*'To see a World in a Grain of Sand
And a Heaven in a Wild Flower,
Hold Infinity in the palm of your hand*

And Eternity in an hour.'

And there was a cautionary admonishment to make the most of my days from 1786:

*'Stop traveller, and cast an Eye
As you are now so once was I.
As I am now so must you be
Therefore prepare to follow me.'*

The church lay in the foot of a valley, so I dropped into a low gear to cycle uphill through the rain, past a bungalow called Sunset Towers with a pristine white picket fence and privet hedge. A footpath led up into a wood, and I sat for a while in an airy clearing where a giant beech tree had fallen. The diameter of the tree's root system, now pointing skyward rather than flat on the ground, was around three metres, yet less than a metre deep. It often surprises me how shallow the roots of trees are, although I suppose I only ever get to see those that have fallen over and failed at their job. Trees rarely root more than two metres deep, and almost all of the roots are found within the top 60 centimetres of soil^{ccxxxi}.

I was sharing my log (but not my coffee) with a gloriously weird, slimy, beautiful pink fungus. It was called a wrinkled peach, fond of rotting elm, though tolerant of other hardwoods. With the sad demise of the elm from Dutch elm disease, these fungi are now fairly rare in Britain. I only vaguely remembered the infamous infection from my childhood which killed millions of trees and changed our landscape forever. Dutch Elm disease killed millions of the trees when it was accidentally imported from Canada in the 1960s. The fungus, spread by the elm bark beetle, is still moving north today.

History is now repeating itself with ash dieback, a disease likely to wipe out most of the ash trees in our country. Ash dieback is a fungal disease spreading rapidly across Britain. It arrived via imported saplings, and highlights the hazard of the international plant trade^{ccxxxi} bringing species into contact that have been apart over millions of years of evolution. The disease spreads via spores blowing tens of miles on the breeze, and is predicted to kill 80% of our 180 million ash trees.

The footpath out of the wood was lined with holly trees. ^{ccxxxi} Early green shoots of bluebells sprouted beneath the delicate white and pink blossoms of blackthorn bushes and cherry trees. In Japan, cherry blossom, *sakura*, reminds people of renewal. The season is celebrated with cheerful picnics beneath the beautiful pink trees. The blossom epitomises *wabi-sabi*, accepting and celebrating the beauty of imperfections and the passing ephemerality of everything.

Petals drifted in the wind like snow as I emerged from the wood. I pushed out through hawthorn trees, just beginning to bud, onto an expanse of playing fields. A buckled and smashed tennis racket on the ground painted a succinct picture of the frustration of defeat. The wind moaned through the skeletal tree branches, chilling me now that I was away from the wood's shelter. The sports pitches were deserted and the cricket sight-screens had been gathered together in one corner, waiting for the joy of summertime to return.

I climbed a stile into farmland. A shiny blue Ford Fiesta was parked neatly in the corner of the grassy field. I pushed my bike round fields of grazed grass then through some that were scrubby, brown and thistle-strewn. Most fields contained dazzling green crops of winter wheat seedlings, planted either

as a cash crop for next summer or as a cover crop to protect the soil against water run-off, weeds, pests and diseases. They are also good for fixing nitrogen and for wildlife. If soil is left bare^{ccxxxiv} it leads to erosion, nutrient loss and carbon release.

Reading about winter wheat led me into a YouTube world of farmer vloggers filming the planting of winter wheat (including drone shots) and I just have to call out, enough! Stop! I dragged myself away from investigating how farmers plant seedlings in such straight lines and how they determine the optimum tread shape for tractor tyres. I am overwhelmed by the abundance of everything. Begin looking closely at the world before your eyes and you disappear, spinning like Alice, down a rabbit hole of infinite possibilities.

I dropped back into the valley that ran the length of today's square, then pedalled up the other side, lamenting my fitness as I huffed and puffed in bottom gear. I was riding so slowly that I had time to notice a plump bumblebee busying itself around a hole by the road.

'That's early,' I thought.

I was surprised to find that I was correct, for once. The early bumblebee (which I'd never heard of) is one of our prettiest and smallest bumble bees, commonly seen in early spring, hence its name. It has an orange tail and pale yellow stripes. Early bumblebees nest underground, often in the abandoned nests of small mammals, old birds' nests or holes in trees. They gather in small colonies of fewer than a hundred workers with a lone queen who emerges between March and May.

I kept battling intrepidly and ineptly up that small hill in order to reach the first trig point I had encountered on my map. Having not been up a mountain all year, it felt like meeting an old friend again as I patted the concrete block, a whopping 110 metres above sea level in the middle of a muddy field. It felt like a different world to camping a couple of years ago by the trig point on top of Sulven, my favourite mountain.

Trig points were first used in the re-triangulation of Great Britain in 1936, beginning somewhere in a field in Northamptonshire and branching out from there to improve the accuracy of Ordnance Survey maps.^{ccxxxv} A network of trig points right across the country enabled the precise measurement of angles that took place over the next 26 years. It was a remarkable project. These days, however, triangulation and mapping technology has moved on and the country's 6000 trig points stand now as essentially obsolete novelties.^{ccxxxvi}

I pulled up my hood against the cold wind and looked around. Fields and woods fell away towards wind turbines, pylons and the red-white streaks of motorway lights. It was a pleasant view, not only of all today's square, but also others that I had visited, and very satisfying to be able to gradually piece them together like a puzzle.

PIGS

'Early one morning, any morning, we can set out, with the least possible baggage, and discover the

world.'

– Thomas A. Clark, *In Praise of Walking*

I made a beeline on another cold day towards this week's grid square, though without the navigational expertise of actual bees who fly directly to food sources using information gleaned from their buddies' dances. Their 'waggle dance' consists of flying in a straight line to indicate the direction of the food relative to the sun, and then a series of loops whose speed is related to the quality of the flowers found. At the same time, the bee beats its wings and waggles its abdomen, creating vibrations that communicate extra information about the location of the food.

Bees are mesmerically efficient, cooperative, communicative insects, complete with solar compasses, inbuilt clocks, complex dances, electrical communication with plants, and a sting in the tail. They are also in grave danger as we kamikaze towards insectageddon and the extinction of up to 70% of our wild species.

The story of bumblebees over the past century has been one of steady decline, with two species becoming extinct in the UK. Of the 24 species we have left, a third are on conservation concern lists due to their decline, caused by the mechanisation of farming^{ccxxxvii} and changes in the way we manage the countryside which has decimated flowering plants and the safe places where bumblebees nest.

Amongst the many problems they face is the fragmentation of routes that insects use to move around. Imagine trying to travel without roads or train tracks. The splintering of wild places makes it challenging for wildlife to move freely across the countryside.^{ccxxxviii}

I locked up my bike by the pond on the village green. Village greens conjure peaceful images of cricket matches, community celebrations and maypole dances. But historically, village greens were about more than recreation. Since the Middle Ages they have been an area of common grassland, for the use of everyone, often with a communal pond where fish were reared, cartwheels soaked to stop them shrinking, clothes washed, cattle watered, and alleged witches punished on ducking stools as social humiliation.

Completing today's bucolic scene was a beautiful old flint and brick oast house, once used to dry hops for brewing beer, so their distinctive conical shapes are fairly common in hop-growing areas.^{ccxxxix} I set off down a narrow lane beneath an archway of hedges and trees. The earth had been chewed to mud by horses' hooves so I had pick my way carefully. A sign on a fence said 'Do not feed horses no carrot or apple. Thank you.'

Access issues continued to hamper my efforts to get acquainted with this landscape. A red sign declaring 'PRIVATE GROUNDS' was nailed to an old beech tree. 'NO THRU ACCESS' read another. 'PRIAVATE [sic]. NO PARKING. RESIDENTS ONLY.'

Even where there were footpaths, they often felt as though they had been allowed only grudgingly, with fences and cautionary signs keeping me strictly on the narrow strip of land that someone had deemed I was allowed to walk on. It was a cheerless affair, a grudging granting of the least-possible space, and at one point it became a claustrophobic tunnel lined with tall fence panels and barely wide enough for my shoulders.

A squirrel sitting on this fence suddenly noticed me. Its nearest safe tree was about 20 metres away.

Unfortunately for the furry fellow, I was between the tree and he. The squirrel decided that the lure of the tree was greater than the terror of the human. So it sprinted along the top of the fence, a clatter of tiny claws, zooming straight past me within easy arm's reach, and leapt for the safety of the high branches.

As a fond feeder of birds, I am in constant conflict with the squirrels who try to scoff all the bird food I put out. Outside my writing shed I have a squirrel-proof bird feeder, complete with a squirrel-proof concave baffle to stop them climbing the pole. But still they drop from trees or leap from my shed roof to get at the seeds.^{ccxi}

Feeding birds is a simple pleasure and an easy way to connect to nature. But, like many things, it also has a negative environmental side. My heart sank a little when I learned this. It is so hard to not cause damage even when you're trying to do good, like switching from cow milk, which is terrible for emissions, land use and eutrophication, then learning that your virtuous almond milk is bad for bees, or flipping from burgers' awful impact on deforestation to discovering that each Instagrammable avocado you munch needs 320 litres of water. Feeding birds risks spreading disease, and skews populations towards those that thrive from the human boost of food: adaptable and aggressive generalists like great tits, nuthatches and ring-necked parakeets. More timid birds, such as the wood warbler and marsh tit, have suffered sharp declines as a consequence.

This grid square felt like an old-fashioned English rural landscape. There were farms with cows, sheep, pigs, horses, goats and chickens, and none of old McDonald's litter.^{ccxli} The land was higgledy piggledy and it even felt as though there was an abundance of woodland here, which made me very happy. There was also, on this damp and dreary March morning, an abundance of birdsong, more again than a week ago. More green shoots too, and leaf buds spraying the woods in their first hopeful green mist. I nibbled a few fresh hawthorn leaves, a tasty morsel once known as 'bread and cheese', which made me think of the yellowhammer I'd seen earlier, a little bird whose song sounds like it is calling 'a little bit of bread and no cheese' over and over. Three buzzards circled high overhead, and a mischief of concerned magpies grew agitated by their presence.

'One for sorrow,' I began counting, reciting the rhyme I remembered from my childhood. Magpies have been linked to superstitions and omens for centuries,^{ccxlii} with the earliest variation of the famous rhyme first being written down in 1780.

*'One for sorrow,
Two for mirth,
Three for a funeral,
And four for a birth.'*

And what of magpies' reputation for killing other birds? There's no denying that they are noisy and vigorous predators, but there is little evidence that they have an adverse effect on songbird populations. Ecologist Tim Birkhead defends them, saying, 'cats are undoubtedly a monumental threat to songbirds, but it's magpies that incur the wrath of the average bird lover. If magpies were rare, people would travel a long way to see them. In bright sunlight they are the most exquisitely beautiful birds, with that lovely long tail and iridescence.'

I walked over some fields and encountered my map's first pigs, fenced into a patch of woodland where they had turned every inch of the ground to mud. The pigs looked as happy as, well, I can't think of a simile but they looked very happy.

‘Morning, pigs.’ I called.

Three little ones paused their rooting to stare at me from beneath floppy ears. Pigs have been put out to pasture in woodland for centuries. Allowing pigs to forage for fallen acorns, beechmast or chestnuts, known as pannage, began in Mediaeval times as a privilege granted on common land or in royal forests. As well as fattening the pigs with free food, pannage was useful as a way of turning the soil and releasing nutrients. So long as the pigs are rotated regularly into different areas in small numbers, this ancient system of silvopasture or agroforestry works well. A mixture of trees, pasture and a few grazing animals is up to ten times better than grassland alone for sequestering carbon and helping counteract the livestock’s emissions.

As well as helping the environment, agroforestry can generate income on different levels, from foraged nuts, berries and fungi, up to rearing livestock and timber production. Such diversity also helps shield farmers from market fluctuations. Agroforestry is good for the farm, good for the farmer, and can even be good for the planet, if done correctly.

Past the pigs I went, and down into a coppiced wood. I passed patches of primroses, a plump stuffed panda perched up in the fork of a pollarded tree, and a ramshackle hut. If the cabin was a kids’ playground, the construction was impressive. If it was built by adults for some other function, then it was very much past its prime. I often come across mysteries in the woods, signs that someone else did something here, for some reason, sometime. I wish I could see everyone who has ever walked past one place, all here at the very same time, from dog walkers with earphones and GoreTex, back through farmers and deserting soldiers, all the way past hunting lords and peasant poachers to legionnaires and Neanderthals and ankylosaurs.

Across the valley, I saw an old timber house tucked onto a hillside in a fold of woodland, like a scene from *Cider with Rosie*. I made my way towards it. A sign cautioned drivers to be careful of badgers crossing the narrow lane. Along the grassy public footpath leading to the house were eight small, homemade wooden crosses, the earth around them sprinkled with yellow primroses, and each cross bearing the dates and name of a beloved pet. I stopped to chat over the low garden fence with an elderly lady who was pottering around her garden. She told me that her home had been built around 1900, and ‘I’ve been here nearly as long as that.’

I asked her about the pond in her garden, for I have been on a long, unsuccessful, mission to find frogspawn in this area. ‘Oh yes,’ she told me. ‘We get loads of frogs. Newts too. And dragonflies.’

As a boy, I used to love pushing through the hedge at the bottom of our garden out into the fields, and collecting gloopy balls of frogspawn from a nearby spring. We kept them in an old sink in the garden until they hatched and hopped away. It was fascinating to watch the tadpoles grow into froglets. I’d like to watch the same miracle unfolding today outside my shed. But because she was a frail old lady, I didn’t want to trouble her by asking if I could come into her garden and take a little bit of her frogspawn. She would probably have thought me very weird had I filled up my water bottle with frogspawn anyway! I shall continue my search. For meteorologists, spring begins at the start of March. For astronomers it is next week’s equinox. And for me, the start of spring might well just equate to the first frogspawn and the beginning of a new generation of wildlife.

HOUSES

'My vicinity affords many good walks; and though for so many years I have walked almost every day, and sometimes for several days together, I have not yet exhausted them. An absolutely new prospect is a great happiness, and I can still get this any afternoon.'

– Henry David Thoreau

Blackthorn blossom lined every lane this week. It was late March and the best time to spot the difference between hawthorn and blackthorn. Blackthorn blossoms before its leaves appear, whilst hawthorn does it the other way round. We use many cues to link what we see with a time of year (fairy lights in windows at Christmas, for example), but making a conscious business of being observant each week was building a richer natural calendar in my mind than I had ever had before. I hope next year I will instinctively think, 'Blossom season, and that hedgerow is blackthorn not hawthorn. Late March.'

Now I heard the year's first chiffchaff chirping away, a call like a tiny blacksmith hammering an anvil all day long, 'chiff-chaff-chiff-chaff'. It is easily confused with the great tit's 'teach-er teach-er' chirp. I know not many people will get excited by a little brown bird with a monotonous song. But I was enjoying celebrating the awesomeness of a feisty six-gram bird that has flown all the way here from Africa. I was learning to appreciate so many things that I had literally never noticed before in decades of life. This sense of wonder was boosted by my new ability to tell a chiffchaff from a great tit, and made me glow with appreciation for this humdrum corner of England I've found my life playing out in. Matthew Arnold asked, 'is it so small a thing to have enjoyed the sun, to have lived light in the spring, to have loved, to have thought, to have done?'

I reached today's grid square down a busy road, with cars swooping to and fro. It demanded all my concentration as I pedalled along. A workman battered the pavement with a pneumatic drill, so I had to turn off the road onto a quiet street of brand new houses before I could quieten my mind enough to settle into the slow rhythm of exploring.

Located literally a stone's thrown from the railway station, this cul de sac was prime real estate for wealthy people commuting into the city. The homes were huge, with giant cars parked outside, oversized as though they had been inflated with hot air (or hefty bonuses). But all this bigness came at the expense of any outdoor space to relax in. Ten identical houses had been squeezed onto a plot of land which would probably have been the size of the garden for a similarly-sized home in earlier times. This tug between houses and space was to be a recurring theme on today's ride.

After stepping aside to let an old lady pass on her squeaky mobility scooter, I pedalled behind the railway station into a sweeping neighbourhood of circular residential roads, lined with 1960s bungalows set back from the street in tidy gardens. One was called Crianlarich, with a garden filled with purple heather. I wondered what had brought the owners south from the beautiful gateway to the highlands.

Bungalows feel quintessentially British, like cups of tea or the Royal Family. Yet none of them are native. As with much in British life, the humble bungalow is wrapped up in the days of Empire. The word ‘bungalow’ comes from the Hindi ‘*bangla*’, meaning ‘belonging to Bengal’ and was used to describe colonial cottages in India. I remembered seeing some beautiful examples when walking through Kerala’s forested hills. Those settlers returned to Britain with enthusiastic memories of the Raj lifestyle and their charming homes (and probably a fondness for tea and royalty too).^{ccxliii}

The next circle of homes was not as affluent as the new builds by the station, nor retirement homes like the bungalows. This was the domain of the mid-tier commuter, successful but still striving upwards, although the proximity of a train line into the city undoubtedly made the rows of semi-detached mock Tudor homes eye-wateringly expensive. It was all fine and pleasant if you’re after a fine and pleasant life, but I found myself yearning to be back amongst big views, big mountains, ocean waves, and rushing rivers, and the sort of people who gravitate to those wilder places.

But I also realised that there are a thousand and one reasons why we can’t all live in log cabins in Montana, even that small minority of the population who would dearly love to. For those of us in that category, yearning to be free, noticing the wildness that *is* around us is a much better choice than lamenting what is not here.

Here in town, it was bin day, so there was a full wheelie bin or two outside every home. We have an extremely efficient system that whisks away our rubbish and recycling. But perhaps it is too efficient, for once it’s out of sight we forget all about its impact. UK households produce 27 million tonnes of waste a year, which averages out to over 400 kg per person. A significant amount of that is food waste, for the average family here throws away 20% of their food, or about £800 worth per year. If global food waste was a country, it would be the third largest greenhouse gas emitter.^{ccxliiv}

Every year, the world throws away over two billion tonnes of rubbish. Load that onto lorries and they’d lap the world 24 times. Almost everything we buy ends up in the bin within six months, and then in the ocean soon after that. ^{ccxlv}

‘Enough of houses and landfill and cycling up and down concrete streets!’ I cried to myself, and pedalled on in search of something wild to soothe my soul.

I found it, or the beginnings of it, in a park covered in trees, grass and transitional scrub. Forty years ago the area had been farmland, yet now it was covered with a dense, virtually impregnable cover of quick-growing trees and bushes, self-sown and being allowed to develop naturally. I love these examples of nature’s speedy re-establishment. If we stop causing harm and change our lifestyles to free up more space, it is definitely not too late for nature to return to this map, despite all the houses.

I felt myself unwinding as I sat on a bench in a clearing in the young woodland and took stock of things. The motorway still roared quietly beyond the trees, but it was a low, steady noise that I could tune out of or pretend it was a picturesque waterfall. I looked around at the budding trees and blossom, listened to the birds, and reminded myself to appreciate that this was also the week of the spring equinox, when the hours of light and darkness are equal. Summer was coming soon.

For ancient people, the equinox was one of the year’s most important markers. In the grand scheme of human history we have only very recently disconnected from the natural world to live in an indoor bubble of regulated light and temperature. People celebrated the equinox with yet more bonfires as they feasted on the last of the winter stores. It falls in the middle of a period known as the hungry gap, when little fresh produce is ready to harvest, so a festival helped raise famished spirits.

This itch to celebrate spring became the Pagan festival of Ostara which was personified by the goddess of the dawn and rebirth, a young woman surrounded by light, flowers and new growth. It was a celebration of longer, lighter days, new life, and a time of renewed hope. Ostara's name came from the old German word for 'east', the direction of the sunrise. Many of the rituals remain today, passed down through Celts, Saxons and Romans, such as colourful eggs, rabbits and baskets of sweets.

The northern half of today's square was striped with tight contour lines and split between a wood and a housing development perched on the same hillside. Half of the wood had been removed to build the homes. I was interested to cycle around the houses and then do a direct comparison with the wood next door. We love woods, yet need houses. But we also need woods and can love our homes. The tug of demands on our land was very apparent on this single hillside.

The houses were, frankly, amazing. I had not seen such a collection of lavish homes anywhere else on my map. There were footballer-style mansions behind high gates, painted clapboard homes like affluent American suburbs, imitations of traditional old rectories filled with Labradors and hockey sticks, and grand design homes with massive plate glass windows and sans serif fonts^{ccxlvii}. Lovely homes, and I'm sure the people who lived there were very nice too. But the unease I felt as I pedalled along the quiet, litter-free lane was about the inherited inequalities on my map between today and the poor estates of crowded tower blocks I had seen just a few miles away.

Does our society focus too much on measuring growth and wealth as the key indicators of success? India, for example, has a booming economy measured in terms of Gross Domestic Product, but has shameful inequality and is one of the world's most depressed countries. Bhutan, on the other hand, scores poorly for GDP, but ranks highly for Gross National Happiness which it measures and takes seriously.

Where do we want our priorities to lie? How should we measure our societies? Kate Raworth's Doughnut Economics emphasises the need to balance our obsession with growth against quality of life and the earth's environmental limits. Chasing growth, bigger houses, and ever more stuff to buy and bin is literally unsustainable. Only in the middle of this 'doughnut' can we find the 'ecologically safe and socially just space' that society should be aiming for.

Amen, I thought. And went off to have fun riding my bike around the woods.

April

VINEYARDS

'If ever I saw blessing in the air

I see it now in this still early day

Where lemon-green the vaporous morning drips

Wet sunlight on the powder of my eye.'

– Laurie Lee, April Rise

Out into the delirium of spring, riding fast and happy towards today's grid square. The first blush of yellow in the oilseed rape fields, pretty but terrible for leaching nitrates into waterways. The first sulphurous yellow Brimstone butterfly of the spring, a yellow that put the 'butter' into butterfly. In *Every Day Nature*, Andy Beer suggests you note the first date you spot one and call it your Brimstone Day each year. I liked that idea. My computer calendar already reminds me of the differing dates of the first snowdrop and daffodil outside my shed over recent years. The first green leaf on the tree by my window too, the return of the goldfinches to my feeder, the first swift and, from today, the first Brimstone butterfly of the spring. I enjoy seeing the differences in nature's calendar year on year, the phenology of where I live.

It is a start, but I'm a long way from the Reverend Gilbert White^{ccxlvii} whose detailed decades of observation in his village resulted in *The Natural History of Selborne*, a book still in print after 230 years. He was a pioneering and curious natural historian with astonishing powers of observation. Only the *King James Bible*, the *Complete Works of Shakespeare* and *The Pilgrim's Progress* have been continuously in print for longer. His book offers an invaluable insight into rural life in the 18th Century, and was often carried by emigrants to North America and Australia who wanted a nostalgic reminder of home.

White paid minute attention to nature and recorded it diligently, what he called 'observing narrowly'. The more he paid attention, the more engrossed he became in the natural wonder on his doorstep in Hampshire. For example, he observed that owls hoot in the note of B flat, and surmised that willow wrens were actually a separate species by tiny differences in their songs and plumage. I'm quite proud of myself if I even spot a wren at all, as they dash low from bush to bush.

I walked past a couple of wooden thatched barns and a red Victorian postbox wreathed in dark ivy. A notice on the village hall commemorated the date when this valley had been saved from being commandeered by the Ministry of Defence for mine-laying and infantry training. Good news, I decided, for this square was beautiful and needed preserving. I crossed the village cricket pitch (oh hurry along, summer), passed a 'hedgehog crossing' sign and began climbing a path up the side of the valley.

Yet no landscape in this country is fixed or even exists as it originally was. The countryside is always in flux. These valleys here have changed tremendously in recent years, with thousands of grapevines now planted across hundreds of acres. In every direction the land was now covered with rows and rows of small vines, each staked out and protected from rabbits with a green (hopefully biodegradable) plastic sheath. Producing wine in England on this scale is a mark of our evolving climate. But it is not a new phenomenon,^{ccxlviii} and as our climate warms, changes in agriculture such as this look set to continue.

At the head of the steep chalk valley, I paused on a bench to catch my breath and look down over the vines and the cricket pitch. Overhead, I heard one of my favourite bird calls, the skylark, which inspired the musical composition of Ralph Vaughan Williams. The skylark is a pale brown bird with a funky tuft on its head. They nest on the ground in open areas across Eurasia and North Africa.

What makes skylark's special is the male's incredible singing throughout the summer months. They burst up to a great height, almost 300 metres high, hover, plummet down, and then climb again, all whilst singing a beautiful, burbling song. It's like belting out arias whilst running uphill at top speed! They fly so high and sing so loudly that Tennyson described them as being 'drowned in yonder living blue, the lark becomes a sightless song.'

New life was blooming across the land. Blue speedwell birdseye flowers crept along the ground. White wood anemones sparkled in the shadows. Celandines beamed like little suns. Peacock butterflies fluttered red wings in the sunshine, winking their bold eyes to mimic the eyes of larger and dangerous predators. And although one huge oak caught my attention when I remembered that its bare branches would soon be upholstered in green once again, most trees were now pushing out pale new leaves.

Even though it was spring, this process of renewal actually began back in the autumn when trees responded to the shortening days, lengthening nights and lowering temperatures and began their dormancy. New buds have a 'cold requirement' so as not to begin growing too soon, requiring a minimum number of cold days followed by an adequate warm spell before they burst forth.

God it felt good to be on the move today. I had donned shorts for the first time, the air smelled warm, the sun shone on my back, and the horizon of hills broke up the monotony of the skyline and my days. I felt as though I too was coming back to life after a long hibernation. I loved it up there.

And there was just so much to take in, everywhere. Here the first bluebell flower of the year, there a dunnock, a woodlouse, a budding beech tree, a nesting blackbird, a path I hadn't noticed, a pheasant's call, the first fragrance of wild garlic, the sun on my neck. All these things scabbled through my mind at once. It was therefore something of a relief when I found a mossy stump in the woods where I decided to try sitting still for an hour and connect with all this nature.

Richard Louv coined the phrase 'Nature Deficit Disorder' in his influential book *Last Child in the Woods*. Our disconnection with nature threatens our health, our economy and the very future of our relationship with the natural world. Louv highlighted its connection to obesity, attention-deficit disorder, isolation and depression, warning that 'time in nature is not leisure time; it's an essential investment in our children's health (and also, by the way, in our own).' He cautioned that getting more people to spend more time in nature, more regularly is vital if we 'are going to save environmentalism and the environment'. Without spending time in nature, we lose awareness of a world that is real and vital, yet hidden on the other side of our windows, walls and screens. Louv believes 'we need to focus not just on what is lost when nature experience fades, but on what is gained through exposure to natural settings, including nearby nature in urban places.' Nature, even a sliver of it, is available every day, everywhere, for everyone. It was up to me now to notice it and appreciate it.

So I challenged myself to sit on this log for a whole hour. The busier we are and the less time we have to spare, the more we probably need to do this. If you think time is racing far too fast to waste an hour sitting on a tree stump, fear not: this hour will feel like an eternity.

I set an alarm for the end, then put my phone and watch out of sight and out of reach. And then I just sat down on my stump and waited. The book *Under the Open Skies* describes this experience of seeking out a stump to sit on as 'a symbol of the idea that you sometimes have to leave your head and reach down into your heart.'

Here I was then, alone in a wood. I felt I needed a little help to immerse myself in this day and this grid square. It is uncomfortable, but I always benefit from some quiet time. 'Alone is a fact,' wrote

dancer and choreographer Twyla Tharp in *The Creative Habit*. ‘Lonely is how you feel about that.’

Sitting on a stump for an hour with no pen or paper and nobody to talk to is similar to the methods of mindful meditation. It is both an invitation and a challenge. You are observing what is in your head, but not recording it. And as your thoughts whirl, you can only notice them arrive and then allow them to leave. If you are fortunate, who knows, you might settle into a state described by the lovely Gaelic phrase of *ciúnas gan uaigneas*, ‘quietness without loneliness.’ And Mary Oliver observed in ‘How I Go Into the Woods’, ‘I have my way of praying, as you no doubt have yours...’

The hour sprawled into a daunting expanse of time. I heard a dozen different bird calls and watched a bumblebee rustling in dead leaves. I wondered what was for lunch. I felt the sun shining on my face, 660 million tonnes of hydrogen burning every second, and that light and warmth already eight minutes old by the time it reached me.

I closed my eyes and allowed myself to really absorb that warmth. I was certain that the alarm clock had broken and that hours had passed. I squirmed. I yearned for the end. But like the last time I sat still for an hour, my first sensation upon finally hearing the bell was disappointment that it was over. Each hour is a treasure not to be wasted.

The biologist David Haskell is expert at watching nature closely. He visited a one-square-metre patch of forest over the course of a year whilst writing *The Forest Unseen*. Haskell asked himself, ‘can the whole forest be seen through a small contemplative window of leaves, rocks and water?’ His rules to himself were simple: ‘visit often, watch a year circle past, be quiet.’ It is a whole book about a single square metre, which he chose merely by ‘walking haphazardly through the forest and stopping when I found a suitable rock on which to sit.’

It does not matter where you go. It matters only that you go.

One memorable outcome of his observations was ‘to realise that we create wonderful places by giving them our attention, not by finding ‘pristine’ places that will bring wonder to us. Gardens, urban trees, the sky, fields, young forests, a flock of suburban sparrows... Watching them closely is as fruitful as watching an ancient woodland.’

Haskell concluded with some advice for me on my stump today. ‘Leave behind expectations. Hoping for excitement, beauty, violence, enlightenment, or sacrament gets in the way of clear observation and will fog the mind with restlessness. Hope only for an enthusiastic openness of the senses.’

DAISIES

‘The year is but a succession of days, and I see that I could assign some office to each day which, summed up, would be the history of the year. Everything is done in season, and there is no time to spare.’

– Henry David Thoreau

I passed a primary school in a forgotten-looking estate of identikit tower blocks as I cycled into

today's square. The playground was full of joyous shrieks and laughter, and three colourful quotes were displayed on the wall:

- 'Somewhere, something incredible is waiting to be known.' – Carl Sagan
- 'Education is not the filling of a pail, but the lighting of a fire.' – W.B. Yeats
- 'The more you read, the more things that you will know. The more you learn, the more places you'll go.' – Dr Seuss (who, incidentally was not a Doctor, but added it to his pen-name to appease his father who had wanted him to study medicine.)

These are brilliant quotes for an education built on curiosity not box-ticking, but they also summed up what fascinated me about diving deeply into my map. The diversity of living experiences across just 20 kilometres is stark, and I'm not sure I particularly belong in any of them. I feel like an outsider in the towns I come across, and feel more comfortable in the countryside. Yet there too I feel like an imposter when writing about it; I don't work on the land or in conservation and don't really know what I'm talking about. I'm just a concerned onlooker at the car crash, hoping the professionals will arrive soon to save the day. I suspect the experience of getting to know this area would be different if I felt attached to it, perhaps generationally-hefted, and if I had a job that immersed me in the communities here. Perhaps, I asked myself nervously, my fondness for the open road and new horizons was actually a fear of commitment or a sense of isolation and not belonging anywhere?

Around the tower blocks I saw kids bunking school, mums with prams and cans of energy drink, and men in dressing gowns smoking breakfast cigarettes on their doorsteps in the mid-morning sunshine. Meanwhile, I knew that a few hundred metres away there were smart cul de sacs with cherry blossom trees, the kids in school and all the adults already up and in work. Seeing the variety of landscapes around my map is fun; the disparity of opportunities is more jarring.

When this now-scruffy estate was built in the housing crisis after the Second World War, it was opened by Prime Minister Clement Attlee who declared, full of hope, 'we want people to have places they will love; places in which they will be happy and where they will form a community and have a social life and a civic life.'

I can't fairly judge a place from walking around for an hour, but the community library was 'temporarily closed until further notice', the shops sold little but junk food, and every small patch of grass bore signs warning 'No Ball Games. No Cycling.' On the plus side, there was a community gym with an outdoor weights area, a youth club with a football cage, and a café busy with old folk enjoying the sunshine and each other's company.

On one of the grass verges (where fun was forbidden), I noticed small mauve pink flowers growing amongst the dandelions and curls of dog shit. I learned that they were musk stork's bill. What a name! What a delight. It was just an obscure little flower on a scrappy verge, but the name burnished it and made me smile. And the kids in the school playground were still hollering. It's hard not to be optimistic for the world when wild plants are blooming and children are laughing. I smiled and set off to see what else this grid square might reveal.

I rode up and down straight Victorian terraces for a while, brick-built with four chimneys on each roof from the days of coal fires. Those polluting fires are long gone. Reduce also the parked cars that now hem the roads in on both sides and these streets could become a lovely area for outdoor living again, with kids playing ball games and cycling in the streets, and all the sense of community that Clement Attlee had hoped for. I felt optimistic for the future of these streets by the time those school

children reach my age.

I cycled past a road sweeper van (named in the magnificent *Meaning of Liff* as a ‘Vancouver’), bumped over a series of sleeping policemen (another fabulous description), and slowed to allow a blind man to cross the road at a zebra crossing (ditto). He continued carefully on his way, feeling along the pavement edge with his white cane, both of us concentrating on paying attention and noticing. Different ways of exploring and making the invisible visible.^{ccxlix}

I love April. It took this project for me to realise that though. Previously, I would have ranked April as a cold and blustery month, quite far down my list. But this year I have seen how the natural world bursts back into life in April, refilling me with hope and recharging my batteries. Robert Browning pinned the feeling down long before me,

‘Oh, to be in England

Now that April’s there,

And whoever wakes in England

Sees, some morning, unaware,

That the lowest boughs and the brushwood sheaf

Round the elm-tree bole are in tiny leaf,

While the chaffinch sings on the orchard bough

In England—now.’

I walked around a graveyard accompanied by the loud songs of chaffinches, robins and blackbirds. My first red admiral butterfly of the year flitted past, and a sprightly pied wagtail landed on the grass, wagged its tail up and down, then dashed across the grass in search of food. The trees were full of leaves by now, and the grass a mosaic of dandelions and daisies. Those flowers are so common that I almost did not register them or note them as anything interesting. But had I never seen this before, so many daisies and dandelions would have struck me as spectacular. So I made the decision to appreciate them.

Dandelions go by many nicknames such as blowball, cankerwort, doon-head-clock, milk witch, Irish daisy, monks-head and priest’s-crown. Their diuretic properties are well-known, hence one of its French names being ‘*pissenlit*’, or ‘wet the bed’. The French also gave us our word dandelion, for the leaves are said to resemble the teeth of a lion, or ‘*dents de lion*’. It has an evocative name in Chinese which translates to, ‘flower that grows in public spaces by the riverside’.^{cc1} As for daisies, that name comes from ‘*day’s eye*’ because of the way it opens in the morning and closes each evening. Chaucer called the flower the ‘eye of the day’.

‘Of all the floures in the mede,

Than love I most these floures white and rede,

Soch that men callen daisies in our town;

To hem I have so great affection,

As I said erst, when comen is the May,

That in my bedde there daweth me no day

That I nam [I am not] up and walking in the mede,

To seene this flour ayenst the Sunne sprede,

Whan it up riseth early by the morrow.

That blissful sight softeneth all my sorrow.’

I moseyed around the graveyard for a while, discovering that the inventor of the steam locomotive

rested in a pauper's grave here, whilst one of his other colleagues had amassed enough money for a large family tomb.^{ccli} Amongst the centuries' of graves were three Protestant martyrs, burned at the cross.

Such religious fervour is hard to imagine in Britain these days. We are more diverse and tolerant than ever before, despite the ongoing hysterical culture war over our differences. I wondered what the angry folk back then would have made of some of the other churches I came across within this square kilometre, including a Methodist chapel converted into a Vietnamese Buddhist Meditation Centre, The King of Glory Assembly, an old cinema converted into the Evangelical Alliance and Assemblies of God UK, and a corrugated iron warehouse on the industrial estate that was home to The Redeemed Christian Church of God.

I dropped down from the residential streets into the town centre, a hotchpotch of old buildings and alleys mixed with modern 'improvements' – shopping centres, roundabouts and one way systems. There was a 9th Century church by the river as well as plenty of rubbish, and, mysteriously, a neat trinity of tins of chickpeas, new potatoes and tomato sauce. There were two benches to relax on, but a third had been upended into the river. A tall elm tree, as featured in Browning's poem, cast shade over the benches. I didn't recognise it as an elm without the assistance of my ever-present Seek app as they are pretty rare these days following the ravages of Dutch elm disease.

This area was a fashionable area to live until the 17th Century, but seems to have faded rather since then. There have been beer houses here, water mills, clay pipe makers, and greengrocers, all built over the ages on top of the Roman road that forded the river. Today's assortment of small shops served residents from every corner of the Roman Empire and far beyond. At times this year I have missed being in distant lands, but today I enjoyed a bustling reminder of marketplaces around the world, listening to accents from across the globe, and the timeless pleasure of people watching, with shops selling produce from Transylvania, the Philippines, Turkey and more. Opposite the African grocery was a café whose menu board offered eggs florentine and mashed avocado, whilst next door's menu was resolutely old-school:

- Egg, bacon and sausage: £3.20
- Egg, bacon and mushrooms: £3.20
- Egg, bacon and bubble: £3.20
- Egg, bacon and beans: £3.20
- Egg, bacon and tin tomatoes [sic]: £3.20
- Egg, bacon and black pudding: £3.20
- Egg, bacon and onion rings: £3.90

The price hike for onion rings intrigued me...

Tables outside the church had been laid in the sunshine with pink polka dot cloths, bunches of flowers and stands of cakes, tempting me to stop and drink coffee and eat scones.^{cclii} An elderly lady watched me go through the rigmarole of taking a photograph of my scone before scoffing it in far less time than the photo had taken me. I really enjoy taking pictures though, so this never feels like a hassle to me.

'Are you a photographer, or are you learning?' she asked.

'I think you're always a learner, aren't you?' I replied.

It was market day and the High Street was busy with trading stalls and pedestrians browsing racks of

clothes, household goods, vaping supplies and piles of vegetables. Bunting fluttered overhead, criss-crossing the street with red and white St George's cross flags. I liked seeing the display for our saint's day, despite England's general reluctance to celebrate itself.

I pedalled on past the shopping centre and outlet stores towards the industrial estate behind it. I love places like this, with all sorts of banging machines and weird equipment that I don't understand. I peered around curiously, on my way to the open land behind the enormous, redundant gasometer.^{ccliii} The stream through the town centre flowed behind the gasometer, beyond the ford where hermits once helped travellers cross. The river morphed unnoticed under a modern bridge from a small stream into a broad creek, flowing slowly towards the tidal marshes I explored some months ago.

I had begun today with the run-down estate on top of the hill, then cycled down through the thousands of years and layers of a town centre, out beyond the margins of welding businesses and repair shops, and finally past an old mill which was now a 'a luxury collection of apartments where aspirations are brought to life'. I pedalled back up the hill to the neighbourhood where I had begun, a community working hard to make do, with a community network of volunteers helping families through these challenging times.

Travelling round a map segregated into kilometre squares is an arbitrary way to see a place. Lives within each square are also divided and separated, often sharing nothing in common but a postcode. It feels awkward at times, and certainly risky to attempt to conclude too much from my brief passing through. But on a personal level, in ways that are hard to quantify objectively, I have found these randomly-generated snapshots of what life is like for different people, now, in my district and country, has helped me make more sense of my own life. April is a month to look for hope in every corner and to turn your face to the sun whenever you need a reminder that summer always follows winter.

BLUEBELLS

'I do know how to pay attention, how to fall down

*into the grass, how to kneel down in the grass,
how to be idle and blessed, how to stroll through the fields,
which is what I have been doing all day.*

Tell me, what else should I have done?'

– Mary Oliver

'Get out of the bloody field!'

'I'm on a bloody footpath!' I yelled back, both because I was angry and because the 4x4 emblazoned with the land-owning estate's name on the road was far away.

It was an ineffective, hard to hear argument with a man leaning out of a car window, so I turned my

back on the angry driver and continued following the footpath diagonally across a large grassy field. I hate any form of confrontation – even a cross Tweet upsets me all day. But this one particularly annoyed me because I was actually on a public footpath.

I would have understood his anger had there been no right of way and I was trampling down crops, tearing up the field on a motorbike, dropping litter or worrying livestock. But his assumption that he had more right to this wind, sun and sky than me irritated me. I believe we all have a need for access to the natural world, not only for our enjoyment and health, but also if enough of us are to develop a connection and a caring for the natural world to reverse its destruction before it is too late. And I despair that our history and laws put so much of the country in the hands of so few people, and that we have allowed a culture to establish where strolling in the countryside is seen as invasive, damaging or confrontational.

This ‘get off my land’ ticking-off put me in a blue mood when I should have been enjoying the bright blue sunshine or the bloom of bluebells. And it was a shame, because I could see that a lot of trees had recently been planted here, something which always makes me happy, so we probably had far more in common than the gulf in our shouting match suggested. Had we chatted congenially and disagreed agreeably, the two of us would more than likely have ended up cheering for trees but feeling frustrated at government feet-dragging hindering their efforts.

For example, one tree-loving landowner told me they tried to plant 200 acres of woodland, aided by a grant which didn’t go so far as to make the venture profitable nor even balance the books, but at least made it manageable to do the right thing for the land. But they were then told to apply for planning permission to plant that woodland, and by the time it came through, that particular planting grant had been withdrawn. So they were left with tens of thousands of tree whips sitting in their greenhouses awaiting a more encouraging moment. It is so frustrating to hear stories like this.

However, I rode out this beautiful spring morning to look for bluebells, not to get in a grump. And so into the woods I went. I was not disappointed. Bluebells are one of the highlights of my year. Their season is one of the most beautiful times in England, with pockets of shaded woodland overflowing with carpets of beautiful flowers. They grow slowly and take a long time to establish, so woods with bluebells are usually ancient.

Because they flower early in the spring, bluebells provide important nectar to pollinating butterflies, bees and hoverflies. Every year I am taken aback by their abundance and vibrancy. It feels shocking to have such extravagant beauty in our gentle, muted landscape. Yet half of the world’s bluebells are in the UK, and they are one of our natural crown jewels. Beautiful, and worth protecting.

A bluebell’s many colloquial names include English harebell, wild hyacinth, cuckoo’s boots, granfer griggles, witches’ thimbles, lady’s nightcap, fairy flower, and cra’tae – crow’s toes. Folklore stories and fables abound. Bluebells woods were said to be enchanted by wicked fairies who lured and then trapped people. Should you ever hear a bluebell ring, you’re due for a visit from a menacing fairy, and will soon be dead. Picking a bluebell is also hazardous (not to mention illegal to dig up the bulbs), for you may then be led astray by fairies, and destined to wander lost for all time.

Less sinister stories notions were that bluebells were symbols of humility, gratitude and love. Turn one inside out without damaging it, and you would win the person you loved. Wear a wreath of bluebells and you can speak only the truth.

Bluebells had many practical uses in olden times, with their sticky sap used for glueing books and

sticking the fletching feathers onto arrows, whilst Elizabethans crushed the bulbs to get starch for the ruffs of their collars and sleeves. Every grid square in Britain has, over millennia, been changed and managed. Nothing is wild, nothing is untouched. But the plus side is that nowhere comes without layers and layers of history and stories like these woven into it.

With all this history in the landscape, I perpetually risk opening one of those crazy Russian dolls that go on forever (or up to 51, actually, which is the world record for *Matryoshka* dolls). For in every grid square lie Romans and Victorians, Mediaeval farming practices and Neolithic burial beliefs, never mind the aeons of evolution and geology on display. And this is before I even get onto all the tangential ideas that each of these places bring to my mind; memories of other places, plans for future journeys, books I have read or want to write. In other words, my single map is in danger of unfurling into a lifetime of work and wonder. Every grid square has been walked by somebody before me, people whose tales I would love to know.

Louis Macneice put this feeling better than me in his poem, 'Snow':

*'World is crazier and more of it than we think,
Incorrigibly plural. I peel and portion
A tangerine and spit the pips and feel
The drunkenness of things being various.'*

Leaving the wood, I stepped over a ditch full of delicate mauve cuckoo flower and yellow cowslip, then followed a footpath across the fields in the sunshine. To my delight, I saw my first swallows to welcome in the spring. I love the swallow's wittering, chirping song and acrobatic flying that 'catch at my heart and trail it after them like streamers^{ccliv}'. They had arrived back after a gigantic migration from Southern Africa. A swallow has even been sighted in Antarctica, making it the only one of the world's 6,000 species of songbird to have reached all seven continents.

Because they only eat flying insects, the swallows' food sources dwindle at the end of the summer. And so, after a too-brief visit they head south once again, nonchalantly crossing the Sahara desert and covering around 200 miles a day. I doffed my cap to them remembering my own labouring efforts in deserts, whether running marathons in the Sahara or heaving a cumbersome cart through the Empty Quarter. Next year they'll return to us once again, with almost half of swallow pairs returning to the very same nest. Seeing that one swallow today had made my spring.

Bird migration baffled our ancestors, and even Gilbert White struggled to believe in it. A round trip of 12,000 miles seemed so outlandish that alternative theories prevailed for the swallow's mysterious appearance then disappearance. Humans were reluctant to imagine that little birds could accomplish navigational journeys beyond the greatest of our heroic explorers. Perhaps the birds hibernated, people guessed, buried into the mud at the bottom of ponds, or even flew to the moon and back?

It was peak lambing season now. Young lambs pranced in the fields and nudged their mothers for milk. The ewes and lambs were out in the pastures together, with the ewes eating grass and the suckling lambs enjoying a mixed diet of grass and milk that helps them put on a speedy 300 grams per day. The popularity of eating sheep meat (mostly lamb) is declining in the UK, though it is still higher here than in many other countries, probably culturally engrained due to the historical importance of the wool trade in Britain.

Wool exports drove the economy from the 13th to 15th Century and were known as ‘the jewel in the realm’. All Englishmen had to wear a wool cap to church on Sunday to support the wool industry. Even today, the Lord High Chancellor in the House of Lords sits on a woosack as a reminder of those times of wealth. It was the desire for wool that led to the notorious Highland Clearances in the 18th and 19th Centuries which brought eviction and famine to much of rural Scotland. Populations were forcibly removed from the land to create more space for sheep. It destroyed the clan society and led to rural depopulation and mass emigration.

Dominating today’s grid square beyond the fields of sheep was a radio transmitting station, a giant metal spike thrusting high into the sky, dotted with dishes to transmit radio signals across the land. It was a well-chosen location, for I could see all the way across my map and far beyond. The green landscape fell away in every direction, dissolving into the hazy horizon. I walked across a footbridge over the motorway and went into the woods to search for what I was pretty sure would be the highest trig point on my map.

I like the wild land squashed up against motorways. They feel like a secret discovery, un-noticed by the thousands of people thundering by just metres away listening to Radio2CapitalRadio4ClassicFMKiss and drumming on the steering wheel. These fringes of forgotten woodland were becoming one of my favourite hideaways. The soft subtle shades, the stillness and the birdsong all lulled me after the roar of metal, the rush of bright primary colours, the tang of burning fuel and the harsh bright sky on the motorway bridge.

The wood was mostly oak and beech, bursting into leaf, with a carpet of dog mercury beneath. But there were also stands of pine with a bare floor of needles that reminded me of Castille in Spain, but minus the chirrup of cicadas. I had once spent a month hiking through Spain with no money and only my appalling violin busking skills with which to earn my next loaf of bread. I often sought siesta shade from the brutal heat beneath trees like these.

Someone had set up a cross-country running course through the wood, with orange arrows and plastic marker tape hanging all over the place. It always surprised me to find signs that other people have also been in these liminal spaces that I am snuffling around this year.

I found my trig point on the far edge of the wood, enveloped in brambles beside a flinty, ploughed field. It took me three attempts with the ten-second timer on my camera to successfully capture my dash, climb and celebratory pose, but I got there in the end, arms aloft and grinning up on the trig point. The top of my map, spring sunshine, swallows and bluebells. Today was worth smiling about, after all, and no irate landowner who begrudged me enjoying our ancient rights of way was going to spoil that.

SUBURBS

‘Nothing, like something, happens anywhere.’

– Philip Larkin

Much of today's square was taken up by stuff that loosely lumps together under the heading of 'infrastructure'. Railways, roads, roundabouts, railings. Big metal things. Spiked fences. Corrugated sheds. Padlocks. Pylons. Pick-ups with hazard lights. Men in hard hats. Stuff I don't really understand, but I know is important. And all the Keep Out signs in these places are definitely for the best. I tried to get a closer look from outside the fence at a 400kV electricity substation, but its mysteries were obscured by rings of trees because, between 1968 and 1973, an admirable 725,000 tall trees, 915,400 smaller trees and 17,600 ground cover plants were planted to screen substations across the land.

Highways England sort the roads out, National Grid keep the lights on, Network Rail run the trains and UK Power Network Services are, according to their website, 'delivering your energy infrastructure solutions. We optimise your existing assets and integrate new technologies to deliver improved performance and commercial benefits.' That means commercial jargon plus energy stuff, I reckon.

So much goes on behind the scenes to make modern life run smoothly. Not only does everything function, more or less, all this work also pays the bills for countless employees. After all, as economist Adam Smith noted, before popping back home to his mum's for tea, 'It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own self-interest. We address ourselves not to their humanity but to their self-love, and never talk to them of our own necessities, but of their advantages.'

My limited interest in infrastructure and economics exhausted, I followed a cycle path alongside the dual carriageway, dodging glass shards amidst the traffic roar and the smells of hot tarmac and diesel that bring back happy memories of the world's highways. I peered down from a bridge at an overgrown pond, thick with slime and dotted with traffic cones. Then I turned off at a slip road and made my way into town. There were large detached houses at the top of the hill, which became steadily smaller and closer together as I freewheeled down towards the centre. A pony and trap cantered by, trailing a moderately patient line of backed-up traffic in its wake, and I turned off the main road to ride around some suburban residential estates.

I have always enjoyed the grid squares that most approximate wild countryside. But I have also enjoyed busy ones brimming with human life and homes. I have been equally intrigued by the mansions and the poorer areas. Today I was bang in the middle, on street after street of neat and tidy suburbia. The brick houses were neat and tidy with neat and tidy front gardens and practical driveway parking. They varied in size, but they were all polished by aspirational pride and striving for 'familiarity and endurance, security and safety', in the words of *The Buddha of Suburbia*.^{cclv} I didn't see anybody outside, and only occasional cars drove past, slowed by speed bumps. I took a photo of a garden ablaze with tulips next to a neighbour's empty one covered in paving and power-hosed spick and span.

Those tulips had come a long way. Originally growing wild in the valleys of the Tian Shan mountains in Central Asia, tulips have been cultivated for a thousand years. They became popular in the West in the 16th Century after diplomats saw them in the Ottoman court in Constantinople. Their popularity continued to soar until tulips eventually became a valuable, tradable commodity. During a mad period known as Tulip mania, the craze boomed and prices soared, before collapsing spectacularly in February 1637. The apex of the frenzy was a single Semper Augustus bulb whose value was 'sufficient to purchase one of the grandest homes on the most fashionable canal in

Amsterdam, complete with a coach house and a 25 metre garden'. And after the crash it became just a flower bulb once more. Tulip mania was the first recorded asset bubble, leading on to the more recent Dotcom bubble and the US housing bubble.

The suburban streets were comfortable, safe rewards for working hard, living sensibly and settling down. These are all good things, of course. But I wanted to find less order, more nature and more surprises, so I made my way towards the fields behind the cul de sacs, a clear boundary marking the end of the development and the beginning of agriculture. Once I got out into those fields I would see a similarly sharp boundary between the farmland and the remaining fragments of woodland on the edge of my square. The fields were flat and bare, with pylons down the middle and dog walkers around the fringe. They were hard fields to love, so I was pleased to reach the woods.

The woodland was only a scraggly area consisting mostly of runaway saplings and brambles, a poor relic of the original broadleaf forest. It had been felled to create fields, which had become empty of wildlife and its bare, compacted soil was degrading year on year from monoculture crops. And now much of that farmland had been lost to rows of empty streets that all looked the same. I yearned for a little wildness and disorder.

Each generation feels the world they live in is normal, and therefore is not unduly alarmed by its condition. We can't notice how things change unless we get out on the ground to observe them. You sit in the sunshine and enjoy the buzzing of bees and tweeting of birds. You do not sit in horror because the last eight years have been the hottest on record, because our flying insect population has declined by 60% in the last 20 years, and because 80% of our popular birds are in decline. Thankfully, the woods made me feel better immediately, as they always do. This bit of wood was young, but it was on its way back at least. After all, 'the thorn is the mother of the oak'. Scrub is so important for the growth of new woodland that in the 18th Century you risked three months' hard labour and lashes of the whip if you damaged it^{cclvi}.

I came across the framework for someone's treehouse up an oak tree, the ground beneath it strewn with Strongbow Dark Fruit cider cans, one of the default drinks for local litterers. Over the ages, there have been four fashionable periods for treehouses: the Roman era, the Renaissance period, the Romantic period, and right now. We are living in a golden age for treehouse fans. Even Caligula was said to have enjoyed a treehouse in the branches of a plane tree in the Alban hills.

The wealthy Medici family later rekindled the trend in Renaissance Italy and they became popular in England's formal gardens in the 17th Century. Both myself and whoever had been working on this treehouse can attest that treehouses are still fun to build in the 21st Century. I made one a few years ago and love to write up there on summer days when it's too warm to be in my shed.

I headed further into the wood, looking for a comfy spot to brew a cup of coffee. Soon I stumbled upon a homemade BMX track, its berms and bumps constructed carefully from mud and branches. A discarded bottle of Dandelion and Burdock^{cclvii} (£1 for two litres with the equivalent of 20 teaspoons of sugar) was a flashback to my own childhood. The empty lager cans in the bushes, torn and burned pages of school books and shredded air gun targets suggested all sorts of youthful antics beyond riding bikes went on here.

This morning the BMX bandits were all at school, so I had the clearing to myself. I sat in the sunshine and boiled water on my small gas stove. I enjoyed this ritual not so much for the coffee, but for the caesura, the enforced pause and stillness of waiting for water to boil. My weekly forays often felt hectic. I was constantly alert, taking photos, making notes and scanning the landscape. I'm sure

other people would approach it differently, but I don't seem to be able to do anything without descending into a hurry and a challenge. Sitting still with a cup of coffee is my antidote to that. And if you sit still in a wood, you will almost always be rewarded.

I heard the magnificent drumroll of a great spotted woodpecker somewhere beyond the white carpet of star-shaped wood anemones. When there is a covering of these flowers you know that you are in ancient woodland, even if only a couple of hundred metres remains. Wood anemones rarely set seed and spread only six foot per century through their roots. This carpet of little flowers had been a long time in the making. The woodpecker was smashing its head against a tree nearby in search of lunch or love. They don't claim territory by singing, as many birds do. Instead they make themselves known by drumming on dead trees with their beaks. It sounds painful, but their skulls are cushioned with tiny pockets of air and supported with extra strengthened bone tissue. This shock absorption allows them to drum on wood, peck for insects and excavate nest holes.

I finished my coffee and began to ride home in the warm sunshine. It was the sort of day where you leave home in a jacket and gloves, then return in a t-shirt. The sort of grid square that begins boring but ended up taking me somewhere I'd never been before and getting me out to enjoy some miles on my bike. I need these regular doses of exercise and sunshine to help me chill out and get through each week. I envy all the neighbours in the suburbs who enjoy the familiarity and routine of regular life. These scheduled weekly outings of mine were going a long way towards dampening the madness that daily life incites in me, and starting to help me accept and appreciate the gentle curiosities of my local map.

I was also learning to consider where I lived as an interesting natural habitat in itself^{cclviii}. I have been lucky enough to visit savannah and jungle habitats, but wildlife also thrives here in the suburban or urban environments where most of us spend our days. New developments, tidying of scruffy areas and a decline in natural food supplies all add extra stress to these environments, but nonetheless I still saw carnivores like foxes most nights, enjoyed seeing fabulous birds like herons mooching around in manky streams or sparrowhawks doing battle with pigeons. I could see butterflies, hear bees and see plants^{cclix} like shepherd's purse, red dead nettle and creeping wood sorrel valiantly battling through cracks in the concrete. It is fantastic that millions of us live alongside this diversity and can all make an effort to enjoy it and help it.

In exploring this unremarkable corner of the world, I found that there was in fact much to remark upon. I realised that the limitations of any map were more a reflection of my own perceptions, prejudices or lack of curiosity. Every map is worth exploring, and every map is worth saving. In doing so, you might just save yourself too.

CUCKOOS

'Each town should have a park, or rather a primitive forest, of five hundred or a thousand acres, where a stick should never be cut for fuel, a common possession forever, for instruction and

recreation.'

– Henry David Thoreau

I was back on the marshes where I'd begun my journey almost six months ago. I liked it out here. The town lay in the distance, with its prominent wind turbines turning steadily. I preferred these empty corners of my map, the ignored and forgotten places. I was drawn to their anonymity and the distance they put between me and all the things I 'should' be doing in life, the sort of things I imagined everyone else seemed to put up with or enjoy but which left me frustrated and feeling I wanted to be elsewhere. Perhaps that explained my recent indifference to the neat and predictable suburbs. I tended to feel I was the only one, yet I'm sure there were all sorts of other people on my map also pounding the walls and howling at the moon. But I didn't know any of them and never saw anyone out in quiet places like this.

After the recent sunshine, cold, blustery weather had returned. I donned thick gloves that I had put away for the summer and pedalled out through rush hour, slipping past the cars hooting their frustration in traffic jams, including a gleaming baby blue Bentley. Cities with enlightened transport planning systems, like Hong Kong, Zurich or Stockholm^{cclx}, try hard to not only expand public transport access, but also to end the blight of single-occupancy vehicles. A hallowed motto of urban mobility planning is that 'a developed country is not a place where the poor have cars. It's where the rich use public transport.'

I felt myself unwinding as I rode beyond the town into the countryside. The crop fields were thickening and greening nicely. And I was delighted to hear my first cuckoo call of the year. Cuckoos were once part of the soundtrack to an English summer, but I rarely hear them these days, having lost three-quarters of them since the 1980s. Because they lay their eggs in the nests of unwitting hosts, their habitat and feeding conditions must match the meadow pipits, reed warblers or dunnocks that raise the young cuckoos. And so their fate is also intertwined with their hosts'. Agricultural practices are contributing to the decline of all these species, as birds are pushed out of the farmed countryside into what remains of wilder heath areas and uplands.

Brood parasitic birds like cuckoos save themselves the bother of rearing their offspring. They can therefore allocate extra resources to mating and producing more eggs. The host's offspring, meanwhile, have to compete with the imposter baby cuckoo, which even goes as far as evicting all the other eggs or killing the host's hatchlings. To avoid detection, parasitic eggs evolve to mimic their host's eggs, they have harder shells to resist rejection by puncture, and they incubate more quickly, giving the parasitic nestling an extra advantage. The grotesquely gargantuan cuckoo chick remorselessly demands food from the poor host which may be only a tenth the size of the young cuckoo. Nature seems cruel, but she balances her books far better than we do.

I passed through a kissing gate and paused to admire an old timber barn raised on mushroom-shaped staddle stones to raise the stores off the ground and protect them from mice and rising damp. Disappointingly, kissing gates derive their name not from romance but because the swinging hinge 'kisses' both sides of the enclosure rather than being latched like a normal gate. This hasn't stopped the tradition of requesting a kiss from the person who follows you through the gate. As usual I was by myself though, so I just heaved my bike over my head (in a heroic way which would no doubt have inspired any companion to want to kiss me) and then passed through on my own.

Marshlands are one of Britain's most endangered landscapes. They are at risk from rising sea levels and could begin to disappear within the next 20 years. For as well as rising sea levels, wetlands are threatened because they are low lying, accessible and therefore tantalising for 'development'. But besides their own intrinsic value, salt marshes protect against erosion and flooding, and their complex ecosystem is an important refuge for nature.

I followed a chalky, bumpy track across the marsh between two reed-lined drainage ditches. A reed warbler, recently arrived from Africa, burred its lively song. I couldn't spot it in the undergrowth, but the trusty Merlin app^{cclxi} identified its song. Reed warblers weave immaculate basket-like nests that are suspended and concealed in the reeds. Even so, they are not safe from cuckoos, and as many as 10% of reed warbler nests each spring are home to an imposter. Fortunately, because warblers raise multiple clutches of eggs each year, so cuckoos are not too damaging to overall warbler populations.

A heron descended like a paraglider, gliding for about 200 metres without flapping its wings, then braking hard and landing smoothly beside one of the flooded ditches to survey the landscape with its haughty, atavistic gaze. I stood for a while and watched it while a ship on the estuary appeared to drift smoothly past a field of cows. A lark sang overhead as eased in to the sedate pace of marsh life. I passed a fence post covered in bird droppings, a lookout post for a marsh harrier on this low, open terrain. They also nest in the reedbeds and hunt for frogs, mammals and small birds. Their courtship involves remarkable aerial displays with the couple locking talons in the air as they tumble from great heights. Marsh harriers were once very rare but their numbers are increasing now due to habitat restoration, banning certain pesticides and clamping down on illegal shooting and egg collection.

The footpath continued through a herd of big, docile cows who walked over to say hello. The silky black ones were Herefords crossed with Limousin cattle, whilst the leaner ones were crossed with dairy cows. These generally struggle to hold condition as they produce more milk for their calves. Hereford cattle are one of the most widespread breeds in the world, with five million pedigree descendants of Benjamin Tomkin's single bull, Silver, and two calves, Pidgeon and Mottle, that he bred in Herefordshire way back in 1742.^{cclxii}

'Good morning, ladies!' I called out. 'Don't be moody. Do you want to be in my book? The stakes are high, but I'll milk it for all I'm worth. Are you not amused?'

And so on.

Slicing across the marsh was the disused canal I sat by on my first outing. Its construction began with great fanfare, but the era of the railway arrived before it was completed, rendering it instantly obsolete. It eventually opened 25 years after work began, coming in at 11 times over budget (making it perhaps almost as bad an idea as HS2?) Today the canal's towpath is a peaceful path for joggers and cyclists, and its overgrown waters are home to reeds, moorhens, frogs, Lucozade bottles and deflated birthday balloons.

I zipped cheerfully along the towpath which was now part of Sustrans' National Cycle Network, established to encourage us all to ride and walk more. Launched with a £42.5 million National Lottery grant, the NCN is used for over 786 million cycling and walking trips per year, on 12,739 miles of signed routes, of which 5,220 miles are traffic-free paths like this one. A pair of feisty reed warblers almost crashed into my bike, squabbling or courting on the wing and paying scant attention to the giant human on his blue bicycle. I saw, in a vivid split second, one bird fan open its wings, slam on the brakes and veer away from my spinning spokes just in time.

It was a good day to be out on my bike. Spring was in full cry. It comes along slowly, slowly, then all at once. I was in a country that cared, to a greater degree than most nations, about encouraging cycling and walking. I had heard my first cuckoo of the year. And I had chatted to some cows. What more could I ask for this morning?

The Light Half

Beltane

May

CLOUDS

'At any rate, spring is here, even in London N.I., and they can't stop you enjoying it. This is a satisfying reflection. How many a time have I stood watching the toads mating, or a pair of hares having a boxing match in the young corn, and thought of all the important persons who would stop me enjoying this if they could. But luckily they can't... The atom bombs are piling up in the factories, the police are prowling through the cities, the lies are streaming from the loudspeakers, but the earth is still going round the sun, and neither the dictators nor the bureaucrats, deeply as they disapprove of the process, are able to prevent it.'

– George Orwell

First stop: the skate park. It was a school morning so I had the place to myself, and I amused myself for a while riding up and down the ramps on my bike, except for the steepest one which was too scary. The fields were still damp with morning dew when I'd finished mucking about, sparkling with a million tiny diamonds.

The fleeting beauty of these shining droplets, each with an upside down image of the world hanging within it, led to much folklore. It was said that the dew on the first of May had magical properties to bestow a flawless complexion on anyone who washed their faces with it. The diarist Samuel Pepys recorded his wife duly travelling from London out to the countryside in Woolwich on the evening of 30 April 1667, ready to collect May dew 'which Mrs Turner hath taught her is the only thing in the world to wash her face with.'

A rhyme suggested that a maid who rose early on May Day 'and washes in dew from the hawthorn tree, will ever after handsome be.' Variants of the formula suggested the May dew had to come from ivy, or perhaps the grass beneath oak trees. What all agreed on was that it was best at sunrise. To be

sure of catching it, some people stayed out all night to await the dawn. But there may have been additional motives at play here, with the Puritan Philip Stubbes harrumphing in 1583 that out of all the girls who spent May Day eve in the woods, ‘scarcely the third part of them returned home again undefiled.’

The roadside verges were growing thicker and greener every week. Oxeye daisies waved in the backdraft of passing cars. I nibbled a few leaves of garlic mustard, also known as Jack-by-the-hedge.^{cclxiii} Another abundant plant this week was *Galium aparine*, known better by kids as cleavers, clivers, bedstraw, goosegrass, catchweed, stickyweed, sticky bob, stickybud, stickyback, robin-run-the-hedge, sticky willy, sticky willow, stickyjack, stickeljack, grip grass, sticky grass, bobby buttons or whippysticks. I still haven’t grown out of finding it amusing to stick strands of them onto people’s backs when out walking. Ancient Greek shepherds used the hairy stems to make rough sieves to strain milk. The botanist Carl Linnaeus reported the same thing in Sweden, whilst elsewhere in Europe the dried foliage was used for stuffing mattress.

Today’s grid square was a land of huge houses, double garages, and lawns with fountains and sculptures. One garden had a tall monkey puzzle tree. Next door was a beautiful cedar tree with boughs spreading wide over the lawn. Cedar trees always remind me of the flag of Lebanon and my happy time cycling through the mountains there. The cedar tree is mentioned 77 times in the Bible and is synonymous with Lebanon’s mountains. When Lebanon gained its independence from the French in 1943, the new country adopted a white flag with two red stripes and a green cedar tree. The white represented peace and purity, while the red stripes were a reminder of so much bloodshed. This flag though was only the latest in a line of thousands of years of regional history and flag design.^{cclxiv} It is good for your sense of perspective to reflect occasionally on the impermanence of everything we tend to consider fixed and permanent, such as huge cedar trees, landscapes, national flags or, indeed, nations.

Meanwhile, the monkey puzzle tree next door hailed from Chile and Argentina, and was first brought to the UK in 1795 as an ornamental tree. Its distinctive spiky branches have defended it from grazing for 200 million years, though these days it is mostly jays and squirrels feasting on its nuts, rather than dinosaurs^{cclxv}, and they are now sadly endangered^{cclxvi} in the wild.

8400 miles away from Lebanon’s cedar tree, Chile’s flag is a white and red horizontal stripes and a blue square with a white star. Once again, it wasn’t always thus, and I wonder what will come next.^{cclxvii}

Flagging from all this vexillography, or flag design, I rode into the centre of the village where old brick cottages and grand town houses clustered around two appealing pubs (‘it’s too early, Al. It’s too early.’) One house was called ‘The Old Chemist’ and another ‘The Old Butchers’, a reminder of the changes in village life over the centuries. Today’s occupants probably work in an office in the city, have their meat delivered from a supermarket, and buy their medicines online from a warehouse on a distant grid square.

An antique watch restorer had a studio in the village, and he clearly shared my developing interest in random stuff. A note asked, ‘Does anyone know what these pliers were used for? Let me know if you do. Thanks, Mark.’^{cclxviii} There was another peculiar spiky object with a note that asked simply, ‘WHAT IS THIS?’

That mystery had been solved at some point, and an updated note gave the details. ‘Thanks to a customer I can now tell you that this is a larding needle used to inject fat into lean meat. Look up

larding and barding. Best wishes, Mark.' OK, Mark, I shall. The internet informed me that larding beef means to 'artificially marble the meat with fat. The fat is introduced in the beef's cut using a larding needle. The fat injected can be beef fat or more likely pork fat. Barding beef engages wrapping the meat in two or more strips of fat which have the purpose of protecting the meat from drying. There are people who confuse larding beef with barding beef but the difference is very clear.'

I pedalled out of the village and away from the mental madness of becoming engrossed in every single thing my eyes fell upon. I rode down a grassy byway towards a triangle of woodland by the motorway. The mighty oak trees sported their first blush of unfurling green leaves, and a little wren blasted out its surprisingly loud song.^{cclxix} Per unit weight, wrens are ten times louder than a cockerel. They generate such a volume by creating their sounds deep within their body. A syrinx at the bottom of their windpipe is surrounded by a resonating air sac chamber to amplify the song, rather than our weedy little larynx. The syrinx helps birds produce more complex sounds^{cclxx} than other creatures can manage as it is double-barrelled, which for us would be like standing with both a trumpet and a tin whistle in your mouth and being able to play them individually using the air from each lung.

A footpath led through the wood and crossed the motorway on a narrow footbridge.^{cclxxi} I was grateful and impressed it existed, for the bridge must have cost a fortune and seemed little used. It would have been easy to have simply ignored this old footpath when they built the motorway and left the right of way as a redundant dead end. But instead it remains part of England and Wales' commendable 140,000 miles of public rights of way^{cclxxii}.

On the other side of the motorway, heathland stretched towards the tall fences of a quarry. Once again I was hurrying for no good reason, so I chose to notice that the sky was a deep blue and the fluffy white clouds were scudding along in the high altitude winds. I lay down and looked up at the sky for a few minutes. The sun felt wonderful on my face as I studied the clouds and imagined the shapes I could see, just like Hamlet did.

'Do you see yonder cloud that's almost in shape of a camel?' he asked.

Polonius: By the mass, and 'tis like a camel, indeed.

Hamlet: Methinks it is like a weasel.

Polonius: It is backed like a weasel.

Hamlet: Or like a whale?

Polonius: Very like a whale.'^{cclxxiii}

The quarry had gouged a chasm 20 metres down into the earth, a mind-boggling number of sand castles as the quarry excavated building sand, top soil, southern side sand, equestrian sand, reject sand and silica sand. To pick just a couple of these categories, silica sand has been used in glass making for thousands of years, and was a vital component of the industrial revolution.^{cclxxiv} Topsoil, the first layer to be excavated in a quarry, is high in organic matter and invaluable for growing plants. Indeed, it is one of the most important and under-rated components of life on earth.

Alarmingly, almost 4 million hectares of soil are at risk of compaction in England and Wales^{cclxxv}, 2 million hectares are at risk of erosion, intensive agriculture has caused arable soils to lose about 40 to 60% of their organic carbon, and soil degradation now costs us over £1 billion every year. Worse than that though, if we continue to neglect the soil as we do now, losing it far faster than it is created, then the world could run out of topsoil in as little as 60 years, with disastrous consequences. We need

to shift our farming systems to ones that use less fertiliser, reduce ploughing, and use cover crops and crop rotation if we are to repair the soil we depend upon.

Almost all the world's food depends on soil. It cleans our water, prevents flooding and protects against drought. It captures colossal amounts of carbon, more than trees, and it regenerates in a miraculous self-sustaining cycle.^{cclxxvi} Every cubic metre of soil contains hundreds of thousands of creatures, and a single teaspoonful has around a kilometre of tangled fungal filaments and more organisms than there are people on earth.^{cclxxvii} We take the soil shockingly for granted, but an ancient Sanscrit text wisely cautioned, 'upon this handful of soil our survival depends. Husband it and it will grow our food, our fuel, and our shelter and surround us with beauty. Abuse it and the soil will collapse and die, taking humanity with it.'

Looking down into the quarry, it was jarring that a man-made hole had literally reshaped the landscape. I am used to towns and roads so none of that reshaping looks shocking to me anymore. But this huge hole prompted a small nudge in my awareness about our endless desire for development^{cclxxviii} and the impact we have had on every single square of my map.

GREEN MAN

'I am alarmed when it happens that I have walked a mile into the woods bodily, without getting there in spirit. In my afternoon walk I would fain forget all my morning occupations and my obligations to Society. But it sometimes happens that I cannot easily shake off the village. The thought of some work will run in my head and I am not where my body is – I am out of my senses. In my walks I would fain return to my senses. What business have I in the woods, if I am thinking of something out of the woods?'

– Henry David Thoreau

As a child, my bedroom overlooked the village green and I have been fond of those open spaces ever since. My brother and I used to hang out there with our two friends from over the road. It was our amphitheatre, the scene of day-long two-on-two rugby matches, and a cricket pitch with the twin hazards of horrific bounce after the cows had been herded across the green, and the risk of a lost ball if an exuberant hook sent it flying into the garden of the grumpy man who lived in the cottage in the centre of the green.

Given that it was early May, it was apt that the pub on today's charming village green was called The Green Man. Found in various guises throughout history, the Green Man usually takes the form of a green head sprouting leaves and foliage. His origins are murky, but he has been carved in churches and buildings for a thousand years, a symbol of spring's rebirth and the cycle of life. The Romans had similar figures, as seen for example in Nero's Golden House palace. Bacchus, their god of wine, nature and harvest, was often portrayed as a leaf-crowned lord, so he could perhaps be the origin of

our Green Man.^{cclxxix}

The Gaelic quarter day festival of Beltane is one of the many worldwide celebrations of May, a community celebration of summer's return. The origin of the word Beltane is 'bright fire' for, as always, bonfires played an important role. Fire purifies and heals, and revellers danced around the flames revelling in the return of the light after the cold, dark months. As the animals were put out to spring pastures, farmers made sure to first drive their cattle between the bonfires to bring them protection.

Cheered not only by the leafy trees and the village green, but by the fact that the pub would be open in a couple of hours, I cycled out of the village past an old red phone box that had been converted into a community library and larder ('Bring what you can, take what you need'), and past the Polling Station holding today's local elections. I turned down a rutted farm track wedged between green hedges. These were usually thick and well-maintained, brilliant for wildlife. We have half a million miles of hedgerows, a fraction of what we had a century ago, but still a brilliant ecological building block and vital to nature's recovery. The verges were flush with bluebells, a clue that here had once been forest, for some woodland species linger like lonely ghosts even once the trees themselves have been felled, their roots grubbed out, and the wild land turned over to cattle.

I blooming love May. Everything was blooming and beginning again. I muttered a snippet of Larkin that popped into my head.

'The trees are coming into leaf.

Like something almost being said.

Last year is dead, they seem to say,

Begin afresh, afresh, afresh.'

Little of what I was taught at school or university remains in my head. But I had an English teacher who forced us each week to remember quotations or snippets of poetry, and I'm often thankful for it.

I shoved my way down an overgrown byway and emerged into a shaded wood spectacularly carpeted with bluebells in every direction. The footpath was pocked with horses' hoof prints and I wondered idly why horses wear shoes but other farm animals do not. Apparently wild horses amble long distances over rough grassland, which gradually toughens their hooves, similar to us going barefoot for the summer. But domestic horses don't exercise as much, and when they do so it is generally on softer, damp ground, so horseshoes are needed to stop their hooves from wearing down or splitting.

I pootled happily across a farm down grassy footpaths, unlikely to accidentally veer off course with the abundance of passive aggressive 'please keep to the path' signs (backed up with 'no through route' signs) plastered everywhere away from the thinnest of lines that I was permitted to tread in the countryside. But this was a morning for expansive enjoyment, so I chose not to feel unwelcome.

The warm air was fresh after last night's rain. Beneath a blue sky dotted with white clouds, the hornbeam trees (the hardest wood in Europe, used by the Romans for building chariots) were unfurling their new leaves above banks of greater stitchwort's pretty, star-shaped, white flowers. Like most hedgerow plants, most of us today would not notice it nor know its name (me included, until Seek taught me), and yet over the centuries the small flower has accrued a host of nicknames, including wedding cakes, star-of-Bethlehem, milk maids, little dicky shirt fronts, and daddy's-shirt-

buttons, as well as snapdragon due to its brittle stems and poppers, snap jack or nanny crackers for its seed pods that pop on warm summer days when ripe. I'd love to time travel back to when everyone in a village knew the names, uses and stories of every little flower.

I nosed around the grid square for a couple of hours before inevitably succumbing to the lure of the pub with its tables laid out on the village green in the sunshine. As I sipped my pint, I reflected on the experience of getting outside and seeing what was different every single week. I was now halfway through my year: 26 weeks and 26 squares down. Documenting it had helped me pay more attention (as opposed to, say, walking the dog with my headphones in) and I had immersed myself in the turning of the seasons, explored places I never knew existed and learned about all sorts of things.

Once you become notice how impermanent is the state of each day, and interested in these constant shifts in nature's calendar, then there is always something to spark your curiosity.

The Japanese calendar was traditionally divided into 24 periods, beginning with *Risshun*, 'the beginning of spring', and finishing with *Daikan*, 'the greater cold'. But the year was also sub-divided into 72 micro-seasons, each lasting for around five days and marking the near-continuous changes in nature around us. They have beautiful, melodic names, such as *Kōō kenkan su* or 'bush warblers begin singing in the mountains'. Others that I like include 'Fish emerge from the ice', 'Mist starts to linger', 'Swallows return', 'Frogs start singing', 'Dew glistens white on grass', 'Wild geese return', 'Bears start hibernating in their dens', and 'Ice thickens on streams'. I would happily have listed them all. I have sometimes toyed with the idea of creating my own version of that calendar, paying detailed attention to what happens outside my shed over the span of a year.

With half my year on this map under my belt, any grid square with a patch of woodland on it currently wins my affections the most. I love being in the trees whatever the season or weather. Yet whilst bluebell woods are delightful, not even they could match a beer in the sunshine, with summer and freedom on the horizon once more.

BUTTERCUPS

'The world will never starve for want of wonders; but only for want of wonder.'

– G.K. Chesterton

You should sit in nature for twenty minutes every day, they say, unless you're too busy; then you should sit for an hour. So I sat for a while on the bench on a small, triangular village green because I thought I was too busy to be doing this today. It was a cold and blustery morning and I was wearing hat and gloves again and hunkering deep down into my collar. As I entered the second half of my year on this small map, I worried I had already seen everything there was to see, and I was in a bit of a grump because this square looked dull on the map. But a few minutes of stillness helped settle me into a calmer mood and slow my impatient mind.

A sign on the green said the village was supporting ‘No Mow May’, which explained why the grass was peppered with wildflowers. In Britain we revere short, stripy lawns. But the charity Plantlife urges us to enjoy the beauty and wildlife benefits that come from not mowing for a month and allowing lawns, greens and verges to run a little wild. After ‘No Mow May’, as many as 200 different species can be found flowering on lawns, including rarities such as meadow saxifrage, knotted clover and eyebright, with an abundance of daisy, white clover and selfheal. The longer you leave a lawn un-mown, the wider the range of flowers, whilst cutting the grass every four weeks generates the greatest production of flowers and nectar.

Cycling out of the village, my first stop was a field absolutely covered in buttercups. The buttercup’s sap is toxic for humans and animals. Mediaeval beggars rubbed the irritant sap on their skin to create sores, hoping to receive more sympathy and money. Over in Sardinia, anyone foolish enough to eat the poisonous flower was believed to develop a twisted grin before keeling over. ^{cclxxx} This may have been the origin of the ‘sardonic smile’.

I remember as a boy holding buttercups under friends’ chins to ‘test’ if they liked butter. ^{cclxxxi} The butter test is a sweet game, but the flower’s Latin name, *Ranunculus*, nods to darker folklore. The story goes that Ranunculus was a boy who dressed always in gold and green silk. He ran through the forests all day, singing loudly until the wood nymphs got fed up with him. They turned the lad into a buttercup and banished him to live in the open meadows.

In parts of America the buttercup is called coyote’s eye. Legend has it that the coyote was busy tossing his eyes in the air and catching them (details are hazy as to why he was doing such a thing, and how he managed to catch his eyes if he couldn’t see them...) when an eagle swooped down and snatched them away. The coyote was forced to fashion new eyes out of buttercups.

I was photographing the field of buttercups when a lawn mower (the job description, not the machine) stopped his van, wound down the window and asked, ‘What lens are you using?’

It was an odd question, and not the sort you usually expect when a white van man skids to a stop and winds down his window. But I’m always happy to talk lenses.

‘A 24-70 f4,’ I said. ‘Not wide enough to be wide, not zoomed enough for the long shots. Not brilliant at anything, but quite a useful all-rounder. Maybe a bit like me.’

It turned out, however, that the man did not actually want to ask me about my camera equipment. He wanted to tell me about his own. He spent ten minutes pulling out each lens from the camera bag on the passenger seat and telling me all about them. I liked his enthusiasm. He also explained why he loved his job mowing people’s lawns.

‘I go to some pretty nice places, so I always take my gear with me. There’s loads of stuff to photograph and put online.’

Both of us were going about similar things in different ways. We both liked seeing new places, capturing them and sharing them, and had gone about finding jobs that allowed us to get outdoors and do what we enjoyed.

‘What about No Mow May?’ I asked.

‘Bloody stupid idea!’ he laughed.

I wished him well and made my way into the woods to make coffee. I was pleased to see that they were managed by The Woodland Trust, a conservation charity I'm fond of.^{cclxxxii} A sign pointed out that many ash trees had been felled to manage ash dieback, and sprayed orange blazes on trees marked those which were next for the chainsaw to try to stop the spread of the disease. I felt sad to see so many condemned trees.^{cclxxxiii} Ash makes up 12% of our woodlands, so dieback is going to radically change the appearance of our countryside for decades to come. It will cost billions and put strain on the many species^{cclxxxiv} that rely on ash trees, including dormice, bullfinches, privet hawkmoths and nuthatches.

Finding a chain-sawed tree in a beautiful clearing of bluebells, I made the most of the tragic situation by manoeuvring a smooth white slab of ash wood to make a temporary coffee table. I even used the spirit level app ^{cclxxxv}on my phone to ensure it was perfectly level. As I fired up my little gas stove to boil water I admired my handiwork and uncharacteristic attention to detail. Soon my moka pot was roaring happily and I turned off the flame to enjoy the sudden silence and the dark, strong coffee.^{cclxxxvi} Taking the time to sip a decent cup of coffee out in nature^{cclxxxvii} has been a treat this year.

A free-wheeling, no-handed downhill ride is another of life's delights (also included on my list are picking blackberries, fresh snow, peeing off high places and jumping into rivers.) I flew down through a tunnel of green trees towards a village spread across the foot of the valley. The hills were unusually steep in today's grid square and one climb even got me up out of the saddle and panting in granny gear, which felt rather damning for someone who had cycled over mountain ranges in fitter times gone by.

I passed a field that was half wheat, half wild land. The difference between the green monoculture and the haphazard variety of the meadow sprinkled with dozens of varieties of plants like purple ground ivy, crosswort and burdock, was a clear illustration of the environmental impact of feeding us all. Efficient calories, but at a cost to nature.

Meanwhile, at my feet, a loveliness of ladybirds (a fine collective noun) were going about things their own way, quietly foraging for lunch on a patch of nettles. There is a greater mass of insects on earth than humans, and yet they tread far more gently than us, barring the occasional biblical locust swarm, I suppose! Every year, we dump 8 million tonnes of plastic into the oceans. Every day, we burn 100 million barrels of oil. Every minute, we subsidise the fossil fuel industry by £8.8 million. And every second, we cut down a football field's worth of forest^{cclxxxviii}. Ladybirds, meanwhile, nibble a few aphids and look cool.

The name 'ladybird' is a contraction of 'Our Lady's bird'. In early Christian art, Mary was often depicted wearing a red cloak, and the insect's seven spots symbolised her seven joys and sorrows. The German name for ladybirds, *Marienkäfer*, translates to Marybeetle. In Hebrew, it is known as 'Moses' little cow', whilst the Dutch word '*lieveheersbeestje*' translates as 'little animal of our Lord',^{cclxxxix} and its name in Irish, Polish and Russian all translate to 'God's little cow'.

Along a quiet lane I passed four or five people each walking a pair of greyhounds on leads. They had come out from the professional greyhound kennels down the road to stretch their legs. I used to enjoy an evening at the dogs in Wimbledon before the stadium closed, as many others have now done. Greyhound racing began through the 'sport' of coursing, or hunting hares, which is still practiced but now illegal. Greyhounds are a spectacular sight when sprinting. They run at 45 mph – Usain Bolt hit 27 mph – and are in the air for 75% of the time when in full flight. These graceful dogs were depicted in the tombs of Egyptian pharaohs, and are the only breed of dog name-checked

in the King James Bible.

I continued back up to the top of the valley, along narrow strips of footpath fenced off from broad horse pastures by electric fences. Horses seemed to have more rights to roam on this map than I did. It was a beautiful valley, green and wooded in all directions. I liked being able to see the whole grid square in one expanse, appreciating the lie of the land and realising quite how large a square kilometre is when you travel slowly around it. You cover a kilometre in a mere 30 seconds on the motorway, and you have to run across five such grid squares to complete one of the popular and achievable parkruns. So a kilometre is a small distance, yet it is also as large as you want it to be when you slow down and immerse yourself in it.

I could hear kids playing at the school down in the valley, lorries rumbling along the nearby motorway, and birds singing in the woods. The world looked verdant, lush and full of life. I too felt full of life, restored and entirely different to my mood when I arrived here this morning.

SWIFTS

‘Also, as I stand listening for the wren and sweltering in my great-coat, I hear the woods filled with the hum of insects – as if my hearing were affected – and thus the summer choir begins. The silent spaces have begun to be filled.’

– Henry David Thoreau

I found an elevated spot where I could peep through the building site’s fences and look down on the new town being built right across what used to be a blank grid square. Yet the land here has never really been blank. Even humans’ brief history stretches all the way back to the Neanderthal hand axes discovered nearby, tools used to butcher animals and make clothes.^{ccxc} I’ve heard that sort of fact so often that it didn’t really astonish me. But learning that the axes were made by *Homo heidelbergensis*^{ccxcj}, an extinct species of archaic human, rather than by us, reminded me how rare it is for there to be just one species in a genus (known as a monotypic genus^{ccxcii}), a dubious lonely honour we share with the dugong, narwhal, platypus and not much else.

There used to be nine species of human,^{ccxciii} and the fact that only we remain is testament to our aggressive, expansionist success, wiping out species along the way from woolly mammoths and Australia’s megafauna to the recent ivory-billed woodpecker and splendid poison frog (the first two examples when I asked Google what has gone extinct recently). We are a uniquely dangerous species. *But* our success over the other *Homo* species was also due to our superior skills of communication and community. Yes, we wreck everything. But we are also well-suited to fixing problems, if only we choose to do so. We need to tell the different stories that will ignite everybody to care about the perilous state of our natural world and the impact its collapse is having on people across the world. And then we need our local, national and international communities to work together and turn that around.

Only a few years ago this grid square had been an expanse of peaceful emptiness, but it had now been swallowed by the construction of an entire new town that sprawled across this square and many others. As I looked over the emerging streets I struggled to take it all in. How does this happen? How can a town spring from the earth where my map still implied countryside?

Ignoring that I live in a house, buy things in shops and use roads every day, I'd rather see countryside than towns. But those facts are, of course, impossible to ignore. We all depend upon the concretification^{ccxciv} of the landscape^{ccxcv} for our modern, connected lives, and we all live on streets that used to be meadow or forest. On my shed wall I have a map from 1884 titled 'London Before The Houses'. It shows mostly green woodland and marshy floodplains, with rivers that have now disappeared underground or into drainage channels: Bridge Creek, the Effra, the Fleet, West Bourne and the like. Images like this help me to imagine how things used to be and I enjoy nosing around the old maps on the National Library of Scotland's [website](#). The map of London and the emergence of this new town both remind me to be mindful of the impact we make on nature. Look out of the window. All the buildings you see did not used to be there. It is all imposed on a land that used to be wild. We need towns, of course, but it is worth remaining cognisant of their cost.

I set off along an old footpath, squeezed now between barriers to keep the public safely off the building site. Hawthorn flowers, those darling buds of May, pushed through the railings, their froth of white blossom looking exuberant and full of life. Shakespeare's sonnet proclaimed,

*'Rough winds do shake the darling buds of May,
And summer's lease hath all too short a date.'*

Today's rough winds were swirling clouds of dust from the building site up into the air and reminding me that even if we strip nature from a grid square and cover it in houses, we are still part of the wild universe. Wind is simply air moving around due to the sun heating the earth unevenly.^{ccxcvi} We can't see wind, but we can feel it. It blew explorers across oceans, mingles our pollution with our neighbours', disperses seeds, whips sandstorms from African deserts to our northern skies, and dries our washing on the line. Invisible and untamed, wind scours and carves our landscapes. I remember seeing rare trees on the Patagonian steppe that were permanently bowed by the wind's relentless onslaught.

Around the world, winds are bestowed with evocative local names like Bora, Chinook, Haboob, Harmattan, Mistral and Scirocco. The only named wind in Britain is the Helm Wind, a strong north-easterly that hits the slopes of Cross Fell in Cumbria. I always found wind unsettling when travelling in remote places on my own. But back home I like wind, as I do with every form of extreme weather, confirming that at heart I'm still a kid itching to run around the playground^{ccxcvii} on windy days with my anorak lifted over my head like a parachute.

CCTV cameras peered at me as I followed the spiked fence around the perimeter of the development. While they looked at me, I looked at some split gill mushrooms growing on a fallen log and checked the time by blowing a dandelion clock. After flowering, the dandelion's petals dry and drop off, and the ball of seeds develops. When the wind blows (perhaps a Bora, a Harmattan, or a breeze over this new town), the seeds soar into the air. Each one has a white beard bundle of around 100 bristles, known as a pappus from the old Greek word for grandfather, which acts like a parachute, helping it to fly further. An air bubble known as a vortex ring, unknown elsewhere in nature, surrounds the seed while it spins, perfectly stabilised by the geometry and design of the pappus. This results in four times extra drag to further slow their descent.

I continued down a narrow green path that was overgrown with riotous growth from the recent mild weather. I edged round an impenetrable mass of brambles and beneath a huge pylon, its cables all a-fizzing and crackling. I hate that sound and always imagine it is frazzling directly into my skull.^{ccxcviii} An even more intimidating noise was the dual carriageway that the footpath now ran alongside. I was virtually on the hard shoulder and butted right up against the violent, roaring, stinking, awesome power and urgency of modern life. What on earth would the local Neanderthals have made of all this? What or who will be here in another 400,000 years from now?

Part of the new town had been built on the site on an old cement quarry. White cliffs dropped into the wide chalky bowl that was already filled with completed buildings. I free-wheeled down the smooth new roads, past the blossom of a solitary cherry tree and followed my nose towards a lake I had seen from my vantage point. I expected it would be fenced off, out of bounds, danger, keep out, as usual, but I felt I ought to try.

And then there they were. Down by the little lake. Swifts! Hundreds of them screaming around the sky, winnowing the air, back from their migration to Africa. They're back! Every year I celebrate my first sighting of a swift, as did poet Ted Hughes, in his joyful poem.

*'Fifteenth of May. Cherry blossom. The swifts
Materialize at the tip of a long scream
Of needle. 'Look. They're back. Look.' And they're gone
On a steep*

*Controlled scream of skid
Round the house-end and away under the cherries...*

*They've made it again,
Which means the globe's still working, the Creation's
Still waking refreshed, our summer's
Still all to come.'*

'They've made it again, which means the globe's still working'. I love that line, and the optimism that nature can fill us with. It was ironic that I had found the swifts on a grid square where I'd assumed the story was going to be about the removal of nature. Instead, I discovered this lovely pond lined with reedbeds, and birch trees were rewilding the quarry walls with a steep greenness that felt more like the Austrian Alps than English suburbia. Crowning it all was the majesty of the swifts.

Swifts are right up there amongst my favourite wild creatures and score extra for heralding that summer evenings are on their way again. I envy swifts, for they exist in perpetual summer. They live in the heavens, ancient birds soaring and swooping as they watched continents take form and mammals evolve. Today they hurtle recklessly around our chimney tops, exuding joy and life itself. Swifts belong nowhere and everywhere, soaring nomads surfing on the winds of heaven.

I loved watching the dramatic antics of swifts as they barrelled over me like boisterous delinquents. In damp weather they swoop low over ponds and lakes, but on fair days they gorge on flying insects high overhead. They gather up to 10,000 aphids, midges and other insects each day on the wing, a lifestyle threatened by pesticide use and habitat loss. Swifts migrate to us from Africa, navigating through mysterious magic^{ccxcix} and covering thousands of miles at tremendous speed to nest in our eaves and share our buildings, as they have done for millennia. But not for much longer. Modern building designs exclude swifts and they are in genuine danger of vanishing from the UK.

We have lost over half our swifts in the past 25 years, placing them on the Red List of species threatened with local extinction. This is heart-breaking for a special bird that separated taxonomically from other birds way back when they flew amongst the last of the Tyrannosaurs. For them to be lost on our generation's watch would be shameful, but we do also hold it in our powers to be their saviour.

The swift is the UK's fastest bird in level flight. They can hit 60 mph and blast through 500 miles in a day, a million miles or more in a life on the wing. When they leave their nests for the first time, young swifts do not touch earth again for a couple of years, until they return to breed in the place where they were born. They spend almost their entire life in the air, feeding, migrating, sleeping and mating on the wing. At dusk they climb to 10,000 feet, the soaring evening vesper flight, and drift half asleep through the dark skies.

Inspired by the swifts' wild and enviable freedom, I hopped over a low fence and cycled round the back of the lake. It was ridiculous how guilty I felt about this 'trespass', though I was doing nothing more sinister than riding my bike along a track in an old quarry. The absurd notion that I'm not allowed in most of nature has been so ingrained in me that I feel uneasy every time I do a gentle, totally harmless thing such as this.

Behind the rustling reedbeds, a thicket of young trees and sea buckthorn was growing vigorously. This was a tucked-away corner of my grid square that was testament to the wonders of self-regeneration. It had certainly been a surprise to find one of the quietest, wildest corners of my map on this noisy building site of a grid square. I would have gone for a quick swim in the lake but was sure that would result in someone wearing hi-vis coming to yell at me. Instead I enjoyed sitting round the back of the lake for a while, out of sight of anyone, watching wild swifts and house martins rejoicing overhead. They've made it again, which means the globe's still working.

June

FLOW

'If you know one landscape well, you will look at all other landscapes differently. And if you learn to love one place, sometimes you can also learn to love another.'

– Anne Michaels

The sun shone and I dug out a pair of shorts to welcome in June. My legs shone alabaster white, brighter than the sun. The lightness I felt today made me aware of how sluggish I was throughout the dark half of the year. Today though, I was alert and enthusiastic. Even better, a chalk stream kissed the corner of today's grid square. So I began there, with the banks shaded by overhanging willow trees and lined with pink foxgloves, and the clear water burbling cheerfully. Trout nosed gently into the current beneath an arched brick bridge, with an inscription saying it had been rebuilt in 1773. Whilst the fish were free to swim, a 'Private Property' sign chained across the river prohibited curious explorers from enjoying the stream.

Chalk streams formed when the last ice age receded ten millennia ago and the melting ice shaped the

distinctive gravel beds that still determine their ecology today. There are only 210 true chalk streams in the world, and 160 of them are in England, so they are perhaps our most important contribution to nature. They bubble deep from springs then run cold and clear thanks to the slow filtration of the chalk. They are beautiful and irreplaceable, and yet we do not care for them at all.

Our rivers are being destroyed by pesticides, herbicides and run-off from industrial farming, and also from water companies dumping sewage or sucking them dry in response to political pressure to prioritise cheap water and their shareholders' thirst for dividends. Before Brexit, the government had committed to clean up rivers by 2027. At the time of writing, however, this pledge has been knocked back to 2063, meaning I may never swim in a truly clean river in England in my lifetime. My mind boggles at the water company executives claiming £100,000 bonuses^{ccc} whilst consistently missing their pollution targets, and at the individuals in Whitehall offices who've decided this is a legacy they are content to live with.

On the riverbank, a *Metasequoia* tree had been planted by 'a friend of the village and enthusiastic gardener on his hundredth birthday'. A plaque read, 'The *Metasequoia glyptostroboides* is the living relic of a fossil genus which thrived 125 million years ago. Discovered in China in 1941, its seeds were first germinated in the UK in 1948'. I am always intrigued by anything not directly related to warfare that happened during the years of the Second World War,^{ccci} that some people were diligently going about lives undistracted by fighting or fascism. Although one of my favourite things about this year has been how intrigued I now am by absolutely everything. Annie Dillard^{ccci}, that perennial enthusiast, wrote that 'if you cultivate a healthy poverty and simplicity, so that finding a penny will literally make your day, then, since the world is in fact planted in pennies, you have with your poverty bought a lifetime of days. It is that simple. What you see is what you get.'

Over the road from the fossil tree, an 18th Century corn mill had been converted into prosperous homes. One had a beware of the dog sign outside, '*Cave Canem*', a replica of the mosaic from the House of the Tragic Poet buried in Pompeii by the eruption of Mount Vesuvius in 79 AD, the same year Chester was founded by the Romans and General Agricola marched against Scotland. This map has sent me ricocheting backwards and forwards through history much more than I had anticipated. I pedalled past the old jail house, circa 1602, a cute white clapboard cottage that looked as though a small child had been the architect. The jail was part of a whole street of quirky old homes which was jammed up against the brutalist noise and speed of a motorway. The different paces of life spanning the centuries is discordant.

Rushing cars echoed loudly off the concrete as I walked under the massive motorway bridge, and pigeons flew in from the bright sunshine to roost in the gloom. The construction effort of this one bridge must have been monumental, weighing thousands of tonnes and costing millions of pounds. In Great Britain, there are 247,100 miles of tarmac roads. We take that for granted, but if you compare that number to our 150,000 miles of footpaths, you start to get an idea of how much life has changed since the village jail was last full of highwaymen.^{ccciii}

Beyond the motorway, I headed up a path on the edge of a hillside meadow. Half the field had already been mown and gathered to be stored for animal fodder in the winter. Another sweet-smelling section had been cut and left to dry, and the final part of the field still awaited mowing. The grass was knee high and golden. ^{ccciv}

I enjoyed climbing the hill, sticking to my rule of not looking around until I reached the top to make sure that I get the full enjoyment of seeing the view for the first time in all its magnificence. It was a beautiful day, the first that had felt like summer, and the sky was shimmering over a landscape of

trees, fields, villages and motorways. The river valley curved away into the distance, following the flow up towards the chalk stream's source in the hills beyond the boundary of my map.

I looked forward to wombling around the wood that spanned the top half of the grid square. It had been formally opened by Sir David Attenborough, no less. An information board promised it was 'a fascinating area of old woodland rich in trees, wildflowers and animals'. There was a long list of all the species I could look forward to seeing. The sun was shining, I was in a wood on top of a hill: this was everything that makes me happy.

Sadly though, roaming the wood was upsetting, for most of it had been felled in a clear-cutting operation far beyond the usual levels of coppicing. There were piles of timber everywhere and it was hard to see the wood for the lack of the trees. Most of the sweet chestnut trees had been removed and all that remained were some sorry-looking saplings and a couple of muddy, silted-up ponds. The motorways on two sides of the wood were louder than the feeble birdsong I heard.

The destruction was due to an invasion of the Oriental chestnut gall wasp, and the wood had been cleared to try to limit its spread. The pest could have a serious impact on sweet chestnut populations if it spreads too much. I was relieved that this work had been done to protect the wood's future, rather than a permanent demolition job. We have had sweet chestnut trees in Britain for over a thousand years (anecdotally, if unreliably^{cccv} pinned to the Romans importing them). For me, that feels long enough for the tree to count as an honorary native to our countryside. I'm happy to embrace a slowly-shifting landscape, like a gentle stream's meandering route changes, so long as it is not being diminished.

Purists, on the other hand, consider native trees to be only those that arrived naturally, without human input, after the last ice age. In which case, we have only 32 truly native trees in Britain. These are ash, aspen, bay willow, beech, bird cherry, black poplar, box, common alder, common juniper, crab apple, crack willow, downy birch, field maple, hawthorn, hazel, holly, hornbeam, large-leaved lime, midland thorn, pedunculate oak, rowan, sallow, Scots pine, sessile oak, silver birch, small-leaved lime, white willow, whitebeam, wild cherry, wild service tree, wych elm, and yew.

I left the remains of the wood down a footpath frothing with cow parsley, six foot high and rising on both sides of the path. I love its fresh heads of tiny flowers and the deep smell of summer days. A pair of blackcaps sang their hearts out in the hedge, flitting amongst the branches with their shorter, less full version of a blackbird's chorus. The warbler's delicate song has earned it the nickname of 'northern nightingale'. I would never have noticed a blackcap before I began exploring this map, and never taken the time to identify a bird by its song.

I sat down on a park bench engraved 'In loving memory of Arthur Harris and Dorothy Harris, and their dog Smirnoff'. From the bench's modest elevation I could look out for miles across motorways and farmland. I no longer felt I was trapped on a claustrophobic, restraining map. This was all my empire, as far as the eye could see. I felt myself drawn towards the neighbouring grid square, and from there onwards towards the next one and the next one, and on to the borders of my map, like Kipling's Explorer, for whom a voice whispered, *'Something hidden. Go and find it. Go and look behind the Ranges – Something lost behind the Ranges. Lost and waiting for you. Go.'*

But I knew I mustn't be greedy, that I should wait until the time came for me to investigate the squares over there. It was satisfying to gradually piece together the jigsaw where I had lived for more than a decade. I felt as though until now I had lived on this map, but never really lived *in* it. Perhaps

this meandering, unplanned journey was slowly helping to change that.

ECLIPSE

'Will it not be employment enough to watch the progress of the seasons?'

– Henry David Thoreau

The map promised waterfalls. I was not expecting the 979 metres of Venezuela's Angel Falls (named after the American explorer and pilot, Jimmy Angel, whose plane crashed on Auyán-Tepuí in 1937), the volume of Inga Falls in the DRC (more than 46 million litres per second), nor even the Denmark Strait cataract (an undersea waterfall that plummets unseen for 3,500 metres in the Atlantic Ocean). But the word 'waterfall' was not something I had expected to see annotated on my suburban lowland map, so I was excited to investigate.

My heart sank when I saw that the stream ran straight across a golf course. Golf courses are like a certain type of model. On first glimpse your eyes light up at the swathes of undulating, lovely lushness. But very quickly your passion plummets at the emptiness of what you see, the lack of nature concealed beneath an artificial, preened veneer. The golf course did not bode well for my waterfalls.

Sure enough, the stream had been corralled into artificial culverts and tunnels and there was no sign of a waterfall. A second one was marked further along in a wood. Determinedly, I waded up the stream through thick undergrowth to try to find it, but the stream passed into a private garden and I was reluctant to go further. I could see though that this waterfall had been tamed too, turned into a concrete channel that fell forlornly a foot or two. I was disappointed, but not surprised. I would not be finding waterfalls on my map after all.

I had, at least, enjoyed walking up the ankle-deep stream on this warm June day. Dazzling blue dragonflies shimmered around the water, although later research taught me that they were in fact damselflies, creatures I never even knew existed. Specifically, they were beautiful demoiselles which are, well, beautiful. Male beautiful demoiselles are a gorgeous metallic turquoise colour, which they flaunt in elaborate flying dances, whilst the females have green bodies and brown wings. You might mistake them for dragonflies, as I did, but once you know that damselflies rest with their wings closed and dragonflies rest with them open, the distinction is easy.

When you see a path going off into the woods, the sensible thing to do is take it. It might make all the difference. I passed through a gap in a hedge, probably too large to be a *smeuse* but the word is so superior to 'gap' that I'm going to squeeze it in here.^{ccvi} I pushed through ferns gleaming in the sunlight with a fluorescent glow. They are ancient plants, over 300 million years old, that dominated the earth before flowering plants came on the scene. Dinosaurs roamed through spectacular ferns up to one hundred feet tall.

Once again I had arrived in today's square in a stupid mad rush to tick everything off. So I forced myself to slow down by putting the Seek app to work in a field of knee-high grasses. Meadows feel

vibrantly alive in the summer, filled with colour and the buzz of insects.

The first plant the app identified for me was common sorrel, with edible lemony leaves and local names that include cuckoo's meat and butter and eggs. This prompted me to WhatsApp an old friend of mine who had named his daughter Sorrel. I had not seen him in many years, and in very different circumstances. Here I was, trying to slow down and remind myself that there was a world and a heaven in a tiny wildflower meadow in England, but also pinging a message thousands of miles across continents through the ether. My friend replied in seconds, pleased to be back in contact, and sending me photos of his Sorrel in the beautiful mountains where they now live.

There is wildness and beauty here; there is wild and beauty on the other side of the world. Which is better? Perhaps the one you are in right now, so long as you are not just yearning for the other? That was certainly my own personal goal for this year, to find beauty in the here and now rather than spending my days longing for faraway places.

I was pleased when my map-reading skills pinned down an inconspicuous footpath. We are lucky to have such good maps in the UK, and I appreciated having been taught to interpret them and read them well. There is a satisfying utility in being able to interpret maps and be able to transpose their lines and symbols into an idea of what the land will be like. Their story dates all the way back to the intriguing Gough Map of 1360 which was one of the earliest maps to show Britain in a recognisable form.^{cccvii}

The footpath I'd found was clearly not popular, for it was completely overgrown with nettles. June is a time of maximum daylight and maximum growth, the very opposite end of the year to the denuded, dark days of December. I braced myself, then launched myself in shorts and t-shirt into the stinger attack. I have a wary respect of nettles that is probably overblown from a childhood dread of their stings. The Romans first brought nettle seeds into Britain, combatting our harsh climate by flogging themselves with their stinging stems to generate heat and improve circulation.

A nettle's sting is like a hypodermic needle, injecting a venomous cocktail of histamine, acetylcholine and 5-hydroxytryptamine. This prickly threat, however, also makes them a haven for over 40 species of invertebrates who like to nestle between the stinging hairs. This bounty of hidden prey in turns attracts amphibians, hedgehogs and agile birds, meaning that a patch of nettles left alone at the foot of your garden is great for nature.

Once I was heroically through the nettles (with much squealing) I channeled my inner Bear Grylls and picked some dock leaves to rub on the nettle stings. Everyone knows that dock leaves cure nettle stings. Except that they don't.^{cccviii} (Better, actually, to use *Plantago major*, aka the humble plantain.^{cccix}) It's sad how little I know about the wild plants all around us, and the inadvertent assumption that animals are inherently more interesting, my plant blindness^{cccix}, is something I've been consciously trying to address this year.

The bluebells had vanished from the woods now, despite being resplendent only a few weeks ago. Only their stems remained. It was rare this year for me to notice what went away as the seasons turned, what was *not* present. I was usually so distracted by all the new stuff that appeared every week that I fully focused on that. A baby squirrel scampered across my path then ran up a tall horse chestnut tree, whose giant, candle-like flowers were in full bloom. In a couple of months, these will become conkers to feed what, by then, will be a full-sized squirrel, whose occasional forgetfulness might allow one of its hoard to germinate and grow into a new tree.

Continuing through the patchwork of farmland and horse paddocks that made up this corner of the map, I saw a small yacht, forgotten and forlorn, mouldering beneath a tarpaulin and marooned in a field far from a rising tide. I wonder what percentage of yachts ever get sailed, and how many days they spend under sail. With all the oceans of the world awaiting, my wanderer's heart went out in sympathy to the stranded boat and her unfulfilled dreams.

A handful of beautiful stone cottages, hundreds of years old, clustered around an old manor and farmhouse. Trellises of roses arched over the doorways. A sign gave the address of the manor's website, but visiting it redirected me to an eye-opening Asian porn site. Moving on from this idyllic, timeless hamlet (and pouting webcam girls), I followed a narrow path wedged up against the railway line (all hail to the nettle-strimmer here).

I came across a yard of lock-up garages in a field of ragwort, filled with cages of loud, angry dogs who intimidated me even from behind their bars. CCTV cameras kept an eye on the space, a punchbag hung in the empty work yard, and the area outside the unit was strewn with knackered vans and piles of half-burned rubbish. Whatever went on here was a million miles (and a few hundred metres) from the tranquil scene of respectability I had recently photographed up in the hamlet.

I didn't linger here with my camera, but moved on swiftly into the next field where my map promised a pond. In fact the whole field had been bulldozed in preparation for new houses and for some reason was strewn with more shards of plastic than pebbles.

Mass production of plastics only began in earnest after the Second World War. But it has spiralled so far out of control that we have now manufactured 8.3 billion tonnes of plastic, most of it as disposable products. Three-quarters of all that has already become waste and less than 10% has been recycled. As plastic takes several centuries to break down, it all still exists in landfills, litter and, ultimately, in the oceans, where 8 million tonnes of plastic ends up each year. Imagine 15 shopping bags filled with plastic piled up on every single metre of shoreline across the planet; that's how much plastic we dump in the oceans every year. At our current rate, there will be 12 billion tonnes of plastic in landfill by 2050, and more plastic in the sea than fish.

Meanwhile, the beautiful natural world battled on, miraculously and resolutely. Delicate blooms of elder flowers filled the hedgerows around the field filled with plastic. I thought about gathering some to make elderflower cocktail as I like the idea of foraged food using simple, local ingredients. But the recipes I found online were heavy on imported lemons and sugar, with only a few flowers from the local hedge chucked in for good measure. So I gave up on that idea and instead cheered the first green woodpecker I had seen on these outings, a surprisingly chunky fellow bobbing and hopping over the ground. The green woodpecker uses its tongue for foraging, an astonishing organ so long that it coils round the back of the skull, over the bird's eyes, and into its right nostril! It is one third the length of the bird's entire body. Cumbersome, perhaps, but magnificent for feasting on ants.

My phone alarm began ringing while I was crossing back over the golf course on a footpath that ran precariously across the driving range. I had set it to remind me that a partial eclipse of the sun was due to begin shortly. The last eclipse I had seen was whilst driving from Las Vegas to Zion's magnificent cliffs and canyons. Today, I settled down on the outfield of a cricket pitch to lie back and look up. But the sunny morning had now clouded over, which was frustrating for my appointment with the heavens, but minor compared to the tribulations of the French astronomer Guillaume Le

Gentil.

Commissioned by the French Academy of Sciences to record Venus's transition of the sun, he spent months sailing to India in 1761 to observe the event. Alas, the Indian territory of Pondicherry was under siege from English warships, so he was sent back to Mauritius and missed the transit. Rather than meekly give up, Le Gentil stayed in Mauritius making plans to study the next transit of Venus instead. In 1766, he set sail for Manila to watch it, but was accused of being a spy. He fled back to Pondicherry, hoping to observe the transit there. But on the day of the big event in 1769, the sky suddenly clouded over and he missed it altogether. Le Gentil decided that enough was enough and set off for home, a journey that in itself took more than a year to complete. He eventually made it back to France in 1771, a decade after first setting sail!

Having stared at clouds for all of two minutes, unable to see the eclipse, I knew *exactly* how Le Gentil felt. Fortunately for me, my patience was rewarded and at that moment the cloud thinned into perfect eclipse-watching conditions with just enough cover to stop me frazzling my retina like some sort of moronic American President as I pointed my camera up at the sun in search of Instagram glory. The moon passed in front of the sun, munching a fair-sized bite from the disc, and I marvelled at this reminder on my cricket pitch that there is a hell of a big universe out there beyond my map.

MEADOWS

'The answer must be, I think, that beauty and grace are performed whether or not we will or sense them. The least we can do is try to be there.'

– Annie Dillard

I was free for the morning and my latest grid square lay before me, beginning with the rare pleasure of a segregated cycle lane, safe from the busy road that sliced this square in half. North of the road lay wheat fields ripened in the recent heat. South of the road was filled with a 1940s housing estate built.^{cccxi} The noisy road was once a major Roman route, though it was already an ancient thoroughfare by the time they arrived to straighten and pave it. I wonder what traffic will be here another two thousand years from now?

A row of houses had recently been built between the road and the wheat fields that had been forest when the Romans began carving through this land in the name of progress. Loss of landscape is always most apparent when you see developments backing directly onto countryside. The new builds were extravagant expanses of glass and steel, with large gravel areas for parking multiple cars. Sparrows jostled noisily in pink rose bushes and petals fell amongst the squabbling. A placard in one garden campaigned against a 'green belt grab'^{cccxii} that proposed to build 4000 more homes around here. This summed up the difficulties of deciding where to build. This family was enjoying their new home but understandably did not want all the neighbouring fields to be built on too. I don't like countryside being turned into towns, but I also want everyone to have a home. Answers on a postcard to your MP, please.

I turned down a farm track and passed a fly-tipped safe, a novel addition to the usual broken sofas,

babies' high chairs, and bags of builders' rubbish. It was stolen, no doubt, but still unopened. I imagined the thieves' frustration as they dumped it in this field after failing to smash the door open. The summer verges around the rubbish were flush with meadow foxtail, ribwort plantain, cocksfoot, salsify and buttercups. Heat reflected back up at me from the stony track. The land here was so flat that a hill about 100 metres high to the north of us looked exotic and wild. I could see for miles. Larks sang overhead, sounding as pretty damn delighted with these summer days as I felt.

On the other side of the main road was the sprawling estate. I stooped to watch a snail slither slowly across the pavement. They have been measured at speeds of 0.048 kilometres per hour, significantly slower than both the speedy sloth (0.24 kph) or a galloping giant tortoise (0.27 kph). The top snail speed in the Guinness Gastropod Championship, held over a 33 cm course in the O'Conor Don, London's oldest Irish pub, is a dizzying 0.0085 kph, racked up by a snail called Archie. How does it experience the world differently to me? Does a snail feel it is missing out on the world by moving so slowly and seeing so little? Or is it mindful of all that it encounters and deems that richness to be more than enough? Or is it merely an invertebrate with a set of ganglia and no brain with which to dredge up laborious metaphors?

I wasn't sure where the snail was going, or what it hoped to eat once it got there. At first glance the only plants I could see on these streets were the weeds growing through the cracks of a neglected basketball court whose ring had been ripped from the backboard. I pedalled past a primary school and the smell of school dinners triggered an instant sensory flashback to memories of mashed potato and compartmentalised plastic trays.^{cccxiii} The local pub was offering three shots for £5 (prompting student flashbacks) at the end of a row of off licences and takeaways.

Fast food is nothing new, despite the modern health crisis it is contributing to. The story of the humble chip dates all the way back to the 17th Century, with both Belgium and France claiming ownership. Chips may actually have been invented as an alternative to fried fish, rather than as its perfect partner. One harsh winter, when rivers froze over and no fish was available, resourceful cooks began slicing potatoes into fish shapes and frying them as a substitute.^{cccxiv} By 1863, John Lees was selling fish and chips from a wooden hut in Mossley market in Lancashire. Southerners like to claim that Joseph Malin's east London fish and chip shop was already in business by 1860. What is undisputed though, is that the concept galloped across Victorian Britain and by the 1920s there were over 35,000 fish and chip shops. I was heartened to learn that there are actually fewer takeaways today, though fish and chips are now outsold by burgers, fried chicken, pizza, Indian, and Chinese food.

A thin strip of tangled weeds ran between a wooden fence and a footpath strewn with fast food rubbish. I stopped to look closer and found barley, dandelions, nipplewort, common mallow humming with pollen-dusted bumblebees, and many more plants I did not know. And then that footpath led me to discover a small wild common and nature reserve tucked up behind the housing estate. It was a delightful surprise and a real treat. I walked for an hour or so around wonderful chalk meadows without seeing another person or any litter among the long grass, scrub and thickets resulting from old hedges growing and spreading.

With only 3% of our wildflower meadows remaining, I felt so fortunate to have found this one on my map, a wonderful habitat supporting a whole food web of insects, animals and birds. We have destroyed wild meadows equivalent to an area one and a half times the size of Wales. So I had been delighted to read about the success of the No Mow May campaign, with councils in London mowing one-third less grass than usual^{cccxv}, resulting in messier, better spaces for wildlife.^{cccxvi}

At this time of year, boring old grass (a phrase that will insult agrostologists, for sure) bursts into exotic life and reveals its true colours.^{cccxvii} My Seek app ticked off tufted vetch and hairy vetch, orchard grass, common soft brome and wild clover, the shimmering hearts of quaking grass, purple scabious, ribwort plantain, lilac knapweed, ragged robin, and swathes of yellow meadow brimming with autumn hawkbit. What wonderful names. The beautiful colours and textures of all these grasses waved gently in the warm, sunlit breeze, as they have done for millions of years.

I heard blackcaps and blackbirds belting out their summer anthems. An information board informed me that 29 species of bird had been identified here. I wasn't sure I could even think of 29 different birds. This was a mere scrap of wildness, about as large as 20 football pitches, but it was a tiny haven that had been left alone when the houses all around it were built. I was so pleased to have stumbled upon it, and it challenged my perception of the absence of nature in this densely-inhabited neighbourhood.

Apart from glimpses between the trees of the built-up area below and some kids' graffiti on the sign boards ('Jesse West is going to get his shit rocked by Eliza Valicy'), I could have been walking through an older and wilder landscape. This was how much of Britain used to look, and it had reestablished itself, from monoculture farmland, in just a few decades. Once we start using land more thoughtfully, there will be far more space for both people and nature in this country. I hope that in years to come we will be able to walk once more a wilder Britain as we recover the meadows that we have lost.

SOLSTICE

'This is June, the month of grass and leaves... I feel a little flustered in my thoughts, as if I might be too late. Each season is but an infinitesimal point. It no longer comes than it is gone.'

– Henry David Thoreau

I sheltered beneath a large hornbeam tree reframing my attitude to rain. Parking the grumbles and persuading myself instead how gleaming clean the trees looked. Appreciating the gun barrel granite skies. Remembering that a day out in the rain is better than a day in the office. That kind of thing.

It had been tipping down all week, culminating at last in one of those wonderful clear-the-air summer rainstorms when the sky darkens, bursts, rinses, and then the sun comes out to polish the gleaming new world. One of my favourite smells is of the air after a storm, the earthy scent of petrichor, from the Greek words '*petros*' (stone) and '*ichor*' (the blood of the gods).

We humans think our sense of smell is not much to be sniffed at in comparison to other animals, but we are actually astonishingly good at smelling geosmin, a chemical released by dead microbes that is responsible for the heady smells of petrichor and pools of water. We can detect geosmin at a level of 5 parts per trillion, which is 200,000 times more sensitive than sharks^{cccxviii} are to the scent of blood.

One theory for why we are so sensitive to it is that detecting water in the savannah landscapes we evolved in was a vital evolutionary advantage.

There was certainly no shortage of water to sniff today beyond the boughs of my tree umbrella. Rain was bucketing from the sky and sluicing off the fields. But, suitably motivated now, I ducked down a narrow holloway in a wood shiny with rain and spiky with nettles. So often on these grid squares I have thought I must be the first person ever to go this way. Who else would have come down this short path going from nowhere much to nowhere else? But, of course, each footpath exists because they have been trod by unseen footprints over hundreds of years, originally as a way to get from here to there, and these days to walk your dog while checking emails and listening to music. You can't easily make your own footpath. They are a collaborative effort. Without all of us unseen partners doing our bit, paths will not remain open to survive the ravages of brambles, building or ploughing. I assumed I never saw anyone because I went out during the working week, but it might also be because I went out even in the pouring rain.

Today I had the holloway to myself, though its very existence was certainly proof of footsteps beyond number passing this way over the millennia. Holloways are sometimes so deep that they feel more like tunnels than tracks, formed by the tread of traffic over centuries and assisted by water erosion.

Tangles of tree roots gaped from the banks of the holloway. Fungi grew in the damp leaf litter, small shy huddles of grey-capped mushrooms. I spotted a cluster of King Alfred's cakes, a fungi that grows on the surface of rotting wood, particularly beech and ash. They darken with age and live on the decaying deadwood for years. When dried, they make useful tinder for lighting fires, burning slowly like charcoal, but with pungent smoke.

The round black fungi are named after the king's famously poor baking skills when he was on the run from invading Vikings back in the year 878. Alfred took refuge in a peasant woman's home in Somerset, and she allegedly asked him to keep an eye on the cakes (small loaves) baking by the fire. Domesticity rarely being a forté of pampered royalty, the king let the cakes burn, earning himself a scolding for his scolding.

I came out today partly through habit, but mostly because it was the summer solstice which is up there with Christmas Day, my birthday and June 16, the day I left school, as the most prominent dates in my year. The longest day. Midsummer. Yet today it was lashing down, and I know from experience that rain is not a rarity on the summer solstice. For many years I encouraged tribes of enthusiastic adventurers to go sleep on a hill for a summer solstice microadventure challenge and we often seemed to get soaked!

In the northern hemisphere, the summer solstice marks the sun reaching its northern limit. The position of the sunrise and sunset creeps north then south over the course of the year. Today was the astronomical start of summer, though meteorologists generally mark summer as beginning on June 1. The solstice doesn't always land precisely on June 21, but to aid my little brain this is the date I generally mark it, taking note of my shortest noonday shadow of the year.

I left the wood and followed a path along the edge of a field sown with young corn and clearly appetising to a melanistic black rabbit nibbling away at the crop. These darker animals are a natural variant, despite being seemingly much more visible to foxes or weasels. The laws of heredity, which dimly remind me of school lessons about monks and pea plants, produces a certain number of dark rabbits each year.

By now my bike's wheels were so clogged with mud that I had to resort to carrying it until I reached a road again. So much for midsummer. Jackdaws called noisily in the trees as I grunted along. The jackdaw call is a familiar hard 'tchack' sound which gives the bird its name and generally reminds me of midwinter dusks and the smell of coal fires. Unlike their noisy cousins the rooks, jackdaws get by with brief yet meaningful conversations. They pair for life, share food and are smart enough to recognise human faces and to communicate using their eyes, as we do. I liked watching the jackdaws go about their business with their cheerful, upbeat manner.^{cccix}

Jackdaws live lightly on the land and cause little harm to their habitat, though farmers still sometimes shoot them. Having just defended the Corvid family, I then spotted a crow flying off with a baby bird from a treetop nest. Daily life in nature revolves around such moments of life, death, hunger and loss. If I had passed by a few seconds earlier or later I would have missed the commotion. There is so much drama that we never witness.

Spending time in woodland always cheers me up, so I was happy to head into the trees on the north of the grid square. I sat for a few minutes near a badger sett with tonnes of sticky earth heaped outside, just listening and watching. I must have been hard to spot in the rainy green gloom, dressed in a green raincoat, for a blackbird flew low towards me on my log, then did an emergency last minute hard left turn around a beech tree to evade me, its wings beating audibly like a drum.

The warblers, tits and thrushes were in full voice this morning. I thought how different woods would feel if birdsong was a jarring, stupid noise (like donkeys or sheep, say). We find birdsong relaxing and reassuring because over time we learned that when the birds were singing we were also safe from predation. It is when the birds stop singing that we are alerted to start worrying. A silent spring should fill us with fear. Birdsong begins early in the morning with the dawn chorus, a sign that the day has begun and it's time to get moving again. And so birdsong also stimulates us cognitively. Scientists at the University of Surrey have studied the 'restorative benefits of birdsong', discovering that, of all the natural sounds, birdsongs were those most often cited as helping people recover from stress and restoring focus and attention.

The Seek app continued to teach me, as well as helping me to travel slowly, pay attention and be curious. Today I learned about stinking iris with its bright orange fruits sheathed in pods. It is said to smell of rotting meat, but I had a cold and could smell nothing. A burst of yellow fungus caught my eye on a dark, wet log which I learned had the magnificent name of hairy curtain crust.

Down at the foot of the hill clusters of red poppies stood out against the green hedgerow, their petals like crinkled tissue paper and covered with raindrop jewels. The poppy species *Papaver somniferum* is the source of opium and morphine, and has been used since ancient times for pain relief, recreation, and the sprinkly little seeds you get on fancy bread rolls.

Since dormant poppy seeds bloomed into heart-breaking, blood red colour on the mud-wrecked fields of the First World War, they have become a symbol of remembrance for fallen soldiers. Canadian doctor John McCrae featured poppies in his poem 'In Flanders Fields', written at the battle of Ypres. Inspired by the poem, American humanitarian Moina Michael then campaigned to make the poppy a symbol of remembrance for those who died in the war.^{cccxx}

Bees feasted amongst the poppies on the purple flowers of spiky thistles, while mullein moth caterpillars painstakingly shredded giant burdock leaves. The internet offered me scant information about them, except for various gardeners' strategies for destroying them. Personally I loved their livery of black dots on yellow and white stripes, and admired the adult moth's ingenious camouflage

that looked perfectly like a bit of twig.

Most of my personal expertise about caterpillars comes from enjoying *The Very Hungry Caterpillar* which has sold more than 55 million copies around the world. Eric Carle made the book using collage techniques, with layers of coloured tissue paper used to tell the story of a voraciously greedy caterpillar scoffing every child's dream feast. The nature-loving author came up with the idea whilst playing around with a hole punch and imagining a worm eating through a book. His editor suggested that a caterpillar would work better in the book, resulting in millions of sales and almost as many indignant letters pointing out that caterpillars form chrysalises, not cocoons. I only hope that the many mistakes I've certainly made in this book result in equally vast numbers of sales, if not so many complaints.

I've often celebrated the summer solstice by heading off to wild places for a microadventure, but this year I was quite content to have stayed local. It was the lightest day of the year. The hottest months of summer were on their way and I had much to look forward to about exploring my map through this light half of the year.

July

JADED

'Man is the most insane species. He worships an invisible God and destroys a visible Nature. Unaware that this Nature he's destroying is this God he's worshiping.'

– Hubert Reeves

Each week I arrived in my grid square with little idea of what would capture my attention that day, but an increased certainty that something would. Like all good exploration, I had hints and hopes about what I might find, but each square had also surprised me in some way.

That meant that if I found a square under-whelming, with little to interest me or catch the eye of my camera, the fault was likely to be mine. Some squares buoyed my mood, whilst others merely matched it. Was how much I saw dependent on how much I looked? A boring square wasn't its fault, it was my fault. I knew that as I struggled round today's streets, but I also excused myself on the grounds of illness. I had sweated and shivered through the night, unable to sleep. In the morning I dragged myself to my shed to work, but after an ineffectual hour of pretending to write a book, I decided to try to salvage something useful from the day by getting my camera and cycling out to investigate a grid square.

What I had noticed on the map before heading out was the total concretification of today's square. There was only one footpath, running for 80 metres behind a row of houses, and one tiny scrap of thicket tucked between a fold of main road and a roundabout. The rest of the kilometre square was a man-made mosaic of streets, railways and roads. Washing lines and trampolines. Rows of terraced houses. But roses too, for my first surprise on arriving was how much greenery I saw. Potholed

alleyways behind the houses had grass growing in the middle, and brambles and nettles sprouted around each garage topped with barbed wire.

A cedar tree spread its expansive boughs in front of a 1980s development of tiny retirement bungalows. The grass outside a tower block was full of clover and buttercups. Elder bushes had taken seed on the flat roofs of a row of lock-ups. Yellow hawkweed flowers burst through broken concrete in parking bays. The ignored gaps between semi-detached homes were filling with undergrowth (and mattresses, beer cans and plastic bottles). The verges of the railway line looked as lush and impenetrable as any jungle. Almost 15,000 species live alongside us in urban areas, and ‘nature goes on existing unofficially^{cccxxi}’, with George Orwell’s pleasing thought that none of it ‘pays a halfpenny of rent’.^{cccxxii}

Crossing the railway line I was struck by how green the embankments were too. Collectively, they add up to thousands of miles of wild land and have become important corridors for nature. Railway tunnels and cuttings also offer habitats for animals and plants to thrive in. Network Rail says they ‘work closely with national and local organisations to make sure we meet, and where possible exceed, the legal requirements when it comes to protecting species and enhancing their environment. Our project work can have an immediate impact on local biodiversity, but we’re testing methods of giving back to the natural environment more than our work has taken – often known as a net positive approach.’^{cccxxiii} This was heartening to read.

I tucked down an alley behind a hostel for homeless people and out onto a high street busy with traffic, fast food franchises, cafés, barbers, charity shops and convenience stores, including a Slovakian, Bulgarian and Lithuanian grocery. These shops serviced the rows of terraced houses covering the grid square, built in stages over the past century. The older streets bristled with chimney pots, the intermediate ones with no chimneys had front gardens and lock-up garages round the back, and the newest streets just had space to park as many cars as possible right outside the front door. Any pretence at gardens had gone in the latest round of building.

‘Stop Smoking, Start Vaping’ urged a sign at the vape shop. Good for business, I guess, but probably the first half of the sentence alone would make for better advice. I have never tried vaping so was tempted to pop in and indulge my curiosity. But I already have enough bad habits so I just carried on my way, past an antiques shop offering ‘Antiques Olde and Modern’. I popped into the newsagent’s next door and emerged with a homemade vegetable samosa and a Diet Coke.

Despite being considered a classic Indian snack, the samosa’s origins are more complex, like many tales of immigration and assimilation. They weave back at least as far as a 10th Century Persian text mentioning the ‘*sanbosag*’, or ‘triangular pastry’. The variations travelled along the trade routes from North Africa to East Asia via travelling merchants and mingling cultures. The samosa reached India via Middle Eastern cooks hired to work in the kitchens of Muslim nobles. A 14th Century account of the court of the Sultan of Delhi described the ‘*sanbosag*, a small pie stuffed with minced meat, almonds, pistachio, walnuts and spices’.

Diet Coke’s history is less storied, and its ingredients more mysterious than the humble samosa. Ordinary Coke contains a ludicrous seven teaspoons of sugar in each can so I switched my bad habit to Diet Coke. Coca Cola try to minimise the fakeness of aspartame by saying that it’s made from the same building blocks of protein found in everyday foods, like meat, fish and eggs. That sounds nicer than describing it as a methyl ester of the aspartic acid/phenylalanine dipeptide. Either way, I know that I’d be better off heeding Cristiano Ronaldo’s viral advice to drink ‘*água*’ rather than Coke.

But that is sweetened with something weird made in a lab, which can't be good. Heed Rule 19 from food writer Michael Pollan's excellent guidelines for eating well: 'If it's a plant, eat it. It was made in a plant, don't.'^{cccxxiv} I also like the most famous of his recommendations, 'Eat food. Not too much. Mostly plants.'^{cccxxv}

The cheerful chatter and laughter of playtime in a primary school carried down the length of the street. Matching the children for exuberance was a quarrel of sparrows in a privet hedge (another perfect collective noun). It was the only strip of hedge on the street, about three metres long, but it was a haven for the birds. Sparrow numbers are plummeting, with London losing 70% between 1994 and 2001. Culprits range from cats to pollution, but an inexorable paving over of their habitat surely makes it worse. It's a far cry from the book *Nature Near London*^{cccxxvi}, which marvelled back in 1883 that 'sparrows crowd every hedge and field, their numbers are incredible.'

As I pedalled around slowly, still feeling a bit sorry for myself, I shared the streets with Amazon delivery vans, Deliveroo mopeds doing the lunch runs, and some young mums with toddlers. A man leaned on an upstairs windowsill, drumming his fingers, gazing out, but whatever he was seeing was inside his mind, not down here on the street. Two old men on a street corner chatted about the England cricket team. A couple of streets down, I passed two other men discussing the local non-league football team. Someone was hoovering a car. A postman knocked on a door then turned away when it wasn't answered. A window cleaner reached up to the first floor with a long mop. An old lady stood and watched him.

What makes a grid square interesting? Is it everything that lives there, or at least the things you notice? Is it what makes you curious, sparks connections and ideas? Or is it that intangible sensation of how a place makes you feel, its sense of place? Within this square, people were living and dying. Loving and crying. It was busy with people driving and walking, working and resting, eating and drinking, sitting and chatting. I might well have passed one of the ten murderers we each walk by in our lives or missed some soulmate for life.

'None of us thought of the others we would never meet or how our lives would all contain this hour.'

It's not what you see, it's how you look and the way this then makes you feel. Every square is a sample of a larger map, and perhaps each one has anything you choose to find in it.

As JA Baker wrote in *The Peregrine*, 'the hardest thing of all to see is what is really there.'

Thoreau summed the challenge up well, of course, 'it's not what you look at that matters, it's what you see.'

HOVERING

'At present, in this vicinity, the best part of the land is not private property; the landscape is not

owned, and the walker enjoys comparative freedom. But possibly the day will come when it will be partitioned off into so-called pleasure-grounds, in which a few will take a narrow and exclusive pleasure only, when fences shall be multiplied, and man-traps and other engines invented to confine men to the *public* road, and walking over the surface of God's earth shall be construed to mean trespassing on some gentleman's grounds. To enjoy a thing exclusively is commonly to exclude yourself from the true enjoyment of it. Let us improve our opportunities, then, before the evil days come.'

– Henry David Thoreau

This map of mine might cover only 20 kilometres, but it seemed at times to span a thousand worlds. From winter to summer, welcoming smiles to grumpy shouts, and from last week's jaded streets to this long grass, humming with butterflies, where I lay on my back, alone and undisturbed, and enjoyed the warmth of the sun on my face. Down in the distance I could see the city's gleaming glass towers to the east, shimmering in the midsummer haze. I lay there for a while, listening, hovering over myself in my mind's eye, allowing myself to settle into the grid square and its vibe. The day was still, with only birdsong and the thrum of a nearby motorway in the air. 'The language of birds is very ancient,' wrote Gilbert White in a letter. 'Little is said, but much is meant and understood.'

Shaking the warm lethargy from my limbs, I walked over a couple of fields and found myself in one of the most beautiful landscapes of my map. It was a postcard snapshot of rural England, all soft undulating curves of fields, hedgerows and woods. The view was funnelled down a steep valley whose flanks were a voluptuous expanse of wild meadow, overflowing with grasses, buttercups and tall spears of blue viper's-bugloss.^{cccxxvii} I took off my shirt while I climbed the hillside as sweat ran down into my eyes. This was the first time I'd unleashed my spectacularly white torso this year. I'm seriously lacking in melanin (unlike the wild rabbit I saw recently) and am always the pastiest fellow on the beach.^{cccxxviii} The sun hung hot overhead. Summer had arrived.

Today was St Swithin's Day and according to folklore^{cccxxix}, whatever the weather is like on St Swithin's Day would remain for the next 40 days and nights.

*'St Swithin's Day, if it does rain
Full forty days, it will remain
St Swithin's Day, if it be fair
For forty days, t'will rain no more.'*

One of the criteria for becoming a Christian saint is that you have to perform a 'verifiable' miracle. Swithin's credentials appear rather modest in this regard. His solitary miracle involved fixing an old lady's broken eggs. When Swithin, who was the Bishop of Winchester, died in the year 862, he declined the usual pomp of a prominent burial in the cathedral, asking instead to be buried outside in a simple lot 'where the sweet rain of heaven may fall upon my grave'. However, a century later, his bones were moved to an ornate indoor shrine so that pilgrims could benefit from his miraculous egg-mending powers.

The legend goes that Swithin sent down a great storm in retribution for this, and it rained for 40 days and nights. However, since the weather forecasting superstition began, there has never actually been 40 days of consistent weather following St Swithin's Day. Perhaps the French who look out for rain on St Gervais' Day (July 19th) or the German's Seven Sleepers Day (July 7th) have more luck in predicting the weather?

Chalk downlands are our country's mini version of a tropical rainforest, a special and unusual habitat packed with life. There can be as many as 40 species of plant in a single square metre, and many grow nowhere else^{cccxxx}, such as the ghost orchid, greater butterfly orchid and early spider orchid. Conditions are harsh on the lime-rich, thin soil. The ground heats up quickly and dries out easily, preventing the usual grasses from dominating and giving an opportunity for rarer species to thrive,^{cccxxxi} particularly if combined with with some judicious, occasional mob grazing from livestock.

Looking north, I could see right off the bottom of my map and on towards other people's maps and lives and stories. Bees busied themselves amongst the clover and red admiral butterflies fluttered in the fierce sunshine. I picked up my pace and sought the shade of the woods up ahead.

This may be a heretical suggestion after all the muddy moaning months of slopping through soggy woods in winter rain, but summer could be the worst season to walk in woodland. It was quiet and there was little birdsong. Brambles blocked many of the views and smaller paths and the wood felt somber with so little light breaking through the overhead canopy. The wood boundary was festooned with Keep Out notices, which I ignored, but I couldn't ignore the nagging sense that I was unwelcome. Although I didn't see anyone all afternoon, the feeling of being watched persisted across the square, or at least of not being particularly welcome. In *The Growing Pains of Adrian Mole*, Adrian writes, 'Saturday, June 19th. Nigel and I went for a bike ride today. We set out to look for a wild piece of countryside so that we could get back to nature and stuff. We pedalled for miles but all the woods and fields were guarded by barbed wire and 'KEEP OUT' notices so we could only get near to nature.'

Back in open country, a kestrel^{cccxxxii} flew overhead. They are one of my favourite birds, 200 grams of creamy, mottled aerial assassin. Kestrels' remarkable eyesight helps them catch up to eight voles per day. This task is made easier as they can also see in the ultraviolet light range which helps them spot the urine-tagged vole trails which glow under UV light. They have also learned to keep an eye on farm machinery and wait for tractors to unearth tasty morsels. They can spot a beetle from 50 metres away.

Kestrels are masters of hovering^{cccxxxiii}, which they do by facing into the wind and allowing it to lift them and hold them, poised and still. Their feathers are specially designed to reduce turbulence and avoid stalling, so they hang in the sky like a kite, their heads beautifully still, ready to plummet and hunt.

Marginally less graceful than a kestrel, but not much, was the distinctive outline of a Spitfire fighter plane which flew overhead with its characteristic throaty roar. The Spitfire is the most famous plane from the Second World War, beloved by both military buffs and misty-eyed nostalgics.^{cccxxxiv} Its cutting edge design and technology gave Britain the decisive edge in the critical, tense Battle of Britain.^{cccxxxv}

Marginally less ferocious than a Spitfire, but not by much, was a pair of bright blue dragonflies (not damselflies) patrolling the hedgerow. They seemed far away from water, up here on this high plateau, but I'm sure they knew what they were doing. Both the aquatic nymphs and the flying adults are aggressive hunters. Dragonflies (not the 1930s British twin-engined luxury touring biplane of that name) eat small insects like mosquitoes (not the twin-engined, shoulder-winged, multirole combat aircraft from the Second World War) and midges (not the small, swept-wing British subsonic light fighter aircraft prototype). Their knack of moving in different directions whilst always facing forwards is why the dragonfly is a symbol of vigilance and focused effort in Japan.

Beneath the Spitfire, the kestrel and the dragonfly, the meadows stretched down into a valley that shimmered in the heat. I could happily have sat here all day. But I'd veered off the footpath to enjoy this view, and in the back of my mind I remembered I'd been yelled at near here a few weeks ago. I felt a vague unease that someone might appear from somewhere and shout at me for something. This rubbed up against my sense of freedom and access, but also triggered my wimpy dislike of being told off. I hovered between resistance and compliance, but in the end turned my back on the fine views and returned to the permitted route for the rest of my walk: the path of least resistance, if not the path heading upwards to the sunlit uplands of open, responsible access for all.

CONNECTIONS

*'What is this life if, full of care,
We have no time to stand and stare.'*

– W.H. Davies, Leisure

A bonus round. A little something extra. Let's take a look at what you could have won...

I didn't go out today to explore a grid square, but rather to see the squares between the squares. I unexpectedly found myself with the rare but joyous occurrence of a weekend afternoon all to myself, so decided to go for a bike ride to calm my nerves before the big evening football match. I wasn't even playing, and was merely preparing to take my seat in front of the TV, along with much of the population, with beer in hand and loud opinions galore, but the game was still all I could concentrate on that day.

So I decided to head out after lunch, and see how many of the grid squares I'd visited this year I could link together in one afternoon. I'd ride through as many as possible before I ran out of time, and then zoom home for the match. I was interested to take stock on what I'd seen so far.

Calculating the shortest route between different points is known as the travelling salesman problem and is notoriously difficult. It is, apparently an 'NP-hard problem in combinatorial optimisation, important in theoretical computer science and operations research' although I can't pretend to understand what that means, let alone know how to optimise a route. I engaged my brain for approximately five minutes by plugging the grid squares I'd visited into Google Maps, and left the rest to Google's increasingly competent skill at finding good cycle routes. Then I jumped on my bike and got pedalling.

It felt strange to set off without one specific grid square in mind, and liberating to not lug a heavy camera, nor feel duty-bound to pay close attention. I was just going for a burn-up on my bike. Once you have built the habit of noticing, however, I noticed that it is hard to stop. So I noticed (and appreciated) the smoothness of a stretch of new tarmac. I noticed a squashed hedgehog on the road into town, sorry to see it, insides and all, but also kind of happy to see it at all, for dead hedgehogs imply live hedgehogs and I've seen vanishingly few in these parts over recent years.

I soon found myself on streets I didn't know, gliding through squares I hadn't explored yet. I choose

each week's square by random, so if I'd been sent to this square rather than that one, how would things be different? I was sorry I had not travelled both. At the very least, those changes would have altered the route of today's ride and served up a different perspective.

I would not have seen, for example, the blonde toddler frown and hesitate to push her pink scooter wheels through a muddy puddle, heard her indignant tears when they got dirty and her muscular father consoling her in Polish, nor our exchange of grins of mutual understanding and him switching to English to say to me, 'Daddy's in trouble again'.

I would have missed the teenager running into bowl in a cricket match, glimpsed between gaps in the hedge as I pedalled past. The batsman stood back in his crease, defended, and there was no run.

I might not have learned about the useful footpath in town that cuts down behind the back of the houses, with its cheerful mural saying HAKUNA MATATA in colourful letters above the overflowing bins and fly-tipped TV. The path led down to the barges on the river, where sky and water meet, the boats marooned on grey mud until the tide lifted them again. A very young bride and groom posed for wedding photographs outside their front door, and were startled by my joyful cheer to them as I whizzed past ringing my bell. All afternoon, through the tall heat, I saw so many things I would not have seen or felt had my route taken me another way through the sheer multiplicity of our world.

I zoomed along, savouring my freedom, enjoying the lightness of having nothing to do but pedal fast. Google was in charge of my route, and I felt no pressure to pause, take notes, or do anything but ride and enjoy myself. I took phone photos from the saddle, firing from the hip without even bothering to stop.

As I passed from one suddenly familiar grid square to another via linking roads that were either new to me or not, I was reminded of the founding myth of the ancient city of Carthage. Elissa, daughter of the Phoenician King of Tyre was nicknamed, Dido, meaning 'wanderer'. Her brother, Pygmalion, cheated Dido out of her inheritance then killed her husband to claim the throne. Dido escaped west with a few supporters, landing in North Africa to found a new city. But King Hiarbas, the local Libyan leader, offered Dido only as much land as could be covered by an oxhide. Wily Dido made the most of this miserly insult by slicing the skin into such thin strips that it encircled an entire hill. Byrsa Hill (from the Greek word for oxhide, βύρσα), became the citadel for the new city of Carthage.

The grid squares I'd visited encircled a large area after half a year of exploring, and I discovered some new ones that I hoped to revisit in depth over the coming weeks, if they happened to be selected. I learned how close together some of the places I'd visited actually were, and appreciated making the connections between them, building up a better idea of the patterns of my map.

How much do you know about the local area you live in? What is the oldest woodland on your map? Which hills does the rainfall you drink come from, and what watershed do you live in? Which rivers do your fertilisers and sewage leach into? Where does your rubbish go? What flower blooms first in spring? What does a rainy morning smell like in the woods? The maps we live on, and the ways we live there, are small but interconnected representations of the world at large.

I rode west from the town's tightly-terraced streets towards the marshes, zipping down the disused canal towpath beneath heavy clouds towards the very first square I'd visited, that inauspicious beginning when I drove my car into a ditch. From that far corner of my map I turned inland once

more, swooping north down narrow lanes lined with full green summer hedgerows. Short but sharp hills carried me through farmland and pretty villages, bringing me to the high point of my map with expansive views in every direction.

The sun burned strongly as I hurtled down the map's longest descent, offering rueful grins of encouragement to a trickle of cyclists labouring slowly upwards in the opposite direction. Their trendy cycling clothes (£295 for some lycra shorts, anyone?) and hipster beards suggested day-riders out from the city, whose tall buildings glimmered occasionally in the distance.

Among the many, many benefits of bikes over cars is getting to enjoy the sense of smell when you're out on the road. It is an under-valued sense. Today's ride, for example, took me down a high street of frying chicken and past teenagers on a bench with the sweet reek of weed. There was the smell of puddles and piss in a gloomy subway, and a muddy footpath along the edge of a golf course brought a waft of golfers' deodorant into the weirdly spermatic scent of the sweet chestnut wood. As the afternoon warmed, I smelled the softening of tarmac roads, a charcoal barbecue at a bowls club, a car's faux-pine air freshener at a traffic light, the heady scent of lavender fields, the fumes of exhausts and, increasingly, my own sweaty stink.

Such sensory maps are the obsession of Dr Kate McLean who works 'at the intersection of human-perceived smellscape, cartography and the communication of 'eye-invisible' sensed data.' She leads 'smellwalks' around cities and translates the information into maps using 'digital design, watercolour, animation, scent diffusion and sculpture'.^{ccccxxvi} I tend to interpret maps visually, but her maps make me pause to consider how different things would be were I focusing on the smells, sounds or tastes of a map. I would be fascinated to learn how a blind person would experience all the grid squares I've documented.

I span down from pretty hills through an industrial area with miles of warehouses and roadside burger vans. It made a pleasant change to ride fast and feel my legs pumping and lungs working. Covering mile after mile in straight-ish lines gave me a better overview of the topography of the landscape than I had grasped before from visiting different fragments. I became more aware of how all the rivers and roads and elevations linked the land together.

Arriving at another corner of my map, I turned 90 degrees again, hungry now, and cycled through a village of enormous houses, gardens and enviable views of sunlit uplands. I slurped down a squashed banana as I rode. These homes were as far as could be from the homeless shelter I had ridden past a couple of hours earlier, though only separated by about ten miles in a straight line. All of society could be found on this single map, so close together, so far apart.

I paused at a newsagent's to stuff my face with sugar, salt and fat, all the easy calories. One of the best bits of being a cyclist is slumping on a warm pavement, grimy and weary, and shovelling food down my throat as quickly as I can chew. I traditionally plump for a Coke, cheese and onion crisps, and a pack of Eccles cakes (which I never eat at any other time). I refilled my bottles from an outside tap and hurried onwards, refuelled and loving life. I span through wheat fields and A roads, along sleepy byways with grass growing down the middle of the lane, and down a pilgrims' way dating right back to the Stone Age. I watched a kestrel hover overhead and passed a bright purple lavender farm filled with young folk snapping selfies.

At one point I seized the initiative from Google, convinced that I knew a better route through the woods. Years of experiencing my own hapless shortcuts meant that I was not at all surprised to end up hauling my bike through long grass, carrying it up muddy slopes and wriggling through dense

thickets until eventually I was faced with a great wall of nettles. Too stubborn to retreat, I grabbed a stick and began slashing a route through. My legs and arms got stung so many times that I lay awake for hours that night as burning waves washed up and down my body. It wasn't an entirely unpleasant pain, but it certainly stopped me sleeping.

Despite my 'shortcuts', I eventually reached the affluent, peaceful third corner of my map and hoped I still had time to make it all the way across to the final corner – an area of free school meals, brownfield development, and the constant rush of traffic. I set off at top speed, but had to concede defeat. The football would start before I made it all the way, and there was no way England could cope without me yelling enthusiastic advice, encouragement and insults at the TV. I left the remaining grid squares for another day and pedalled quickly towards my sofa, singing loudly as I rode, 'I'm going home, I'm going home, I'm going, I am going home!'

I had seen so many new places, and the route was very different to the normal rides I default to out of habit when going out to spin through some miles. The afternoon's miles burned, apparently, 2119 calories which equated to about 9 pints of lager and a packet of crisps... But I settled for a solitary, celebratory beer in a pub close to home. I was so happy with the sensation of zipping along under my own power on a summer afternoon that I didn't need more than that one beer to cheer my soul.

And besides, England needed me. My timing was perfect. I hosed down my bike, jumped in the shower, and landed on the sofa just in time for the national anthems. Cheers!

BUTTERFLIES

'Will wonder become extinct in me?'

– Henry David Thoreau

I removed my helmet and wiped my sweaty face. It was hot. I was at a memorial to a pilot killed in an engagement with a group of German Messerschmitts in the skies overhead during the Second World War. Appropriately, the fields around were covered filled with red poppies. Scattered on the ground by the memorial was the rubbish from someone's KFC meal. Their 10-piece Wicked Variety bucket contained 4790 calories, the large fries had 1440 and there were 750 in the large Pepsi. That is a spectacular 6980 calories, which would fuel the eater through an impressive 69.8 mile run. Although given they were too lazy to put their rubbish in a bin, I doubted this gorging of almost three times the daily recommended intake of calories was being used for long distance running.

A cockerel crowed from behind a nearby hedge, jubilant not to have been fried. I rarely heard cockerels around here, but the sound reminded me of travels in other countries, like pre-dawn wake ups in the Philippines and the potholed roads of rural Nicaragua.

It was a hot, bleached-out morning so I appreciated the brief burst of shade as I cycled under the motorway. Up on scaffolding, two workmen in helmets and one in a turban were wielding noisy

power tools. The smell of fried breakfasts wafted from a garden centre, whilst the waste ground alongside it was a riot of yellow, red and purple flowers. Large white butterflies flitted amongst them. Further down the road I passed wheat fields, grass meadows, a water treatment works, and an old mill converted into industrial units. There is such a variety of land usage in each of my busy grid squares.

A narrow footpath led between spiked fences guarding a fishing lake, where members pay £1000 a year to catch 100 lb catfish and 60 lb carp. It ran between an industrial unit and the motorway, pushing through skeletal cow parsley now past its prime. Who would ever use this path, I wondered? The first mushrooms were pushing through the dank earth, and bindweed vines spiralled up the chain link fence. Bindweed spirals to the left, whereas honeysuckle spirals right. Why? How? And what the heck prompted Flanders and Swann to write an entire song about this?

*'The fragrant honeysuckle spirals clockwise to the sun,
And many other creepers do the same.
But some climb anti-clockwise, the bindweed does, for one,
Or Convolvulus, to give her proper name.
Rooted on either side a door, one of each species grew,
And raced towards the window-ledge above.
Each corkscrewed to the lintel in the only way it knew,
Where they stopped, touched tendrils, smiled, and fell in love.'*

I like bindweed's big, bold flowers, white trumpets for bumblebees to snuffle and forage inside. Yet gardeners loathe the stuff for it is notoriously hard to get rid of and way more persistent than your average weekend gardener. If left unchecked, bindweed's prolific growth can outcompete shrubs and even small trees. Their roots creep underground for three metres and they send out runners which finger swiftly outwards until they touch something they can climb and lay down a new root system. And if that doesn't succeed in taking over an area, bindweed seeds can lay dormant in soil for three decades, biding their time and waiting to bind.

The footpath continued past the smell of a bonfire burning plastic, past portakabins, hard standings, metal sheds, and flatbed trucks. It linked nowhere with nowhere in the ugliest of ways. Then it spiralled left, like bindweed (not honeysuckle), up a ramp onto a footpath across the motorway. The noise on the bridge struck me, along with the smell of fumes. On the far side of the motorway was a scrap yard and mechanics whose office was two shipping containers stacked on top of each other. A large but flapping tarpaulin kept off some of the sun's heat and provided a little shade for the massive flat screen TV in the upper container.

The radio was playing The Living Years (aptly enough by Mike and the Mechanics), a song that gave me an instant flashback to the classroom I was in at school when I first heard it. The power of music to evoke memories is extraordinary, similar to the power that smells have.^{cccxvii} For me, songs are often strongly connected with travelling, and I had toyed with listening to music whilst exploring the grid squares this year. But whilst I like that music reminds me of different places, I have tended to use music on expeditions as a way to mentally escape from hard times. I didn't want to be escaping from anything on this map, and tried to do what I could to remain present and alert. So this meant no music and trying to not allow my phone to distract me with anything except the map and the informative apps I used around each square.

I passed a horse field dotted with yellow ragwort plants, a wildflower that is poisonous to animals. People get very worked up about ragwort, even though its taste is off-putting so horses don't eat it.

But it can be harmful if it gets incorporated into hay and the government can fine people who don't control such injurious weeds properly. On the other hand, ragwort is a native wild plant that provides food for bees, insects and birds. Once again, finding a way to balance nature's needs with the way we want to lead our lives is a difficult conundrum.

There have been many such issues on my map that don't have a clear right or wrong answer. How to balance development with habitat loss, access versus privacy, the best ways to use the land, and so on. I may have been irritated by such and such, but I know you worry about something else. This matters to me, but that issue is more pressing to you if you're younger / older / richer / poorer than me. This is my world view, but does it come at the expense of yours? I've spent twenty years promoting adventure, but what is the best use of my next two decades? I have far more questions than answers.

I certainly feel more aware now than at the start of my project about the range of demands which need to be considered on this landscape, and therefore I'm less certain now about some of my assumptions. But I also feel clearer on a few facts that seem incontrovertible. The world needs immediate action for nature and the climate on all fronts: everything, everywhere, all at once^{cccxxxviii}. Britain has been world-beating in destroying its natural environment^{cccxxxix}, and our population is the most disconnected from nature in all of Europe^{cccxl}. The issues are all tightly connected and so are their solutions.

Taking urgent and significant action as individuals and as a society is vital, both practically and morally. There is lots we can do^{cccxli} that is clear, simple and impactful. Best of all, many of these will also generate joy, purpose and bring us closer to nature again. The way we vote, shop, eat, travel, and live all has an effect.

Summoning both speed and nerve, I rode at top speed down The Nation's Worst Footpath®. Barely a metre-wide and wedged between two high fences, the path was jammed with nettles. It was like running the gauntlet^{cccxlvi} on some comedy Japanese game show^{cccxlvi}. I escaped from the pain game of Nettle Hell® into a peaceful churchyard where people have worshipped since the 11th Century, right back when the Domesday Book^{cccxlvi} was commissioned to discover the taxable resources of all the boroughs in England. A row of discarded Budweiser bottles was lined up neatly on the church wall, perhaps on the thinking that tidy littering was preferable to untidy. One gravestone amongst the long grass bore the inscription of a lovely old Gaelic blessing.

'Deep peace of the running wave to you.

Deep peace of the flowing air to you.

Deep peace of the quiet earth to you.

Deep peace of the shining stars to you.

Deep peace of the gentle night to you.'

The church doors had been flung wide open to welcome in the faint summer breeze. I heard an elderly woman inside saying, 'I know people will think I'm odd, that poppies are only for Remembrance Day in November. But on this day thousands of young men went over the top in the Somme, so I'm putting out poppies.'^{cccxlvi}

A venerable yew grew in the churchyard, now bent with age and its trunk split and hollow. Beneath it was a gravestone with a carved inscription about the woman 'who caused this yew tree to be planted

at the foot of the Grave of her Grandmother in the year 1742'. It must be quite unusual to know the precise age of an old tree, and I love the idea of planting a tree when you bury a loved one.

Heading back across my grid square, I pushed my bike along a path through lush hay meadows parallel to the motorway. It was rich with flowering clover, though I failed to find a four-leafed clover, a symbol of good luck for early Christians who associated it with the holy cross.^{cccxlvi} More prosaically, but perhaps more helpfully, clover provides fodder and silage, as well as enriching the soil with its nitrogen-fixing abilities. Such crops are a helpful way of lessening fertiliser dependency^{cccxlvii}. Ancient people fed clover to their warhorses, though if cows eat too much clover they can die from bloated^{cccxlvi} stomachs. Pliny recommended its medicinal powers for poisonous bites, and the Chinese prescription of using clover to treat whooping cough migrated all the way to Europe, and then even crossed the Atlantic with Dutch immigrants.

Clouds of meadow brown butterflies busied themselves amongst the clover and purple knapweed flowers. I had not seen this many butterflies in a long time. Butterflies are often beautifully coloured^{cccclix}, although their colours will seem even more pronounced to their eyes. Whilst our vision is limited to three primary colours, butterflies see not only UV light but also up to ten different primary colours. The common bluebottle butterfly of Asia and Australia sees an astonishing 15, blessing its world with rainbows of colours that our dull and limited lives cannot even imagine.

I was glad to be in this square on a warm July day, for the shallow stream through the meadow looked very appealing. It was a perfect summer scene. Everything looked very mellow, as no doubt appreciated by whoever had spray-painted 'Ganja is life' on the small wooden footbridge. I tried to imagine this grid square in an opposite season. What I find in each square is true only on that day: visit again in winter, pouring rain, blazing sun, or even in a different frame of mind and my discoveries would differ every time. But today, it was time for a dip.

Beyond the pastures, the stream ran wide but shallow beneath a colossal motorway bridge. Each time I have passed this way the bridge has been covered in different elaborate murals. Last time there was a manic-looking Boris Johnson, 10-feet tall and depicted spraying an aerosol can labelled 'PANIC'. Today Boris was gone, painted out beneath new motifs, including a vast HELCH tag from a graffiti artist who apparently annoyed even the Queen when he tagged the viaduct in Windsor, right in front of her Castle.

The stream narrowed and then deepened as it flowed round a bend and into a wood. I stripped off and waded into the sandy shallows as tiny fish flitted round my toes and blue damselflies skimmed the surface. River weed waved in the clear, cool water and provided a soft cushion as I lay down and submerged my head. Opening my eyes under water, I enjoyed the dappled, blurred underwater result and listened to the deep peace of the running water. The motorway felt far away.

Afterwards I sat on the riverbank in my shorts, drying in the sunshine as I drank the coffee I'd brewed on my stove ready for when I got out of the water. I bloody love England in the summer sunshine. Right now, I felt no need for anything more than the deep peace of these few square kilometres of map.

FERRY

'There are things we will never see, unless we walk to them.

Walking is a mobile form of waiting.

What I take with me, what I leave behind, are of less importance than what I discover along the way.'

– Thomas A. Clark, *In Praise of Walking*

To reach today's square I needed to make a short crossing on a small ferry, which I knew would be fun, but also added the *tiniest* fraction of hassle and planning to proceedings, which is all I ever need to be tempted to procrastinate. That quibble aside, I love small ferry crossings. The only thing that beats them are cable ferries across rivers, with a bonus point for those you hail by shouting and hope that the ferryman hasn't gone home for lunch or closed for the season. Even though these journeys are brief, they all come with the excitement of crossing a border, a boundary, to someplace that is new and different.

Although the river was only a few hundred metres wide, I didn't dare swim or canoe across it. The brown water swirled and boiled with eddies and undertows, and boats ploughed up and down. Even the ferry struggled, crossing the flow in a wide, swerving arc.

As I wheeled my bike off the ferry, I looked back across the water at the landscape I had been linking together this year. I enjoyed seeing those connections from this fresh perspective, noting how this place joined onto that place. I crossed a causeway of riveted girders over tidal mud and shopping trolleys, then pedalled away from the ferry.

Much of this grid square was taken up with a dockyard, meaning it was a weird sort of in-between space that was simultaneously busy and deserted. 'No entry' signs abounded and there were neither cyclists nor pedestrians, whilst articulated lorries rushed around hauling shipping containers bound for all corners of the earth.

Even amongst the concrete and barbed wire, nature was fighting back under our noses. The verges grew wild, as brambles and bindweed scaled and smothered high security fences. Buddleia bloomed everywhere, an immigrant shrub that has settled successfully and is beloved by butterflies. The long clusters of lilac flowers thrive in industrial parks, beside railways^{cccl}, and on waste ground everywhere.^{cccli}

Wild rocket, another naturalised plant, grew beside a vast lot of thousands of imported cars. Its yellow flowers look similar to ragwort, though its distinct peppery smell and flavour is even stronger than the stuff in supermarkets. I picked a few leaves to nibble as I rode around.

A flock of starlings that was accustomed to the noise and hot air blasts from passing lorries was startled into flight by me on my bike. They flew over a scrap of waste ground where a forlorn, tethered pony munched its way through what little brown grass it could reach between the main road and the railway line.

Further along the railway was a row of scrap metal dealers, protected behind high walls and fences.

The name of one business was roughly hand-sprayed along a corrugated fence, next to a large sign saying, ‘recycling the past for a better future’.

The town began on the other side of the tracks, opposite an enormous Amazon warehouse. I watched a workman watching another workman dig a hole, while outside a modern brick church an elderly man and his young grandson waited in shirts and ties for a funeral cortege to arrive. He looked at his watch then lit a cigarette, whiling away the time. I pedalled around streets of unusual looking flat-roofed terrace houses and blocks of flats, with peeling paint and the feeling of being a marginalised community. One house had daubed a warning on its gate, ‘NO SALESMAN BEWARE DOGS’ [sic].

Last week’s award of The Nation’s Worst Footpath® was usurped by a path down an alley so blocked with nettles that it forced me to retreat. Flip flops were admittedly not ideal for these expedition conditions, despite their proud claim to be one of the oldest forms of footwear. The trendy beachwear / terrible nettles feature on 6000-year-old Egyptian murals, made back then from reeds and papyrus, rather than today’s ocean-floating plastic.^{ccclii}

Detouring around that footpath, I rode towards the sewage works and an old artillery fort by the river. A settlement of Traveller caravans and their dog kennels were tucked off the main road on a quiet lane. Their ponies grazed in the marshy fields, including a tiny one no higher than my knee. Clouds and blue sky reflected in the moat as I crossed the fields to the fort. Unfortunately it was closed today, so I was tempted to sneak in and have a look around, but a fort is – by definition – tricky to get into! It was a fine example of 17th Century military engineering, its star shape designed to repel attacks, though it never saw action over its many centuries of being a manned garrison.

The riverbank here was a high, concrete flood defence, more like a sea wall than a river wall. I cast a suspicious eye at the pipework sticking out of the wall, knowing that the local water company had already dumped tonnes of sewage into our rivers this year (There were 370,000 discharges of raw sewage into UK rivers in 2021, and only 14% of our rivers are considered to be in good ecological health. Every single one of them fails to meet required chemical standards.^{cccliii})

I stopped to talk to an elderly gentleman who was working on a watercolour painting of the fort. I captured the same image in 1/640th of a second with my camera. He chuckled at the comparison. I wished him well and pedalled onwards, for it was time to catch the ferry back to my side of the river.

As we motored across the water, the little ferry bounced across the wake of a container ship bound for the open ocean. I felt, as I always do, curious about who was on board and envious of the places they were going to. But I consoled myself with the thought that I too had been somewhere new today and crossed a boundary to visit somewhere different.

LAKES

‘If I should sell both my forenoons and afternoons to society, as most appear to do, I am sure that for me there would be nothing left worth living for. I trust that I shall never thus sell my birthright for a

mess of pottage. I wish to suggest that a man may be very industrious, and yet not spend his time well. There is no more fatal blunderer than he who consumes the greater part of his life getting his living.'

– Henry David Thoreau

There was a tropical, humid, jungle feel to the day after heavy overnight rain. Plants shone, the ground steamed, a thrush sang its loud, persistent tune that wouldn't sound out of place in the tropics, and pink rosebay willowherb flowers lining a tiny stream gave off a strong, sweet fragrance. The plant is known as fireweed in North America, and its scent always reminds me of its regeneration of land following forest fires when I cycled through Canada. Its dormant seeds make the most of the increased sunlight and decreased competition after fires to bloom quickly and thrive until young trees return and outgrow them.^{cccliv}

A tiny jewel drop of rainwater shook from each pink Himalayan balsam flower a foraging carder bee landed upon. It is also known as policeman's helmet, kiss-me-on-the-mountain or poor-man's orchid, as well as by its Linnaen name of *Impatiens glandulifera*. The 'impatience' comes not from its prolific growth – from seed to six feet in a single season – but from the explosive nature of the pods which fire seeds for several metres to help its distribution.

Himalayan balsam has thrived and spread since its seeds first arrived in Lancashire mill towns amongst sacks of cotton bolls from India. It spread along canals and riverbanks where, if left unchecked, it chokes the span of the stream. This threatens biodiversity and causes erosion and silting of rivers, for when it dies back each winter there is little material to hold the riverbanks together.

Amongst all these boisterous pink flowers were clusters of creamy meadowsweet.^{ccclv} John Gerard, a 16th Century herbalist, called it the 'Queene of the medowes'. It was used as a strewing herb, strewn on floors to improve the fragrance of rooms. He described how it 'delighteth the senses' as it scented people's homes in those pungent times.

I was wearing shorts and a t-shirt and not even carrying a raincoat in my bag. There had not been many occasions this year when the weather had been so clement. I'd been excited this morning to get out and explore. Yet although the weather was being kind, the summer footpaths continued to be anything but. This was another week of hacking through jagged brambles, squeezing past nettles and swatting mosquitoes in damp undergrowth. All this slashing and whacking and stinging felt like a jungle expedition, albeit a gentle one accompanied by the sound of nearby motorways. I quite like that this is about as ferocious and unwelcoming as the British countryside ever gets.

An under-used footpath took me into woods running along the back of a row of houses. A compost heap of lawn cuttings steamed and smelled of summer. When I was little, I used to enjoy poking through my dad's compost heap in search of frogs, and the smell brought back those memories now.^{ccclvi} I cut down to the lakeshore but was inevitably disappointed by the signs warning of private property and forbidding me to swim. Normally I would have heeded the mantra that it is easier to seek forgiveness than permission and just jumped in. But several fishermen were spaced around the lake with their rods and coolboxes, and I didn't want to disturb their fishing. It requires a bit of give and take occasionally if everyone is to enjoy the outdoors in the way they choose.

I sat on a bench by the lake to eat my packed lunch and watched a pair of grey squirrels foraging for

food. Then two rats emerged from the undergrowth and joined the squirrels. Although the animals were of similar size and appearance, the rats revulsed me in a way that the squirrels didn't and wild animals rarely do (exceptions: snakes, giant spiders, and any time I need to rescue a flapping little bird from inside the house.) I have never had a bad experience with rats, so this must just be a learned prejudice I have inherited.

The brown rat thrives across the world wherever humans live, happily munching anything from insects, fruits and birds eggs, to the contents of your bin and last night's ill-advised kebab. They dig burrows, live in loose colonies, and are particularly prevalent around urban areas where a female can rear a litter of up to 12 young, five times a year. Consequently, we have more than twice as many rats as people in Britain, with over 20 million in London alone. You're never very far away from the nearest rat, though possibly not the 6-foot figure of urban legend.

I stepped away from the peaceful lakeshore onto a path by the intimidating roar of a motorway slip road with just a metal crash barrier between me and the traffic. Wildflowers flourished, like blue chicory and the pink pyramidal orchid with 100 flowers on each tightly-packed flower head. The path led to the town's allotments, which were overflowing with produce: raspberries and beans running up canes, onions swelling from the soil, and courgettes blooming everywhere. Allotments are in huge demand at the moment, with long waiting lists in many areas. This must be the most satisfying season to be a gardener, and lots of them were bustling around their patches, growing healthy food, keeping active, saving money, and doing their bit for nature and the environment.

The kitchen ventilation system of a motorway hotel was pumping out the delicious smell of bacon which made my mouth water. Round the back of the hotel, past the overflowing bins and away from the temptation of bacon sandwiches, I found a footpath into a wood. It was pleasantly cool and dark under the leaf canopy. Maple trees grew close together and most of their trunks were wrapped in dark ivy, which also covered the ground.

A mound of pale wood dust caught my eye, covering everything around the base of a dead tree. The trunk was being gnawed away from the inside by an intrepid troupe of wood boring beetles. I couldn't spot any to identify what they were, but perhaps they were one of the many wood borers with splendid names such as the death watch beetle, ambrosia beetle, fan-bearing wood borer, or the Asian long-horned beetle.

Spiders had set up shop on the outside of this decaying tree, wrapping the trunk in silk webs. These in turn were dusted with frass (the technical term for wood dust) giving a cheap Halloween effect to the tree. Less spooky were the tiny flowers of the deliciously-named enchanter's nightshade that thrived in this shaded wood. Its Latin Genus name, *Circaea*, comes from the woodland enchantress Circe who cast a spell over Ulysses' crew and turned them all into pigs. 'Inchanters nightshade... groweth in obscure and darke places, about dung-hills, and untoiled grounds, by path-waies and such like,' wrote John Gerard in his *Generall Historie of Plantes* four centuries ago. I had never paid much attention to flowers before this year, but the names of wildflowers are imaginative, delightful and dripping with generations of people being far more connected to their local wildlife than we are today.

I pootled up and down the residential streets of a 1960s development. A pensioner was on his knees with a dustpan, brush and bottle of weedkiller, removing every scrap of organic matter from his driveway (and, incidentally, from the skies above it, for the £5 billion global weedkiller market also reduces the abundance of birds). His lawn was an immaculate green rectangle of fake plastic. This was clearly a gentleman who liked order in his garden.

I confess I failed to find much of note in the orderly suburban streets, so I pedalled on to a park by a lake. The gravel path around the perimeter was busy with elderly strollers, professional dog walkers, one or two cyclists, a very sweaty jogger, and some parents with toddlers. I was certainly surprised to see a scuba diver emerging from the murky depths of the flooded gravel pit – 8.3 metres, as he told me happily on the walk back to the car park, dripping in his aqualung. Scuba diving is one of my favourite activities, though it had never occurred to me to look for it on my inland map.^{ccclvii}

I'm not really a fan of organised nature. Perhaps it is the rules ('No Unauthorised Swimming'), the tidiness and order, or just being around lots of other people in the outdoors. I preferred the rougher, emptier corners of my map.

But it was good to see all these people enjoying being outdoors and by water. I appreciated the rewilding, the flooding of this old industrial site, and understood its importance to the community and for the amused office workers who'd escaped in their lunch hours to eat their sandwiches on park benches and watch a soggy man in wetsuit and flippers waddle by.

Lughnasadh

August

VIEWPOINTS

'Find the good. It's all around you. Find it, showcase it and you'll start believing in it. And so will most of the people who come into contact with you.'

– Jesse Owens

I sat on an overgrown, underused bench outside a derelict timber framed pub and squeezed out my socks. The men in hi-vis jackets from the water board had warned me that the flooded road was deep, but I thought, 'come on, how deep can it really be?' and pedalled on anyway.

'Pretty deep,' was the answer.

Now I had wet shoes and socks for squelching around today's grid square. Well done, me.

Unique on my map, but very welcome, was a long strip of grassy land beside the road. It doesn't sound remarkable and would not be particularly of interest but for the fact that it was marked on my Mao as 'land available for access on foot'. Beyond the slender threads of footpaths and the declining municipal parks, this was a rare example of the 8% of England that is open access land for us to roam freely on.

The other side of the road had a row of houses whose names were a nod to their former uses, like

The Old Post Office and The Old School House. An elderly lady in a trilby and her nightie was smoking outside the front door. When she spotted me looking at her, I felt embarrassed, but she just grinned.

These houses backed onto a field dotted with red poppies amongst the crop of pale blue linseed, or flax. Evidence from a cave in Georgia suggests that humans may have been spinning and dyeing flax to make clothes as long as 30,000 years ago. Cotton production overtook flax in the 19th Century, despite flax fibres being twice as strong. Today, flax is grown for its seeds and for linseed oil, whose smell takes me back to my days of cricket bats, high hopes, nervous anticipation and disappointing dismissals.

I followed a path beneath singing and soaring skylarks, across the lovely blue field and through a hedge. The change was dramatic. There were no more wavy blue flowers, nothing for hundreds of metres but the serried ranks of millions of stalks of wheat, standing tall and golden as the ears ripened towards harvest. I say 'standing tall', but cultivated wheat has become shorter and shorter. Shorter wheat was a contributing factor to the green revolution which doubled global wheat yields in the 1960s and 1970s. It was pioneered by scientist Norman Borlaug^{ccclviii} who won the Nobel Peace Prize for his efforts. Genetic modification of semi-dwarf wheats produces more grain and falls over less.

The footpath ran alongside the fields then into an industrial yard filled with heavy equipment and giant cranes for hire. A scrap recycling business had pyramids of old tractor tyres and rusting piles of complicated looking machine parts. More vehicles were in various stages of decomposition in the trees beyond the yard, like old relics in a jungle movie. The cab of an old milk delivery truck had rusted and collapsed, leaving the steering wheel now sticking up in the air. The smashed headlights stared into tangles of brambles and the door hung limply from one hinge.

A swallow swooped low right in front of me, and with it came more weather folklore, 'when the swallows fly high, the weather will be dry.' There is a measure of truth in this one, for swallows hunt at higher altitudes on dry days when rising warm air sweeps up flying insect. Insects seek shelter during cold or wet weather, so the swallows need to swoop low to catch them.

'I love the swallows,' said the farmer I met at the end of the lane. 'I love all of nature, mind you. When I was a student in London, I thought I'd go mad. It's an illness, you know. I needed to get out, somewhere green.'

This was the first common ground the farmer and I had found in about ten minutes of polite but heated conversation.

It had begun when I lifted my bike to cross a stile and walk up a footpath across some grazing fields.

'What the hell do you think you're doing?' called an angry voice.

I turned to see an elderly farmer, flat cap and all, walking my way.

'I'm taking the path up to the wood.'

'Well I'd really rather you didn't,' the farmer went on. 'I've got cows on this farm, the grass will all get trampled, and anyway the grass is wet: you'll get soaked.'

'I don't mind damp grass,' I replied in a conciliatory voice. 'I won't bother your cows or leave the

path. But it is a public right of way. I'm allowed to be here.'

'I know it's a footpath, but it's a bloody nuisance and it would cause me deep distress if you use it...'
And off he went, on a long and well-rehearsed rant about the scourge of people coming onto his land, dogs off their leads, trail bikes scaring the cattle, and the scourge of the 'bloody Ramblers association arguing about access rights.'

Arguing with an angry old farmer wasn't going to change his point of view, but the lack of access to the land I live on had been one of the repeated frustrations of my year on this map, and I told him so.

Then the farmer told me about the swallows and the importance of nature. I pointed out that just as he had needed to get out to green spaces, so too did the 99% of us who don't own all the fields and hills and woods and rivers. He agreed with that, but then dived back into another tirade against people using the footpaths across the land of his farm.

At some point in our futile but slightly cathartic conversation (for me at least, though I suspect not for him) we established that we had a mutual friend – another farmer. At this point he became extremely apologetic about getting angry at me.

'I'm afraid I haven't treated you in a very Christian way, have I? Would you like to come and see the cattle, or have a cup of tea?'

The change of gear once we discovered our common ground was fascinating. I was no longer an undesirable 'other', but was now somehow more legitimate. I thanked him for the invitation, but politely declined. I'd be on my way now. Not the way I wanted to go, a way that I was perfectly entitled to go. But a way that wouldn't further upset an old gentleman, and that felt like the decent thing to do in the circumstances.

POLYTUNNELS

'I wish to speak a word for Nature, for absolute freedom and wildness, as contrasted with a freedom and culture merely civil – to regard man as an inhabitant, or a part and parcel of Nature, rather than a member of society.'

– Henry David Thoreau

I filled my bottles with ice before heading out this morning. It was the hottest day of the year so far, and the air was still. Britain was dry and parched. As I got ready, I heard on the radio that 20 cm of rain had fallen in an hour in Germany, causing floods which killed almost 200 people. The climate is changing, rapidly and unpredictably, but incontrovertibly. Yet governments and voters still don't treat it as a priority.

The main feature I encountered on today's hot grid square were polytunnels, hundreds of metres of plastic tunnels filled with raspberry plants. It was certainly not beautiful, as traditional farmland appears to be at first glance, but it is more efficient and plays a part in the farming future we need to

move towards, using less land to produce more food in less harmful ways.^{ccclix}

I enjoyed discovering that the footpath actually ran straight down the inside of one of the long tunnels. It was ferociously hot in there so I sustained myself by foraging (aka stealing) a few raspberries. I felt a little guilty, but I was also surprised to see how much fruit was already wasted and rotting on the plants. In Britain we waste 3.6 million tonnes of food each year before it even leaves the farms, and 9.5 million tonnes in total: worth over £19 billion! The supermarkets' obsession with the availability and appearance of food (or, more pertinently, *our* obsession) is imposed on farmers who are therefore forced to produce surplus and can't do much with the leftovers.

The last of the morning dew felt cool on my toes as I cycled down a grassy path in my flip flops alongside a crisp, brown field, the harvest seeming to ripen before my very eyes. The day already held a heavy, hot silence that reminded me of Spain. A voice carried from somewhere across the fields. I was roasting. And it was still only 9.30am. I envied the breeze ruffling a buzzard's feathers as it perched on a pylon by the railway.

These were the dog days of summer, hot and heavy, so-called because the star Sirius, part of the Canis Major constellation, rises alongside the sun at this time of year. Greeks and Romans believed that the combined heat of these two stars accounted for the season's high temperature. The roadside wildflowers were past their best now, wilting, hangdog, dusty and tired. In the distance I saw the first combine harvester of the season, as big as a tank and churning up and down the hillside. I clung to shade wherever possible.

This week marked Lughnasadh, the traditional celebration of the midway point between the summer solstice and the autumn equinox. High summer, and the start of the harvest season. A time to enjoy the warm easy days, but also to remember to prepare for the seasons' changing. The festival was traditionally celebrated with athletic competitions, feasts and matchmaking. It was started, so the myth goes, by the god Lugh as a funeral feast for his mother Tailtiu, who died from exhaustion after clearing the land of Ireland to make it suitable for agriculture. The first solemn cut of harvested corn was therefore offered to Lugh by burying it at the high point of the land. Harvest festivals have been celebrated since ancient times, including Lammass^{ccclix}, or loaf day, which is one of the oldest connections between the Church and agriculture. It is a ritual celebration of the beginning of harvest, marked with a loaf of bread made from the new crop.

Before the polytunnels and the redevelopment of farm buildings into 'exclusive residential developments for the high demands of modern living', this square had been covered in cherry orchards. A few cherry trees were still dotted around, ghostly reminders of earlier land use. The ebbs and flows of the land I have been treading this year has been one fascinating, and far from as depressing as I might have predicted. I passed a crumbling barn that was so enmeshed in ivy that its collapse and disintegration seemed to be visibly underway. The land is fluid, flexible and fixable.

It is not always a one-way path towards the end of wildness. This hay field will not be that for ever. The road through the woods may once again become coppice and heath.^{ccclxi} That new railway line will one day be old, one day be obsolete, one day be entwined in brambles, and one day be there no longer. One day, this will be a wood again, or a glacier or sea bed. And then, one distant day, our planet will return to being a dry lifeless rock once more, until the sun runs out of hydrogen, expands into a red giant and swallows Earth. Far from being depressing, I find focusing on this one small pinprick of time that I get to enjoy in this summer grid square to be both reassuring and uplifting.

I followed a narrow footpath along the edge of a field of wheat that scratched my legs, then round a softer field of linseed into a cornfield. I hadn't seen maize growing on my map before. The plants looked tropical and lush, their waxy leaves a darker shade than the other crops around here. At harvesting, some stands of maize would be left around the perimeter of the field to act as cover for pheasants being reared for the local shoot. 57 million game birds are reared, released and shot in Britain each year for sport (with 4000 tonnes of lead), far more than in any other country. That equates to more than twice the biomass of all our wild birds, and this inevitably makes life even harder for them to compete for resources, although at least the shoots' land management does also benefit wildlife.

Corn is one of the world's most important crops, though we eat less than 10% of the billion tonnes grown each year in its direct form.^{ccclxii} We eat a bit of popcorn and corn on the cob, but most of it is turned into the flour and syrup pervasive in processed food, fed to livestock, or turned into ethanol and even plastic.

Corn first became a staple food in the Americas. It was easy to grow and store, and is very nutritious. Columbus brought it back to Europe 500 years ago, but it only became a significant crop in the UK recently. It is mostly grown to feed livestock or provide cover for pheasants reared for shooting sports.

I saw a blob of blue on my map and headed to investigate, hoping on this hot day (with extreme naivety) that I might find a clear, deep pond to swim in. No such luck. It was a very disappointing pond, more mud than water, ringed with officious signs, and some moron had already hurled the lone lifebuoy out onto the mud. In fact, one of the signs informed me that this pond was, alas, no longer even a pond but a PCD: a Pollution Control Device, which can be sealed off in case of an accident to prevent spillages seeping further into the natural environment.

The lane I had ridden down to reach the pond was more attractive. The verge was covered with countless flowers, yellow hawkweed oxtongue and white wild carrot, also known as Queen Anne's lace, with a single, tiny red flower at the centre of each head of white florets.

I listened to the whirring click of grasshoppers amongst all these wildflowers. There are about 25,000 species of Orthopteroids worldwide, 11 native to the UK, and around 30 species now live here. The insects' powerful back legs have rows of bristles, like a comb. Rubbing them against hardened veins on their wing casings produces the cheerful chirring sound that grasshoppers and crickets have been belting out since the days of the Permian moss forests, 230 million years ago. Male grasshoppers perch on blades of grass, enjoying the summer sun, whilst ants below them scabble to put away stores for winter. They blast out their mating calls, competing with each other through increasingly complex songs. Females express their preference by mimicking the song they like the best. It is like a battle of the bands plus a karaoke contest being played out in grasslands everywhere.

Much of today's square was engulfed by the no man's land beside the railway tracks and the dual carriageway, good potential corridors for nature as few humans go there. I crossed the dual carriageway on a bridge then angled left up a hard-to-spot footpath onto an area of hay meadow dotted with blue wildflowers and butterflies. I was surprised by how many different 'feels' this

square had. The grassland felt very different to the degraded pond and the fenced-off highways, and different again to the polytunnel farm. It was a surprisingly rural green expanse up here and I made a mental note to return for a run one day. Finding new running routes had been a nice spin-off benefit of this project.

As I followed a pencil thin, pencil-straight footpath through the grass towards two mighty pylons, I met a lady walking her dog. Meeting anyone using the footpaths on my map was rare, so I always said hello. But today I was also moved to tell her how much I liked this open space.

‘Yes, it’s nice out here,’ she replied. ‘But it used to be a riding stable for the kids before they put in the railway line down there. It’s a shame that’s gone now.’

It was always interesting to hear different perceptions on land use across my map. I’ve tended to feel there were far too many stables taking up too much space for the benefit of too few people. But I’m sure horse riders would say the same about golf courses, golfers about football pitches, footballers about shopping centres, and shoppers about woodland. I keep trying to remind myself that my own preferences are not ‘correct’. This map of ‘mine’ is home to thousands of other people too. We all need homes, transport, food and employment, as well as physical space to exercise, headspace to think, and an aesthetic consideration of nature. Everyone get the right to have their say. Everyone except the land, I suppose.

However, more countries are now giving rights to ecosystems, and there is a growing movement towards giving nature rights in law. Ecuador and New Zealand have enshrined legal personhood upon rivers and mountains, and the first court cases have begun in the US. Food for thought as I circled back towards home down the raspberry polytunnel footpath, perhaps just nibbling one or two more berries as I passed...

STREETS

‘I am no scientist, but a poet and a walker with a background in theology and a penchant for quirky facts.’

– Annie Dillard

I had waited for the rain showers to pass before heading out today, but I was soon forced to shelter from a fresh cloudburst beneath a bowed old horse chestnut tree. Sheets of water slid down the road and dampened my enthusiasm for exploration. I had, however, spotted the map symbol for a pub on today’s square, and I had little to do later today.

‘Go for a look around the square, and after that you can go to the pub,’ I bargained with myself.

Between the heavy showers which were blighting the summer, it was a warm and humid day. Aside from traditional British grumbles, the weather had not been too bad compared to, say, the year 1816 when clouds from a volcanic eruption shrouded the world in an extra winter. Mount Tambora's blast was heard 1600 miles away, ash fell for 800 miles, and the 350 miles around the volcano was plunged into darkness for two days.

Over the next year, a huge dust cloud spread around the globe's atmosphere, wreaking weather havoc for the next three years. Ireland's potato famine led to a terrible outbreak of typhus. North America's arable economy crashed, leading to the panic of 1819 and pushed the country from being a commercial colony towards becoming an independent economy. In Yunnan, China, three consecutive harvests were ruined, prompting farmers to plant poppies in place of rice. It duly became one of the country's main sources of opium, with far-reaching and long-lasting global consequences.

But whilst the eruption led to famine and disruption, it also influenced a noticeable output of poetic and musical works of gloomy genius, including Schubert's first commission, Shelley's *Frankenstein*, and Byron's *Prometheus*.

Such violent events are random, unpredictable and natural. But sane people are now in agreement that human behaviour is also contributing to the extreme swings of weather sweeping the globe. Yet a stark demonstration of the profligacy and recklessness in the way we in the wealthy countries are still living comes in the form of 'Earth Overshoot Day', which occurred this week.

Earth Overshoot Day marks the date when humanity's demand for ecological resources and services in a given year exceeds what earth can regenerate in that year, meaning we have used up the planet's sustainable biocapacity for the year. We therefore deal with that deficit by borrowing from the future, taking from the poor, and gobbling future reserves of ecological resources.

Qatar and Luxembourg's Overshoot Days were back in February, Britain's was in May, and the only reason earth's Overshoot Day is as late as August, is because the poor countries of the world are still living within their means. They prop us up, whilst also bearing most of the burden and consequences of our greedy, selfish short-term thinking. How long would you tolerate a friend who guzzled voraciously, overspent in his own interests, then came to you in August asking you to bail him out for the rest of the year?

Once the rain passed, I left the shelter of my chestnut tree and pedalled on to my grid square. The first half of it was covered in quiet residential streets and cul de sacs. People in these peaceful suburbs evidently took pride in keeping their gardens neat and their cars clean. One house had replica Roman statues on their white gravel drive. Another flew the English flag from a tall pole. A third had a gleaming vintage American Airstream caravan parked outside.

I began noticing the house names I pedalled past. Some settled just for the street number, but many had a name sign too. Many appeared to yearn for nature – 'The Laurels', 'The Oaks', 'Foxglove', 'Briar Cottage', 'Maple Lodge', 'The Glade' – or the countryside – 'Min y Coed', 'Langdale' – despite being on very manicured suburban streets. Others still were whimsical – 'Dewdropinn' – or simply satisfied – 'Finally'.

Naming habits have evolved over time. The oldest written tale in English, *Beowulf*, features a mead hall called 'Heorot', meaning White Hart, which is still a common pub name today. Before 1200, house names usually featured the owner's name, for example 'Ceolmund' or 'Wæрман'. This evolved to taking inspiration from heraldry, like 'Le Griffon', 'La Worm', 'Le Dolfyn', and 'Le

Harpe'. In the Enlightenment, names leaned towards emotional states. Frederick the Great, for example, named his favourite palace '*Sans Souci*', or 'No Worries'.

From the 18th Century, authorities started using numbers for buildings, losing centuries' of place names. As few people could read, merchants used symbols to show their trade – a civet cat for a perfumer, for example. Two standing lions holding a pretzel and a sword meant a baker, and a double-headed eagle holding angle hooks was a printer. A bull's head and two axes was a butcher, and a pair of gloves meant a glover. These old guild signs, or *zunftzeichen*, can still be seen over shops in parts of Europe.

I listened to the rhythmic percussion of a distant train then turned to cycle back through the residential area to the other half of the square. I noticed electric car charging units on the front of a few houses. Many homes had two or more cars parked outside, an indicator of the massive infrastructure changes needed if Britain is to successfully ban the sale of new petrol and diesel cars by 2030. For this to be possible, we need a lot more electric vehicle charging points until they become as ubiquitous and recognisable as post boxes or phone boxes, both previous emblems of technological and societal revolutions.^{ccclxiii}

There are currently 20,000 public charge points in the UK, so vastly more are needed, and quickly. Because the UK is small, it should be easier to create a nationwide charging infrastructure than in large countries. The average length of car journeys in the UK is 8.5 miles, so most people only need regular charging top-ups at destinations like supermarkets, especially those owners who do not have driveways or garages with their own charging facilities. Full charges for long journeys are needed less frequently for most drivers. One of the main issues deterring people from switching to electric cars is range anxiety about being unable to charge their vehicle. It is more of a psychological issue than a genuine problem and both driving range and charging point availability is increasing all the time. Effortless access to charging points is the simplest way to overcome range anxiety though, and part of the vital, swift shift we need to make in the transition to electric vehicles, as transport is currently accountable for around 20%^{ccclxiv} of CO₂ emissions.

I headed down the only footpath on the grid square, a narrow alleyway leading out to the edge of the houses. I leaned on a five-bar gate and looked over a scruffy patch of waste ground blooming with wildflowers and busy with white butterflies, which to my eye looked nicer than the patios and stripy gardens I'd just been riding past.

I watched the butterflies for a few minutes, wondering how they managed to fly in strong breezes like today. Scientists have tested this by putting butterflies on tiny leashes in wind tunnels, training them to fly towards flowers, and then filming their efforts. In windy conditions, they push themselves forward by 'clapping' their wings behind their backs, twisting them to create additional lift through the tiny whirlwinds that roll off their wings.

But wind is not all bad news. Tailwinds help butterflies when they migrate, and they have been recorded flying at 60 mph, hundreds of metres above the ground, speeding them on some of their more epic migrations, like the painted lady's journey across the Sahara desert to Europe or the monarch butterflies flying 3000 miles across North America.

I passed a playground busy with children enjoying their summer holiday freedom, then continued out into farmland. It had been a challenging summer for farmers, waiting for moisture levels in the wheat to drop to the optimum percentage before harvesting, only for more showers to set them back and get them looking anxiously at their harvesting contracts. I searched unsuccessfully for the ancient

boundary stone marked on my map. Instead I found a small bench, obscured by a leaning sloe tree, and sat down to look out over the fields. This grid square consisted almost entirely of the streets I'd ridden around, and these large fields of golden wheat. There was not much variety or scope to follow my nose.

I was pleased, therefore, to stumble upon some community allotments. Allotments are great places at this time of the year. I don't yet have the patience to be a gardener, but I think one day I will find growing my own vegetables very satisfying. I love digging up potatoes and picking fresh tomatoes. I wandered around admiring the rows of fat onions, purple cabbage, swelling corn, pumpkins, and crops of sunflowers. I liked seeing how each person had chosen to use their allotted space.

Allotments were traditionally measured in units of rods, poles or perches, units of measurement dating back to the 14th Century: '*tres pedes faciunt ulnam, quinque ulne et dimidia faciunt perticam*' (three feet make a yard, five and a half yards make a perch). They were originally ten poles long, about the size of a tennis court. Today's were much smaller though, sub-divided to allow more people to have an allotment and to make them a more manageable size.

Whilst allotments have been around since Anglo-Saxon times, the system we have today comes from the 19th Century when poor labourers were allotted some land to grow food. Being self sufficient was important as there was no welfare state and the country was rapidly becoming more urbanised.

Not all of the early allotment rules have survived the test of time. Sunday is now the most popular day for gardening, yet in 1846 allotment holders were 'expected to attend divine service on Sundays; and any occupier who digs potatoes or otherwise works on his land on Sunday shall immediately forfeit the same.'

Pubs also had strict rules and limited opening hours back in those days. For better or for worse, we live in more relaxed / immoral times. I checked the time, shrugged to myself, left the allotment, and cycled off to the pub.

DAY-BREAK

'That night was the turning-point in the season. We had gone to bed in summer, and we awoke in autumn; for summer passes into autumn in some unimaginable point of time, like the turning of a leaf.'

– Henry David Thoreau

It seems to me, walking and cycling through this year on my map, that the seasons move in two ways: gradually, then suddenly. No change, no change, no change... and then one morning the new

season is well on its way, overlapping the last one in its eagerness to get going. I caught the first smells of autumn today, along with heavy dew and a later sunrise.

I always love day-break, though doing the school run means I'm rarely off and away at such an hour. But I managed it this morning and straight away felt that I was winning the day. It took me about an hour to ride to today's grid square, and I enjoyed the sun rising, the rabbits in the fields and the foxes slinking homewards after a big night out.

Eventually the road narrowed, grass grew down the middle, and I passed a sign saying 'No Through Route'. I kept going. A woodpecker chattered in a shaded pocket of woodland. The road dwindled to a track. I kept going. I often wish I lived somewhere wilder, but within my map, not too far away, are places like this that feel gently wild. This year has made that abundantly clear to me. The wild places are not as far away as I often fear. I just have to look a little more closely to find them. This year I have begun to learn how much good stuff there is all around me, and to love where I live a little more. Immersing myself in my neighbourhood has shown me that there is plenty of scope for running and riding and learning, right here.

The track became too steep to pedal, or at least too steep if you were in a late summer, early autumn laid-back kind of morning mood. I dismounted and pushed my bike the rest of the way. Despite this wood being an SSSI, there were still drinks cans and half-burned bags of rubbish flung around the undergrowth. Trees covered the steep slopes of much of today's grid square, with meadows on the plateaus and valleys. It was one of the most rustic and beautiful corners of my map. The path emerged from the woods at the top of a ridge and crossed into farmland. A sign warned 'Bull in field' but today I had the place to myself, a picturesque patchwork of small scale farming, with mixed crops of corn, grass, wheat and fallow land divided by hedgerows.

I swooshed down a footpath through a bumpy field of dewy grass with crickets bouncing out of the way of my wheels. It was 8am and already warm, shaping up to be a glorious day. A familiar, but hard to place fragrance pulled me up short. I squeezed the brakes to investigate. Then it came to me: pizza! I looked down and noticed the small pink flowers carpeting the ground. Riding over them was jolting their fragrance into the air. It was wild marjoram, the herb oregano so familiar to Mediterranean cooking^{ccclxv}.^{ccclxvi} It grows prolifically on chalk grasslands during the summer months.

I was snapped from my study of hillside herbs by the nasty nip of a horsefly. Their bites hurt, but the flies are slow and I gained a modicum of revenge by splatting it before it could escape. My new nature-loving zeal had its limits! Only female horseflies bite like this, for they need the protein from blood to develop their eggs. The bites are sharp because they saw callously through your skin with their serrated mandibles until they strike blood, and they don't administer the mild anaesthetic that accompanies a mosquito's more precise, surgical injections.

I was intrigued to come across the site of a lost village at the end of a quiet track in the valley. The term 'lost village' generally refers to the 3000 villages deserted in Mediaeval times, many resulting from entire populations being wiped out by the Black Death^{ccclxvii}. This was shocking to reflect on with the COVID years still fresh in my mind.

All that remained of this lost village was a tiny church that had changed little in 900 years. It was a modest space with a straw-covered floor, a stone arch and an oak-framed roof. It was staggering to

think it had already stood silent and empty for 150 years by the time Columbus sailed the ocean blue in search of popcorn. The nooks and crannies of my map carry the centuries very lightly.

Today, builders were hard at work outside the church, bringing some 21st Century vibes into the valley with their cement mixers and Magic FM. But they were modernising in an antiquated way, constructing a columbarium in the grounds of the old church. One of the builders explained the plans in enthusiastic detail. A columbarium is a place for storing cremation urns, popular in Roman times. This one was being constructed in the style of a Neolithic long barrow, sunk beneath the ground. Who knows, this may be the beginning of another thousand years of local history.

I rode up the other side of the valley, tackling the road's sharp 25% gradient with a bit more vigour than I'd displayed earlier. I stopped halfway up to turn onto a footpath through the woods (and to catch my breath). The first unripe green conkers had already dropped in the lay-by. A car slowed and the driver wound down his window to tell me of other 'fantastic' steep hills I could tackle nearby, if I fancied the challenge. Everyone seemed more relaxed and chatty on beautiful mornings like today.

The beech wood was airy, light and spacious beneath the canopy. Beech nuts had begun to fall. I caught glimpses of the old church down in the valley, while squirrels leapt through the branches overhead, already harvesting for winter. The path meandered to and fro before narrowing into an area of hawthorn thicket. It became a tunnel through an impenetrable mesh of the prickly trees, before depositing me out of the wood at the top of a hill with beautiful views across the grid square I had been zig zagging around.

I felt filled with a deep gratitude for England's tranquil countryside and these perfect but rare mornings of sunshine that more than make up for the months of gloom and rain we get living in Britain.

SWIMMING

'People say you have to travel to see the world. Sometimes I think that if you just stay in one place and keep your eyes open, you're going to see just about all that you can handle.'

– Paul Auster

I began today outside working man's club with a fluttering Union Jack, amongst Victorian terraces, streets of post-war pebbledash and 1980s semis. A striped brick clocktower had been built with the largesse of the local mill owner 150 years ago, and the mill's chimneys still smoked away in the distance. The usual array of shops was available: kebabs, Chinese, Indian, fried chicken, garage doors (that is a first), and a bookmaker. This was an old-fashioned, tired town of struggling independent shops and pubs sliding into decline, plus a shiny new Domino's pizza takeaway. An old man laboured across the street with his shopping trolley. A car slowed and waited an age for him to cross. That will be me one day, I thought to myself, sliding steadily into decline. Be happy then for this moment, I reminded myself. This moment is my life.

This sort of town was more or less what I had expected when looking at my map before cycling here. What I hadn't anticipated was the new area of clapboard houses and commuter apartments built behind these streets. There were homes painted in pastel shades, drainage culverts landscaped into trickling streams, wooden balconies and pots of geraniums. The gentrification even extended to an M&S store in the local garage, perhaps the poshest petrol station on my map.

A flyer stapled to a noticeboard urged residents to take care of local hedgehogs this Hedgehog Awareness Week, declaring, 'We want to make sure the hedgehog, the UK's only spiny mammal, remains a common and familiar part of British life. We know hedgehogs are in trouble. We've lost a third of all our hedgehogs since the millennium. In an increasingly urbanised Britain, we choose to lose all that is complex and beautiful if we do not stand up for our wild animals and plants.'

The clean uniformity of these new residential streets reminded me uncannily of suburban America. None of the building styles matched the traditional conventions of this region, but I was undecided whether that was a bad thing or good. I wondered whether this new town would merge with the old, if its injection of money would help the high street. Or would the vibe here overtake the traditional terraces down the road, with cappuccino to go replacing a cup of tea in the caff? Housing issues were something else I had never considered before this year, but now found surprisingly interesting.

Beyond the trim homes lay a scrapyard surrounded by caravans and trailer homes. I peeked into the photogenic and intriguing scrapyard, but felt nervous to take my camera out and explore further. Instead, I headed up a path to a park, noticing a mislaid badge on the ground which read, 'Sorry, I need to lip-read. Please be patient.' Exploring these grid-squares was proving to be exhausting: there was so much to see all of the time. Ought I now start reading up on the history of lip-reading ('The earliest record of deaf education was in 1504...') or the history of badges and brooches ('The earliest manufacture of brooches in Great Britain was during the period from 600 to 150 BC...')? I needed to zone out for a moment and take stock of all I had seen.

Behind the town of two halves was a cluster of small lakes in flooded old chalk pits. Back in the day, lime from this area had been used in building the city's bridges and landmarks. My nose picked up the lovely scent of fresh water and my hopes rose in anticipation of a refreshing swim. But I was thwarted, of course, by high fences. Signs warned of the insidious hazards of 'Deep Water' as I dreamed of the delights of deep water and the pleasures of wild swimming. Fencing off nature to 'protect us' is ridiculous and counter-productive. Far better, surely, to teach people how to be safe, how to swim, how to make sensible judgement calls, and then open up nature to be enjoyed, appreciated and cared for.

If I lived in this town but was unable to swim or kayak or SUP here I would be incredibly frustrated. I suspect, however, that the notion of fencing off lakes, of decreeing that this or that area of nature is 'Private' and off limits, is so ingrained in most people's minds that it is rarely questioned. And yet I know that the nearby swimming pool has queues out the door on hot days and rationed time slots, despite having to jostle in the crowded water and put up with changing rooms that smell of wee. Large open lakes of clean, fresh water sound much more appealing.

I was pleased to discover that two fenceposts had been forced apart, allowing me to squeeze through and slip into the water for an illicit but lovely swim. Nothing beats slipping into cool water on a summer's day – the scent of it, the sunlight dancing off the surface, the sounds of birdsong, and the feel on your skin as you sink beneath the surface and slough off the day's heat and frustrations. I love to open my eyes and dive down deep through the soft green water, feeling the temperature fall and the light dim as I try to reach the bottom, and then pushing up to surface triumphantly with a handful

of gravel as proof of my journey into another world.

I left the lakes and the town behind and crossed a busy main road towards a river and marsh. The road was lined by enormous, faceless warehouses with thousands of plastic crates stacked outside. Sellotaped to a fence was a dramatic missing cat notice. ‘On the night she went missing, at around 2.20 am, our neighbour’s CCTV caught someone acting suspiciously outside our home. Our worst fears are that this person may have had something to do with her disappearance.’

Unable to shed light on the feline mystery, I carried on my way, ducking as I rode through a low underpass beneath the railway into an area of reedbeds and streams, home to reed buntings and sedge warblers. Damselflies flitted in the sunshine. Pink and white marsh mallows grew along the verge, a plant that is fond of damp areas. As well as an ingredient for tooth-rotting deliciousness, the root of the marsh mallow also has medicinal properties. Early Arab doctors applied it as a poultice for inflammations, and it has also been used as a laxative, for chest pains, and to treat coughs and sore throats.

‘Is tasteless food eaten without salt, or is there flavour in the sap of the mallow?’ asked the Book of Job in the Old Testament, for mallow is edible if not delicious, until you mix it with loads of sugar. During the siege of Jerusalem in 1947/48, starving residents picked mallow, ‘*khubeza*’, which was considered a weed but is high in iron and vitamins. The local radio station broadcast different ways of cooking it.

The first marshmallow sweets were made by boiling the root with sugar, then straining it and allowing it to cool. Four thousand years ago, the Egyptians added honey to the mix, creating a delicacy reserved for gods or royalty. The French began making modern marshmallows in the 19th Century, mixing the mallow’s root sap with egg whites and corn syrup to create a fluffy mixture which could be heated, then poured into moulds.

The footpath ran along the route of an old railway line, with hunks of concrete from old demolished factories still dotted around. I sampled a few blackberries from a hedgerow. They were getting sweeter, but still weren’t quite ready. Autumn was on her way, but not yet. A bird hide had been erected on the marsh, a simple wooden wall of planks with two horizontal gaps, one at adult eye height and one for children. I saw nothing more exciting than a few pigeons, despite a sign suggesting I may be able to spy kingfishers, teal, egrets, water rail and gadwalls.

I carried on through the tall reeds until I reached the river, which ran broad and slow and glimmered grey and gold in the sunshine like lava. The tide was out and the exposed banks were wide slabs of mud, dotted with discarded tyres and an upturned car seat. New houses lined the far side of the river, with banners declaring them to be ‘a unique and ambitious development, offering all of its residents a wealth of inspiring lifestyle opportunities.’

The sky was big blue and empty, the factory’s chimneys smoked away in the distance, and the breeze rustling the reeds was the only sound. There was nobody else around, except for a father and son who did a bad job of hiding catapults behind their backs as they walked past me. I wasn’t sure what they were taking potshots at, but they evidently didn’t want me to ask.

I liked it out here on this small marsh, tucked into a tight curve of the river that marked the boundary of my map, more or less. The other bank was unknown ground, off-limits in my year’s project, and therefore looked extra tempting to me. As fascinating as I was finding my map, the call of the horizon always lurks within me.

September

ACCESS

'The world is full of obvious things which nobody by any chance ever observes.'

– Sherlock Holmes

My hopes were high. It was a perfect summer day, late in the season, and the grid square looked enticing on paper. It was mostly woodland, with a hill, a small lake and the site of a Roman villa thrown in for luck. A motorway and railway sliced across the map, but a third of the square was a country park and all the rest was open countryside. There was only a single building on the whole square. I looked forward to roving around through old landscapes dotted with enormous trees.

And yet.

And yet it turned out that the solitary building was a historic manor house that owned most of the grid square and resolutely refused to share it with plebs like me. I was shunted away from the meadows and ancient trees by signs and fences, and ushered away down an unattractive footpath squashed between the motorway and a chain link fence. I hoped I could at least explore a copse of woods, but that turned out to belong to a golf course and was also off-limits. And the lake was fenced off with more forbidding signs from the fishing club that owned it.

So far, the most enjoyable part of my outing had been standing on the motorway bridge and watching the hypnotic traffic hurtle beneath me.

But away from all the empty expanses of private land, I could at least enjoy the public country park. It was a nice spot, with footpaths and running trails weaving around the woods. However, as it was the school holidays, the park was really busy with dog walkers, playing kids, and family picnics. Seeing so many of us corralled into one allocated slice of countryside added to my irritation. It showed how many people value being in nature, but how little of it is available to enjoy. Our footpath network is brilliant if you want to walk somewhere, but often people want to sit under a tree and chat, or give their children space to run and explore and get muddy and decompress. There should be more options for this on summer days than crowded parks. I left the park in a huff.

As if to exacerbate my mood, I cycled over the trimmings of a flailed hawthorn hedge and got my first puncture of the year. Taking this as a sign from the gods, I conceded defeat on the day and limped to the nearest pub garden to fix my puncture, order a cold beer^{ccclxviii}, and stew over the iniquities of land access that have reared their head time and again this year.

One of England's challenges in increasing any rights to roam is that we have a densely-packed population. What if everyone decided to go wild camping rather than paying to go on holiday? Do

we actually have the capacity for everyone to access the commons? There's no doubt, for example, that COVID lockdowns brought more people, and more uninformed people, out into the countryside, with some negative impacts.

The charity Fix the Fells acknowledges that 'erosion from people, coupled with severe weather events and climate change, is causing ugly scars and environmental damage in the fragile mountains.' But increasing the areas people are allowed to access will, by and large, disperse people over wider areas, making the concentrated erosion of honeypots less of a problem than it is at the moment. And nobody sensible objects to sensitive habitats being marked as off-limits from disturbance, for example during curlew nesting season. We have 140,000 miles of footpaths, and most people (myself included) are happy to use them for almost all their recreational outings.

So I feel that granting wider access to everyone who wanted to enjoy and care for the land would cause negligible problems. But giving free access to *everyone*, whoever they are, certainly would throw up some friction. If we could educate everyone on how to roam responsibly, things would be fine. Yet that is easier said than done, and I understand anxieties about unleashing a nation of poo-bag-hangers onto an already depleted landscape before that education somehow happens!

I think longingly though of Sweden's policy of '*Allemansrätten*' which is tightly welded to a national pride in loving and protecting their countryside. *Allemansrätten* is the right for every man and woman to roam the countryside. (I have made a short film called *Allemansrätten* which you can watch on YouTube.) In Sweden, the maxim for how to behave in the countryside is 'do not disturb, do not destroy'. Much of Scandinavia has a similar approach. With access rights comes the responsibility to respect nature and not cause problems for other people who live, work or relax in the outdoors.

For Finns, the responsibilities are clear. 'One may not disturb the privacy of people's homes by camping too near to them or making too much noise, nor litter, drive motor vehicles off-road without the landowner's permission, or fish or hunt without the relevant permits.' Norway's policy 'is based on respect for the countryside, and all visitors are expected to show consideration for farmers and landowners, other users and the environment.'

In Iceland, 'state-owned land such as conservation areas and forestry areas are open to everyone with few exceptions. These exceptions include – but are not limited to – access during breeding seasons or during sensitive growth periods'. In Estonia, 'all bodies of water that are public or designated for public use have public shore paths that are up to four metres wide... The owner may not close this path even if the private property is posted or marked with no-trespassing signs.' Even Belarus, an authoritarian state with restricted civil liberties, insists that 'citizens have the right to freely stay in the forest and collect wild fruits, berries, nuts, mushrooms, other food, forest resources and medicinal plants to meet their own needs.'

Closer to home, in fact right here in the United Kingdom, the Scottish Outdoor Access Code is also based on three key principles which apply perfectly to the way I have tried to explore my map: respect other people's interests, care for the environment, and take responsibility for your actions. The Scottish access rights obviously don't apply to homes, gardens, farmyards or land where crops are growing. Their access code tells you to take your rubbish and dog poo bags home, and to never light fires or barbecues 'in dry periods or near to forests, farmland, buildings or historic sites'. I agree with all of this advice wholeheartedly^{ccclxix}. If I heeded all this in England and went for a walk in my local woods, what harm would I cause?

But I do not have the same right to roam in England that is enjoyed in Scotland. Though the freedom to roam is a principle protected by law in several eminently sensible countries, it is treated with horror by English authorities and landowners. (Not coincidentally, there is great historical overlap between those two groups.) How can we soften our inability or unwillingness to conceive of land ownership in any other than absolute terms? And how can we ensure that greater access would not further damage a landscape already blighted by unsustainable farming and fly-tipping?

The Scottish government does a good job of broadcasting messages about caring for the countryside. They make an effort to educate and inform visitors, meaning that fewer people cause harm, either by accident or intentionally. By contrast, England spends only £50,000^{ccclxx} promoting the Countryside Code and educating people how to act responsibly in the great outdoors (at least this has increased from the £2000 annual sum of the past decade). It is easier just to keep people out. But a population disconnected from nature and not informed about how to behave appropriately in the countryside is going to cause more problems than an enlightened one, and the current state of our landscape shows that what we are doing at the moment is not working.

However, if we are to have increased access, it also needs to be accompanied by an increased responsibility towards the land. For as well as being frustrated by how restricted I am in my own country, I also sympathise with the farmers and landowners who have to deal with littering, dogs chasing livestock, and the guidance on what they ought to do with their land chopping and changing on the whim of politicians. They face many frustrations of their own.

We need to have grown up conversations and acknowledge the difficulties of trying to achieve all the different things we demand of the space on our maps.^{ccclxxi}

Politics, plus damage caused by irresponsible access, undoubtedly hinders landowners and farmers from knuckling down and delivering nature-based solutions for the public good.

Whilst some landowners may have thousands of acres, they still often struggle to earn enough to stay afloat. They could get loads of money if they sold the land, but they don't want to do that, for they love the countryside and want to steward their patch and care for it. Over recent decades, however, this has often been done via grants that encouraged keeping the place 'tidy' and maximising food production, which we now realise stripped the soil of nutrients and the land of diversity.

Both of us – me on this side of the fence looking in, and the landowner looking out with worry about the government's latest demand for them and thinking about how best to care for the land they have given their life to – we both love this landscape. Surely there are ways where we can share both the resources and the responsibilities? I would like more access, and in return I'd be happy for more of my taxes to go towards looking after this land, both in terms of education, and to support restoration work and sustainable practices.

Land access and a right to roam need not be so divisive and it would be helpful for all parties if the discussions were more amicable. Many of us, on both sides of the fence, ultimately care about many of the same things, have the same values, love nature, and want to improve our countryside. There are many landowners with huge acreage who are itching to restore the countryside once the government finally takes the environment seriously enough to release the brakes, set the destination, and add a little rocket fuel in the form of suitable incentives. When that happens, inspirational progress could be made very quickly.

If access to the countryside is to increase, we must each leave a positive trace^{ccclxxii} on the land. This means leaving somewhere in a better condition than you found it, an important escalation from the long-established 'leave no trace' convention of the outdoor community. If you only leave 'no trace',

nobody knows that you have been there, that you care, and that this land is important to you and other roamers. A positive trace not only includes tidying up litter, but also having courteous, positive discussions with farmers and landowners about the issues surrounding rights of responsible access. I honestly believe it is possible to transform our restrictive access laws without causing significant problems. I would love it if this book encouraged landowners towards meaningful conversations about increasing public access, but also emphasised the need to educate the public how to not ruin the land they walk upon.

I'd like to think the only people who would be disgruntled with my vision for a green and pleasant land, cared for by an engaged public, would be the hedge fund managers who buy thousands of acres of land to wave their willies, shoot their grouse, and wilfully hoard all that land for themselves.^{ccclxxiii} Fair access to our countryside is an important step towards reconnecting our society with nature, which – amongst benefits like physical and mental health, and engaging with the climate crisis – would lead to a population that cared more about the countryside, left less litter, and valued the important work of farmers. ‘This is more than just a fence around the countryside,’ goes the song The Commons, ‘By fencing off the commons they’re fencing off our minds.’

THISTLES

‘We should go forth on the shortest walk, perchance, in the spirit of undying adventure.’

– Henry David Thoreau

The gate’s clang startled a buzzard who lumbered off the ground and flew into the sanctuary of the trees. I stood still in the field, with the wind at my back, feeling myself beginning to slow down and unwind. I breathed in the smell of hay, blinked at the sunshine, and reminded myself that things couldn’t be too bad if I got to call this ‘work’.

I was disorientated though. Riding here had been a maze of winding lanes and high hedges, so I hadn’t yet orientated myself with any other familiar grid squares nearby. The road had been too narrow for cars to safely pass my bike, so I’d had to stop and tuck in whenever a vehicle appeared. This allowed me the chance for a blackberry update, nibbling one or two while I waited for each car to pass. A few berries were now ripe and swollen, but most were still small green nubbins.

I listened to the buzz of motorbikes on a distant race track, the sounds carrying on the gentle breeze and highlighting how quiet this square was. I felt disconnected and distracted today. I was uncertain what I would do once this year and this book were finished. That day was drawing nearer, but I still had no answers.

My feelings had morphed over the course of the year, from realising there was more of interest on my map than I’d given it credit for, through a sense of slowing down and connecting with local nature, to accepting my life more and being grateful for all that I have. But this was all mixed in with

my increasing alarm as to how much of this environment is in danger and that we need people to wake up and care. What should I do about this?

I've always had clear plans and goals for my entire adult life, so it has been disconcerting and disorientating to not be certain of my direction now. But for today I consciously tried to shrug off those worries, to look around and appreciate where I was today. I saw a long, lovely valley dropping away down towards a grid square where I remembered drinking hot soup on a cold day back in the winter. This helped me to orientate where I was today.

I left the fields and entered a wood, for my map suggested there was a pond in there. But barbed wire and brambles kept me away. Google Maps' satellite view consoled me that the pond was just a brown, dried-up affair, but I'll never know, for if truth be told, I did not try particularly hard to reach it. After ten months of sneaking around woods, leaping fences and pushing through undergrowth, I was tired of being excluded from my countryside.

Perhaps I am greedy, but it was infuriating how restricted I felt, how often a stroll in a wood was technically illegal trespass, and how unfair it is that being a white, middle class guy meant I found this less intimidating than many other groups might do in our countryside.

Today I didn't fight it, but just walked through the wood onto another farm. Every field here was covered in thistles, waist high, prickly, and choking the other plants. Whilst all plants are important to nature and wildlife, some may be more equal than others and a few cause more than their share of problems.

Invasive plants such as rushes, ragwort and thistles can out-compete other plants and are therefore categorised as 'injurious weeds', which makes it the landowner's responsibility to control them. It is possible to find a workable balance using control methods that do little harm to other wildlife in the area, and I wouldn't want to see thistles eradicated, as they are associated with one of my favourite birds.

Goldfinches depend on thistle seeds, as do greenfinches, siskins and redpoll. Painted lady butterflies feed on the thistle's leaves, whilst bees and white letter hairstreak, peacock, and meadow brown butterflies rely on it for nectar. And many insects also overwinter on their thorny stems.

True to form, a charm of goldfinches – a hundred or more – burst into flight as I walked around the field edge, with their cheerful call and looping flight. I had never seen so many. Ever since I started hanging sunflower seeds outside my shed they have been regular, noisy, colourful visitors, keeping me company with my daily writing procrastination. There is a charming line in the novel *Leonard and Hungry Paul* about a mother who looked 'after everyone in her life as though they were her garden birds: that is to say, with unconditional pleasure and generosity.'

The goldfinch is a beautiful bird with a red face, white throat and black and yellow wing patches. They are sociable and boisterous, twittering and wittering at each other all day long. Because they are particularly associated with thistle seeds, they often used to feature in Christian symbolism for the Passion and Jesus's crown of thorns. A little goldfinch in paintings could represent Jesus and Mary's foreknowledge of his crucifixion.^{ccclxxiv}

Until the 19th Century, thousands of goldfinches were trapped and caged each year. People bought them to enjoy a shard of colour and cheerful song in their homes, though it sounds a sad sort of pet to me. And the goldfinch offers a rare glimpse of beauty for the old Irish farmer in Patrick Kavanagh's poem 'The Great Hunter'.

*'The goldfinches on the railway paling were worth looking at –
A man might imagine then
Himself in Brazil and these birds the birds of paradise,
And the Amazon and the romance traced on the school map lived again.'*

The profligacy of the thistles' wind dispersal was extraordinary. Thistledown covered the ground like snow and the air across the grid square was full of seeds drifting on the breeze. Because wind dispersing plants have no control over where their seeds will land, they have to produce vast numbers and then put their faith in a seed. *Faith in a Seed*, incidentally, was the title of Thoreau's final manuscript, a (very wordy) study into the wind dispersal, which not surprisingly didn't gain the same level of fame as *Walden*, his tempting tale of turning your back on the frustrations of modern society to go and live in a lovely cabin in the woods.

I didn't understand why all these fields had been left to thistles. The margins of the fields had been mown, but nothing else. Scarlet pimpernel was growing well in those margins, a wildflower that was once common in cornfields, but now in decline due to intensive agricultural. It is sometimes known as old man's weathervane or shepherd's weather glass because the flowers close when atmospheric pressure falls, which often signals bad weather.^{ccclxxv}

I passed a man walking his dog, tennis ball in mouth (the dog, not the man). One said hello (the man, not the dog) and the other wagged his tail. A teenage son trailed by several yards, glued to his phone with headphones firmly in. He didn't notice me. I climbed a stile and entered an overgrown wood whose only real sunlight came down a corridor where the trees had been felled to allow the passage of a telegraph wire.

I found a large memorial stone in the wood, freshly positioned, and strewn with roses. It is rare to find memorials away from churchyards so I stopped to have a look. It was a tall, uneven boulder, almost my height. Getting it here had been no mean feat, for there was a couple of tonnes of rock here, at least. There were no words on the memorial, just an engraved star in a circle. In times gone by, the five pointed star, known as a pentagram, was a Christian symbol representing the five wounds of the crucified Christ (four nails, plus a spear in the side) and regarded as a deterrent against evil.^{ccclxxvi}

As there was no message with the roses either, so it was impossible to know whose memorial it was. Then I spotted, tossed away into the trees, the foam outlines used at funerals to spell out a name in flowers. The green foam edged with red ribbon was my only clue towards whose life was commemorated here: MUM and NAN. Whether the lady in question was a grandmother or fond of Indian flatbread is unknown.

I relaxed on a bench decorated with a motif saying 'Live Love Laugh & Be Happy'. Earlier I had passed a sign on a farm gate with a picture of a cow and the words 'Slow down'. It was intended to caution drivers about the milking herd, I imagine, but I chose to see the wise cow advising me to slow down, to chew the cud, and enjoy the sunshine. The cow prompted me to pause for a few minutes on this bench. I had hoped to visit the pub shown here on my map, but it had closed down and been converted into houses. All that remained were bollards lining the narrow lane, each one painted with a letter spelling out F O X & H O U N D S.

I liked it up here at the head of the valley. It was a lofty, quiet backwater of the map, a web of tiny lanes leading nowhere much. I had never paid much attention to this area, even when out exploring on my bike and following my nose. But I'd discovered today that it was a back entrance to a valley

I'm fond of, and I appreciated getting a new view of it and looking all the way down to the flat lands on the edge of my map. The tall buildings of the city gleamed and shimmered in the crisp summer light. They looked close, but right now also felt pleasingly far away.

BLACKBERRIES

'I remember how glad I was when I was kept from school a half a day to pick huckleberries on a neighbouring hill all by myself to make a pudding for the family dinner. Ah, they got nothing but the pudding, but I got invaluable experience beside. A half a day of liberty like that was like the promise of life eternal.'

– Henry David Thoreau

Today's grid square was a rare outing to the far side of the river, to the very edge of the map itself. It felt like a new land for me. Over that hill lay lands unknown, and maybe even dragons. As I rode a stony bridleway through the wood, I made sure to enjoy the lush greenery all around me, for I knew that in a few short weeks the leaves would begin to fall. Autumn was closing in, the season when I'd first begun exploring my map. The year was winding round to its close, and I was going to miss these scheduled weekly outings. Holly berries ripened red in the dim woodland light. The path became a holloway, with beech trees arching overhead and their tangle of roots exposed on the elevated track sides. A nuthatch scurried up and down one of the trunks, calling 'dwip, dwip' as it searched for food, then hung upside down as it ate.

I wanted to savour this day in the green trees before the leaves fell for another year, to store its memory as nourishment to get me through the winter. Emails and chores and writing all this down could wait for another day. At the top of the woods I found a lookout point and a picnic table bearing the scorch marks of half a dozen disposable barbecues. From up here, there were long views down over the old village and the new development on its flank, then back over the river and east towards the wooded chalk ridgeline I had visited often this year.

Dropping back towards the village, I cycled through golden fields of straw gathered into rows to dry before being baled. It was September now, a time of sleepy-eyed kids slumped at early bus stops in new school shoes and too-large blazers. A grey haze of coolness hung in the air with a faint drizzle and the scent of honeysuckle.

A telephone box in the village had been repurposed as a library. I glanced inside, secretly hoping I might see one of my own books in there. Of course I didn't: I rarely see them even in bookshops, let alone in a little community library of discarded bestsellers and bodice rippers. Still, a man has to hold on to secret dreams...^{ccclxxvii} The single narrow road couldn't cope with the busy back-to-school

traffic, particularly as both sides of the street were lined with parked cars. I cycled past the chaos down the pavement, imagining how great it would be to see all those hundreds of kids cycling the short journey to school with their friends.

The village was looking past its best. A sign in the shop window said that it had ‘permantley [sic] been closed since the 1st Oct. Thank you.’ The streets of post-war homes looked tatty and the Victorian terraces built for the since-demolished factory needed a coat of paint. At the edge of the village stood a large 16th Century farmhouse with an 18th Century Georgian front, three storeys high with 15 large windows on its front face. A locust tree filled the front garden and an irrigation system dripped onto the rows of geraniums outside the front gate.

Beyond this house lay farmland whose fields had already been harvested and ploughed. Hawthorn berries ripened in the hedgerows and today was the first time in months that I had wished for a woolly hat, although swallows and martins still circled overhead. One day soon I would notice that I hadn’t noticed them in a while, and they’d have all gone, like the best years of my life if I don’t pay attention, flown south to African skies for another year, without even saying goodbye.^{cclxxviii}

A sign on the church invited me in, ‘You are welcome to share the quiet, beauty and friendship of this church’. I passed beneath the lych gate, built to commemorate the local men killed in the First World War. In the graveyard I found the grave of a lady who was mother to 22 children, ‘eleven of whom are buried near this spot’.

Alongside her was the tomb of the oldest man aboard the *HMS Victory* at the Battle of Trafalgar, in his late sixties on the day Lord Nelson died. Close by was the modern grave of an infant who had died the day she was born. It had recently been decorated with a fresh wreath for her 18th birthday from ‘Mummy and Daddy’. This reminded me of Wordsworth’s aching tribute after losing his six-year-old son, ‘I loved the Boy with the utmost love of which my soul is capable, and he is taken from me – yet in the agony of my spirit in surrendering such a treasure I feel a thousand times richer than if I had never possessed it’.

Leaving the churchyard, I pushed through waste ground covered in scrub. Three beehives had been tucked out of sight amongst head high teasels. I ducked into a small wood to dodge a shower, and the rain fell more softly beneath the trees. Dirt bikes had carved an ugly but fun racing course in and around tall stands of old oaks. Slender white birch trees wore bright bracelets of green moss around their bases. The root systems of big beech trees tangled amongst each other. I liked the atmosphere of this wood. It’s interesting, but intangible, the way that some woods just feel right.

I smelled weed and spotted a pair of lurcher dogs running through the trees. Soon after, a man in a flat cap appeared, smoking the joint. His teenage son had gone heavy on the Lynx deodorant. I use my sense of smell far more in the outdoors than when I am cocooned indoors. They were carrying air rifles and scanning the tree canopy. We chatted about the rain, as Brits do, and then I asked what they were hoping to shoot.

‘Squirrels, wood pigeons, anything really. But it’s raining, innit, so they’re all like ‘f*** you’ and hiding, know what I mean? What about you?’

I answered, ‘a bit like you guys, really: just looking for anything interesting. I shoot with my camera though.’

I brandished my camera and they laughed and wished me luck. A few minutes later I heard the pop

pop pop of pellets, the yapping excitement of the dogs, and some squirrel or pigeon had just run out of luck.

The river lapped unobtrusively beyond the village, muddy and full at high tide. I listened to the susurrations of the wind whispering in the reeds, then doubted myself whether susurrations were even a word. (It turned out that it was, from the Latin word for ‘whisper’.) I followed the river downstream to the edge of the grid square, past a tribute to the lime kiln workers who used to work here, past the site of the cement factory that brought wealth to the area, and past the site where a ferry crossed back and forth for hundreds of years until 1963. You could take your bike on the ferry but it cost ½p extra.

I passed a smelly sewage works and a smelly cattery. I passed pylons in the reedbeds festooned with barbed wire and signs warning would-be climbers of the 33,000 Volts fizzing through the cables, and I paused on a quiet bench to watch the water for a while and imagine all these different pasts.

Finally, peak blackberry season had arrived, and with that the onset of autumn. I gorged on a giant patch, my body an efficient machine whirring through the movements of pick, eat, pick, eat, my eyes scanning for the next ripe berry while my fingers automatically found my mouth. Blackberries must be the highlight of the British forager’s calendar (except for those savvy enough to harvest wild mushrooms). They are easy to find, plentiful, won’t kill you, and actually taste delicious, unlike quite a lot of foraged food which tastes mostly of leaves.

Blackberries are an important food and habitat for many creatures, and have also been enjoyed by humans for aeons. The Haraldskær Woman, whose 2500-year-old body was preserved superbly in a Danish bog, was found to have blackberries in her stomach.^{ccclxxix}

Twenty years ago, mention of the word ‘blackberry’ might have conjured up thoughts of the wildly successful mobile phone company loved by Barack Obama and a generation of businessmen and women. Yet BlackBerry the brand has disappeared entirely from the sector and our consciousness. Whether you are a blackberry plant or a BlackBerry phone, the difference between survival and extinction is all about successfully adapting to changing environments.^{ccclxxx}

In 2007, a new edition of the *Oxford Junior Dictionary* included words such as ‘broadband’ but removed many words describing the natural world, such as heron and lark. The decisions were made in response to ‘the current frequency of words in the daily language of children’, which felt suddenly sad and alarming. It was the philosopher AJ Ayer who first raised the notion that if we do not have a word for something, we cannot think of it, let alone care for it. There is a direct connection between our imagination, our ideas, and our vocabulary. This has certainly been true for me this year. An open letter to the *Oxford Junior Dictionary*, signed by naturalists and artists, fought back against the decision, pointing out that ‘there is a shocking, proven connection between the decline in natural play and the decline in children’s wellbeing.’ Unless we have a word for something, we are unable to conceive of it. Unless we explore our local neighbourhood, we are unable to imagine what might be right under our noses, nor to be able to celebrate it, mourn its decline, or doing anything to change that.

SLOW

'Watching ourselves and watching the world are not in opposition; by observing the forest, I have come to see myself more clearly.'

– David George Haskell, *The Forest Unseen*

A fruitful autumn of foraging for sloes on blackthorn trees depends on the spring and summer's weather. A wet and cold year means no sloes. But too many hot and dry days makes small, shrivelled fruit. It is a fussy, Goldilocks type of fruit. Sloes are related to plums and cherries, so in theory you can eat them raw, but they are so sour that they will pucker your face and dry your mouth. Traditionally, they were picked after the first frost had split the skins, allowing the juices to flow into your gin. These days, you can pick them whenever you like and just freeze them before making your sloe gin.

Though the silver birch trees were beginning to turn to autumnal gold, summer was definitely back this week, and with a fury, despite me writing it off. The morning was hot, clear and blue, though it was probably too early to speak of an Indian summer.^{ccclxxxix}

I spent a little time, as I often did, cycling around ordinary streets and mulling over life. As I rode from street to street towards the edge of the small town, the homes became noticeably larger and more spaced out, until I reached Waitrose delivery vans and lawns with willow trees. There was often a gigantic differentiation of wealth within grid squares, and a depressing correlation too between health and longevity. I found myself wondering if there is also a corresponding link (or an inverse one) between wealth and other important life measures like happiness?

Research suggests that half our happiness derives from our genetics and personality, and half comes from external factors in our lives: our work, health, and relationships. Income is linked to happiness, but only up to the point of living a 'comfortable' lifestyle. Once people earn beyond the level of worrying too much about money, happiness levels plateau. How much we earn compared to people around us affects our happiness much more, no matter how much you earn or whether you buy your hummus from Lidl or Marks & Spencer. Gardeners and florists tend to be the happiest people. Self-employed workers are more content than employees, whilst bankers and IT workers are the unhappiest, though not the poorest.

I felt my spirits rising as I rode away from the streets in search of countryside. A sunny day always lifts my mood. The sun was hot on my dark t-shirt and I pulled my cap down to give my eyes a little more shade. Overall, people in warm countries are reported to have higher life satisfaction than those of us in cold or cloudy climates, when that is the only independent variable.

But the increased satisfaction from sunshine only has a short-term influence on overall life satisfaction. For the curse of hedonic adaptation means we soon start to take all good things for granted, even endless sunny days. Ultimately, the best predictor of how satisfied we will be with our lives in the future, is how satisfied we are with our lives today.

This year has made me feel strongly that getting more people out into more of the countryside, more often, would have so many benefits. It is epitomised by the Nordic notion of '*friluftsliv*'. The notion of 'fresh air life' is enshrined in Norway's Outdoor Activities Act^{ccclxxxix} 'so that the opportunity to practice outdoor life as a health-promoting, well-being-creating and environmentally friendly leisure activity is preserved and promoted.'

It is a way of life taught to every child, and you can even study *friluftsliv* at university. The principles of *friluftsliv* are perfect for exploring your local map, too. They include connecting by sharing your explorations with others or meeting people on your map, noticing and being curious, learning, and giving your time or expertise to leave your map in a better place.

A car accelerated past me as soon as it left the restricted 30 mph zone of the village. The driver gunned his engine at the speed limit sign^{ccclxxxiii} and screeched away round the corner. Fast driving in rural areas and a lack of cycle lanes or pavements is a significant barrier to encouraging more people to walk or cycle in the countryside.

I was glad to get off the road, and headed down a footpath alongside a large and well-fenced, almost fortified, chicken coop. A piratical Jolly Roger flag flew from the roof, reinforcing the siege mentality of those chickens against the perennial risk of foxes. The title Jolly Roger came from the French '*joli rouge*', or 'pretty red', because pirate flags were originally blood red as a warning that no mercy would be shown should a ship opt for battle rather than surrender. The skull and crossed bones was adopted from the symbol used in ship's logs representing a death on board.^{ccclxxxiv}

I paused along the path to feast on blackberries again. It was a well-used footpath so most of the low hanging fruit had already gone. But a benefit of being above-average height meant that I was able to reach up and enjoy the higher fruit. By standing on the frame of my bike, I could reach even higher, too. I noticed the acorns were beginning to grow and swell on the oak tree nearby. 'I hold in my hand not a single tree, but a community-to-be, a world-in-waiting,' wrote Rob Macfarlane of the 2300 species that live in an English oak; the 716 lichens, 108 fungi, 1178 invertebrates, and all the owls, bats, wood warblers and butterflies.

Breakfast over, I crossed the railway lines on an exposed crossing where you had to walk over the tracks. I looked left and right carefully before crossing. A kestrel was busily hunting its own breakfast, hovering in a picture of taut concentration. The blackthorn hedges, so frothy with lacy white flowers in the spring, were now heavy with blue-black fruit. A chiffchaff chirped from deep within their spiky sanctuary, and a tiny stream ran beneath the hedge, making me sorry for how few streams there were on my map. Today, of all days, I longed for cool water to submerge myself in. It was ferociously hot.

Fortunately, today's square had a lake marked on the map. I turned towards it, eager to swim. A footpath that ran for hundreds of metres across the grid square, which I had assumed would be an opportunity to enjoy the countryside, turned out to be a gloomy tunnel hemmed between high house fences, a quarry fence and overhead trees. The houses were the outskirts of a posh town just beyond the reach of my map. Perhaps this street was not so fancy though: a sticker attached to a road sign said, 'this sign has no scrap value'. The leaves on the maple tree above the traffic lights were just beginning to turn from green to amber and bright red. The autumn colours were beginning to dominate.

Unfortunately, I not only the lake, but more than half the grid square was cordoned off for a sand quarry. I had no intention of climbing in to a working quarry: as the signs posted regularly along the fences warned, 'people are killed and seriously injured every year in quarries.' But I did want to at least get a telephoto glimpse of the lake, the quarry, and the fenced off landscape in order to better understand today's square.

I set off on a big loop to try to find somewhere where I could at least get a view of the quarry and lake. I found a public footpath that ran right through the working part of the quarry. Much as I'm a

champion for access to our land, this did seem a ridiculous place for a path, with all sorts of dangerous machinery roaring around. Massive diggers were literally removing a hillside and I felt like a little boy as I enjoyed watching them dump their loads onto long conveyor belts to be carried away to build new roads and towns.

Sitting quietly amidst the noise and dust and apocalyptic vehicles was the tantalising blue water of an old sand pit. Tempting for swimming, but acceptably off limits. I settled for cycling back to the village to search for some shade.

The village church was unlocked, which sadly was quite unusual on my map. The cool gloom and muffled peace was a respite from the scalding, dazzling day outside, much like swimming underwater. Stained glass windows gleamed as sunlight poured burnished pools of colour onto the flagstone floor. I thought of how magical those windows must have appeared to devout and simple congregations before our sense of wonder was numbed by the hedonic adaptation of HD TVs and 4K phone screens that dish up dazzling colour every hour of the day.^{ccclxxxv}

One thing I appreciate in ancient churches is the sheer bloody ‘oldness’ of Britain. People have sought rest, respite, solace and perspective on this very spot for 30 generations or more. That felt meaningful and important to me, despite not believing in any god. The sands of time trickle slowly in places like this. Slow down. Today is enough.

A marble plaque on the wall listed benefactions gifted to the community centuries ago. ‘John Porter devised an annuity of two Pounds to be given to the two oldest married persons, at the discretion of the Minister. William Baker bequeathed forever twenty six shillings yearly to be paid to the oldest deserving poor person. And the Lord of the Manor agrees to give annually 500 fagots [a bundle of sticks bound together as fuel] to the poor of the parish.’ I wondered how long those pledges lasted for. With the powers of cumulative interest, they would be worth a fortune by now if they’d been invested in index funds. Rather than the ever-growing financial and carbon debt that we are passing down to our kids, what useful, long-lasting legacy should our generation leave for the future?

On a shelf was a box filled with ‘Quarantined Prayer Books’ from the great medical drama of our age, which in its turn will be gone soon enough and replaced by the next big thing. I looked at the grave of the sombre-looking knight set into the floor by the altar. He died here, one September day, 626 years ago. I wondered what he enjoyed doing on sunny September days like today, beyond rescuing damsels and slaying dragons. The well-worn tombs on the flagstones reminded me not to fret with chasing fame or fortune. Everything I do will be forgotten sooner rather than later. In other words: go and enjoy the sunshine.

And with that I left the church, heading out into the heat in search of a decent cup of coffee. I enjoyed a flat white in the sunshine contemplating the meaning of life, before scrolling around the maps on my phone to find a river somewhere that I could swim in, feeling I had been somewhat premature declaring the end of summer five weeks ago.

'Live in each season as it passes; breathe the air, drink the drink, taste the fruit, and resign yourself to the influences of each.'

– Henry David Thoreau

A long row of black poplar trees guided my road towards the low horizon. I passed a row of small industrial units, then a house offering free windfall apples and pears in a chipped, white ceramic bowl on the doorstep. Voices carried from an open upstairs window, a loud Zoom call about the history of art and the constitution. A row of beehives stood in the corner of a field. The coming cool weather would soon quieten the hive. But today the sun was strong and the bees were busy. They fly incredible distances, racking up round trips as long as ten miles to forage for food. A colony of 60,000 bees cumulatively notches up enough air miles to fly to the moon every day. They search for food at up to 20 mph, before returning to the hive weighted down with nectar, pollen or water at 12 mph.

A single jar of honey contains nectar from two million flowers, with a corresponding flight distance of 90,000 miles, or more than three laps of the planet, yet each bee generates only a twelfth of a teaspoon of honey in its entire life.

I passed a closed-down pub and a 200-year-old granite obelisk boundary marker, then followed a stretch of old canal choked with reeds and bullrushes. Two collared doves watched me ride by from their perch on a phone wire. The water was clear and I imagine it was teeming with life, even around the heaps of dumped furniture and old tyres. All I spotted in the impenetrable tangle was a red-beaked moorhen sitting on her nest.

A recovery vehicle passed, the driver texting with one hand and holding his coffee in the other. Someone had chucked a kid's slide halfway over the hedge, and horses grazed in a paddock while a police forensic van drove by. There was a fresh sheen of dew across the fields as summer continued blending into autumn. The verges were messy with litter, but there were also clusters of wild sweet peas growing, strung with sparkling spider webs. Somewhere in the distance a dog barked, a man shouted instructions, and an old tractor chug-chugged across a field.

For most of the year we don't particularly notice many spiders, but they begin to look for mates in autumn and so spin their largest and most dazzling webs, which can cover entire fields beneath shimmering sheets of silk. Whilst British spiders are almost entirely harmless, we've feared them and connected them with wicked witches ever since the Middle Ages. We have around 650 species of spider here, of which half are tiny money spiders. Most spiders adopt a specialised niche, such as reedbeds, sedge fens, dunes or heathland, and the variety of webs they spin is similarly diverse^{ccclxxxvi}. The design of webs helps identify which spider family made it, for they tend to each make one of seven styles: orb, sheet, tangle, funnel, lace, radial or purse.^{ccclxxxvii}

The map showed an orchard north of the village, but that was gone now, replaced with harvested fields strewn with bales. The field was giving off a gentle ticking sound, like bubble bath popping, which I couldn't explain. The air smelled sweet, that heavenly earthy scent of the last days of summer. I noticed I was moving slowly, savouring the warm weather, basking and recharging ready for the darkness that would return soon. I cruised slowly down the middle of deserted roads, slaloming gently past rustling poplar trees.

The road ran out in a tiny hamlet of thatched cottages clustered around a church. It felt like the end of the world, or at least the end of my map. The wide open marshes stretched beyond. A little red-tiled church was built with striped walls of ragstone and knapped flint. I propped my bike against a gravestone and pushed the magnificent 600-year-old wooden door, which was weather-beaten and knotted and carved with birds and flowers and faces. The keyhole was three inches large, but the door was unlocked and swung open smoothly. I stepped into the cool, quiet building and allowed my eyes to adjust to the gloom before absorbing the ancient atmosphere of Norman worshippers and Benedictine nuns.

I followed a footpath in the direction of the marsh. Progress was slow as I kept stopping to eat blackberries. There were thousands upon thousands of them. Even the fox poo round here was stuffed with berries (I didn't eat that). I became more discerning in my blackberry selection: the berries on the shaded north side of the path were nicely chilled, but not as plump or sweet as those on the southern side. As the noted botanist Louis Armstrong once sang, *'life can be so sweet on the sunny side of the street...'*

A woodpecker flapped indignantly into the tree tops as I paused to poke at a blood red fungus on the trunk of an old oak tree. Furniture makers prize oak timber that has been infected by the beefsteak fungus parasite like this, referring to it as 'brown oak' and valuing its deep brown hue. If you slice through the flesh of *Fistulina hepatica* it does resemble a juicy steak, though sadly is not nearly as tasty. Young specimens are edible, however, and apparently taste best when slowly simmered.

The fields became scruffier as I approached the marshes, unkempt and not far from reverting to wildness. It was a jumbled, broken down and endlessly mutable landscape. The grass was tussocky, like bed head, with bushes, brambles and oak saplings dotted around the fields. This square had a left-alone edgeland vibe which I enjoyed, although if left completely alone the valuable diversity of the marshland would be swallowed up by scrub and woodland. The British countryside requires a gentle helping hand from us to preserve the wonderful variety of its habitats.

Corners of the country like this can feel eternal and unchanging, but even out here development marches on. A rough, hand-drawn notice had been nailed to a fence post. It complained about the 'Development of 6 houses proposed here = light pollution [sic] noise extra traffic [sic], No gas, mains drains no street lights no paths. Small country lane. Please object.'

On my way back to where I'd begun today's ride, I came across an apple tree growing wild by the road, with a cluster of red apples near the top. I gave the trunk a bit of a shake and caught my first wild apple of the year. As I crunched the tart, white flesh I remembered eating an apple like this back on my very first grid square. Over the course of this year, I have learned so much. Not least of all was realising how shockingly ignorant I had been before I began. I had been walking around with blinkers on all my life. The more you notice, the more you learn (and vice versa). And then the more you start to care. The hundreds of hours I have spent paying attention to these grid squares had also started to give me a clearer sense of who I am at this point in my life.

The Welsh word *cynefin* encompasses the multiple, tangled threads in our landscapes and experiences that influence us deeply but are hard to put your finger on. It combines the rootedness of where you live and the relationship you have with that land. These fields and footpaths and streets had shown me a great deal, but they also asked difficult questions. Who are you? What are you doing here? What matters to you? And all the while, the seasons roll round and apples grow and fall. Thoreau, a man better tuned than most to the seasons and to the simple multitudes of local living, was also a fan of wild apples.

‘These apples have hung in the wind and frost and rain till they have absorbed the qualities of the weather or season, and thus are highly seasoned,’ he wrote. ‘And they pierce and sting and permeate us with their spirit. They must be eaten in season, accordingly,— that is, out of doors.’ Yet he also conceded that they can sometimes be ‘sour enough to set a squirrel’s teeth on edge and make a jay scream’!

VALLEY

‘Nature does not need to be cleansed of human artefacts to be beautiful or coherent. Yes, we should be less greedy, untidy, wasteful, and shortsighted. But let us not turn responsibility into self-hatred. Our biggest failing is, after all, lack of compassion for the world. Including ourselves.’
– David George Haskell, *The Forest Unseen*

Walking feels very different to the running and cycling I usually do for exercise. The way I think changes depending on my mode of transport. Slow my legs and slowly my mind starts to slow, too. When you walk, you can stop at any time to poke something with a stick, make a note, or take a photo. Walking is a movement that invites stillness.

I had a good feeling about this grid square as soon as I arrived and locked up my bike, ready to walk. The omens were promising: plenty of contour lines on the map plus zero roads. And on previous outings, I had often looked in this direction and thought, ‘it looks nice over that way.’

There was the bonus too of the sun blazing away again, a bonus late September gift. This week marked the autumn equinox and I noticed the leaves turning golden on more trees. This is a beautiful time of year when, for once, I manage to fully appreciate the here and now and be grateful for it. This kind weather will not be here for much longer. Enjoy it. These light mornings, this golden light will not last. Make the most of it. These were good days. I needed only to stand still and look around to have enough. So I was going to walk this week for some deliberate slowness.

Even at the outset, I was beginning to ask myself, ‘could this be my favourite grid square of the year?’

This felt like actual, proper countryside. In front of me was what seemed to be an actual, proper hill, woefully scarce on this flat corner of the world. A very old man walked towards me on the footpath and I stepped aside to allow him to pass. He acknowledged me with a gentle nod of his head. His body was slow, frail and stooped. He was short of breath and hesitant on the uneven ground. The skin on his face had sagged and his eyes were red-rimmed and sunken. But I reflected that I was probably as near to his age as I was to being a kid running around the playground. The seasons only turn forwards. Don’t take my fitness for granted. Don’t take these days for granted.

This valley felt undiscovered and wild. It was a mixture of chalk grassland and scrub that gradually turned to woodland up at the top of the valley. What I casually call ‘scrub’ actually consists of any number of species that I don’t recognise. I put in few minutes of effort with my Seek app and found I was amongst wild carrot, devil’s bit scabious, strawberry clover, agrimony, wild basil, thyme, oregano, ragwort, thistles and dog rose, not to mention all the different sorts of grasses, sparkling with dew and spiders’ webs. Insects chirped all around. This briefest of efforts at noticing and learning had already made the grassland come more alive before my eyes.

I saw red berries on a whitebeam tree, clusters of black berries on a buckthorn, and spiky hawthorn hedges^{ccclxxxviii} with red berries known as ‘haws’, an important winter food source for hawthorn shield bugs, yellowhammers, and migrating birds like redwings, waxwings and fieldfares.^{ccclxxxix}

The squawk-squawk of a pheasant’s alarm call caused me to look up, and sure enough I spotted a fox in the lee of a hedge, slinking silently and patiently up the valley, its mind set on mischief. The sunlight was soft and the morning felt as though it was paused and waiting for something. This map of mine had grown on me a lot this year.

A band of jays squabbled in the tree tops as I followed a shaded footpath and discovered a monument hidden up an overgrown path. More weeks than not, my grid squares threw up quirky surprises that led me to curious internet explorations back home. This memorial was for a pioneer of aviation who used the valley’s steep slopes to try out his prototype gliders, including a world record distance at the end of the 19th Century. His supporters believed that, without the inconvenience of his death in a crash landing setting him back somewhat, this valley might even have been the site to beat the Wright brothers to the glorious immortality of powered flight.

This beautiful area of mixed grassland, scrub, and young trees was a fine example of the popular buzzword ‘rewilding’. Rewilding is the restoration of ecosystems allowing natural processes to take over again to help nature heal and form healthy, stable habitats. It increases biodiversity, recaptures carbon, costs little, and getting involved is great for people’s physical and mental health.

Rewilding can involve giving nature a gentle helping hand such as rewigging rivers, blocking drainage ditches, planting the right trees in the right places, reintroducing missing species,^{cccxc} and reducing the harmful effects of overgrazing by too many sheep or deer. Landscape restoration ranges from transforming landscapes over decades, to finding quicker ways to allow nature to flourish in built-up environments. It can also involve as little as stepping back from the land and leaving nature to get on with healing itself. Rewilding beats our current approach of filling rivers with manure and the air with methane, or hopes of somehow generating a sci-fi solar shield above the earth to save us all from scorching.

I have a dream. It may not be as noble as some other dreams. But I have a dream that if we tweak our diets, reduce food waste, and sort out our inefficient and toxic industrial farming, there will be spare space in every valley, and then every hill and tiny mountain on my map can be used more thoughtfully, with the rough places left wild, and an enlightened attitude to access helping us all get out into nature more often and more responsibly. This is my hope. One day.

Opponents of rewilding mark people like me down as deluded hippies. For rewilding is mistakenly assumed to be about reducing food security, removing people from their land and forcing farmers out of work. But that is not true at all. Rewilding can help boost employment in rural communities and improve farm yields through providing habitats for pollinating insects, restoring the soil, and mitigating against drought and flooding. It is not a question of rewilding *or* farming. Rewilding and

regenerative agriculture are essential allies for our future.

But using the least productive fifth of our farmland to help nature recover would reduce food production by less than 3%.^{cccxc} That could easily be made up by increasing efficiency elsewhere and making small adjustments to the food we buy. We already use far less land to grow more food than at any time in history.

For example, swapping some nature-depleted fields full of livestock for a field of crops and an area of rewilding balances in terms of calories and protein produced for us to eat (you need 119.49 m² to produce 1000 kilocalories of beef and 184.8 m² to get 100 g of protein, compared to 1.44 m² and 4.6 m² for legumes and pulses). But it also makes sense for the sake of the planet and our souls.

I often grumble about livestock, yet the ‘natural’ valley here only looked the way it did through grazing management. Allowing a small number of cows to graze occasionally prevents the land being engulfed by brambles and allows ecologically-valuable grasslands to flourish. Pasture-fed animals play a role in the future of sustainable farming and a landscape filled with wildlife. Industrially-farmed animals do not.

The uplands of Britain, where I grew up, are some of our most beautiful, treasured, sentimental, culturally important, and nature-depleted landscapes. Upland farms produce a tiny proportion of our food. They have negligible commercial impact. And sheep, in particular, wreak havoc with biodiversity, unless they are kept to very small numbers. And yet nobody would want to see the end of upland farms. They have a role for grazing inaccessible land, and as a precious part of our cultural heritage. For thousands of years, farmers have had one simple, vital task: produce as much food as possible. That focus needs to shift towards producing what a farm is naturally capable of producing, using public money for public goods to get a balance between commercial and environmental sustainability, with corporate funding also helping rewilding through carbon credits.

Rewilding is not an attempt to hark back to an unrealistic, idyllic prior state, but a way to allow the land to be as wild and diverse as possible, alongside the demands of our 21st Century lives. It can brighten our lives and reconnect us with nature, as well as providing employment and resources for local communities. So the only way rewilding can be successful is if everyone feels included and valued, and if communities are consulted^{cccxcii}. We need to balance producing food, keeping farmers on the land, and increasing biodiversity. Everyone will be worse off if land use becomes a battle between farmers and conservationists.

Effective rewilding requires collaboration between people who live and work on the land, those who visit it and cherish it, and officials who hold the power to shape attitudes and policies. But we need to act fast, decisively and ambitiously if 30% of our land and sea is to be restored for nature by 2030, a government claim^{cccxciii} on which very little progress has so far been made. If the Royal Family, Ministry of Defence, Church, and National Trust got involved in restoring the landscape, that could add up to 823051 hectares to the rewilding conversation. That’s more than 8000 of the grid squares I have been exploring on my map.

So much of being passionate about nature and concerned about the climate involves doom and gloom, endless bad news, arguing with strangers on social media, and fears of a bleak future. Rewilding, by contrast, is joyful and uplifting. It is simple, affordable, surprisingly quick, and it works really well. A few fabulous books I recommend about rewilding are *Wilding: The Return of Nature to a British Farm*^{cccxciv}, *The Book of Wilding*^{cccxcv}, *Feral*^{cccxcvi}, *Land Healer*^{cccxcvii}, *English Pastoral*^{cccxcviii} and *Wild Fell*^{cccxcix}. They are all optimistic, encouraging books that show it is entirely

possible to feed a country, whilst at the same time enhancing nature rather than wrecking it. But anyone can plant a tree.

Britain currently has just 13% forest cover, compared to a European average of 37%, and much of what we have is commercial monoculture plantation with little wildlife in it. They say that the best time to plant a tree is twenty years ago. Well, the second best time is right now. You might not see it grow, but your grandkids will appreciate it.

This notion of doing something to benefit later generations was vital to the ‘seven generation stewardship’ concept of the Iroquois. Its essence was that ‘in every deliberation, we must consider the impact on the seventh generation... even if it requires having skin as thick as the bark of a pine.’ It is a generous approach that very much counters our own culture of ‘get rich and buy stuff. Do what we want, and burn the place down on the way out.’ Considering how our actions will impact the world seven generations hence might help change that, and make us happier and healthier at the same time.

At a time when so much news about nature is depressing, and in the latter stages of a book which I fear is filled with more than its fair share of doom and gloom, there is an absolute joy in visiting a rewilded landscape like Knepp. I went there at 4 am to listen to the spring dawn chorus, and was astonished by the volume and variety of birdsong I heard. Britain is one of the most nature-depleted countries on the planet, yet we can easily do something about that simply by allowing some of our gardens, verges, playgrounds, churchyards, and farmland to rewild itself. It is magical, joyful, and swift. It is also cheap, simple, and almost effortless to achieve.

By now the sun was really hot as I followed a footpath uphill across a couple of ploughed fields. I passed through another strip of woodland and emerged at the head of a beautiful valley. I stopped in astonishment.

‘Yes!’ I declared to myself, grinning. ‘This is it.’

The valley opening out before me ran uninterrupted for about two miles, an enormous expanse by local standards. In front of me was a steep vista filled with high hedgerows, trees, meadows and a large pond. I could only see one house, enviably nestled in the trees near the foot of the valley.

‘This is the most beautiful place on my map. I have found the treasure,’ I thought to myself.

I stared at the view in delight, silently absorbing the landscape and feeling moved in a way that I have missed since being absent from properly wild landscapes this year. Wildness, silence, water, contour lines and trees: this valley had everything I love and I felt an immediate connection.

I was still taking it all in when two dog walkers appeared behind me. Aware that I was paying close attention to the view, one of them stopped and spoke.

‘Such a shame, isn’t it?’

‘What do you mean?’ I asked, in surprise.

‘The golf course,’ he explained. ‘All this was a golf course until seven years ago. Look, you can still see a water hazard down there.’

I expressed amazement that this wild landscape used to be a manicured golf course, and that the pond was man-made.

‘Yes, it’s such a shame that it’s gone. Look at it now, there’s nothing here. Just nature.’

October

CONKERS

‘There is just as much beauty visible to us in the landscape as we are prepared to appreciate, not a grain more. The actual objects which one man will see from a particular hilltop are just as different from those which another will see as the beholders are different.’

– Henry David Thoreau

I had been particularly looking forward to the arrival of conkers as autumn approached. Horse chestnut trees, and their beautiful, polished seeds – conkers – are a surefire declaration of the season. Conker trees were introduced into Britain from the Balkans back in the 16th Century. They’re not common in wild woodland, but are staples of towns, parks and villages. Insects gorge on their flamboyant candelabra flowers and caterpillars feast on the leaves. Blue tits enjoy the caterpillars, and deer and squirrels eat the conkers. And me? I hoard them.

As I edit this book today, months away from conker season, I have handfuls of them dotted over my desk. It might be their smooth, shiny tactility, or it may just be decades of ingrained habit, but I am unable to walk past a horse chestnut tree in autumn without stooping and popping a couple more conkers into my pocket. I keep one in my jacket pocket throughout the winter.

As a boy, I used to love playing the game of conkers, threading a shoelace through a skewered hole in the nut then trying to smash a rival’s with precise but powerful swings of your conker. But I never aspired to the heady heights of the World Conker Championships. The competitive game (sport?) of conkers began on the Isle of Wight in 1848, but the inaugural World Conker Championships didn’t take place until 1965, on Ashton village green in Northamptonshire, a peaceful spot surrounded by horse chestnut trees.

The tournament began, like many good ideas, in a pub, in response to the cancellation of a fishing expedition. The rest is history. Like many sports invented in Britain, the rest of the world soon caught up and overtook us. Mexican Jorge Ramirez became World Champion in 1976, and the first overseas Ladies champion was Selma Becker from Austria in 2000.^{cd}

The horse chestnut tree I stood beneath today had prematurely brown and crispy leaves. It was a victim of the increasingly common horse chestnut leaf miner moth. These tiny moths, brown with white sergeant chevrons on their wings, lay up to 180 eggs on the leaves. The larvae bore through the leaves, reducing the health of the tree, and making them more susceptible to diseases like bleeding canker.

It had rained hard yesterday, so today the world was washed clean and shining. The temperature had fallen fast since last week. My breath ballooned in the morning sunshine and my fingers felt cold. It

wouldn't be long until I was back wearing hats and gloves again. The fields sparkled with dew and spider webs, and the blackberries in the hedgerows were now withered and past their best.

Pretty flashes of colour caught my eye three times this morning. The first helium balloon was snagged in a hedge, a party balloon with curly ribbons had been trodden into a field, and another was tangled in telephone wires overhead. Releasing balloons is fun but a single balloon can fly thousands of miles and pollute wherever they land. They threaten birds, fish or turtles that eat the debris or get tangled in the ribbons. In 2013, a primary school in England released 300 helium balloons for a project. A few made it as far as Denmark and the Netherlands, but one balloon made it all the way to New South Wales in Australia, 10,000 miles away on the far side of the planet.

On top of the littering, a Cambridge University chemist is calling for a ban on helium balloons on the grounds of it being a ridiculous waste of a precious element. David Ward of the Culham Centre for Fusion Energy says, 'I will not be happy if I cannot have a medical scan in my seventies because we wasted helium on party balloons while I was in my thirties.'

Looking over semi-rural landscapes, it is striking how many electricity pylons and telegraph poles there are. Someone visiting from the past would be taken aback by their prevalence. According to The Telegraph Pole Appreciation Society (for which life membership costs £9.99), 'there is no reason why a properly treated pole shouldn't last 100 years. We know of one that was 'planted' in 1908 and is still not even classed as decayed.'

I crossed a busy road and walked down a bumpy and potholed farm track with grass growing up the middle. An old caravan in a field was slowly being engulfed by brambles and elder bushes. A footpath led round the back of a row of sheds into a development of quiet bungalows backed up against more fields. A farmer in his tractor raised a hand in greeting as I continued along the path, diagonally across a field towards a cluster of Scots pine trees that looked incongruous on this open land, and then on past the clanging assembly of a large wedding marquee.

The path ran alongside a trickle of a stream, its gentle tinkling a rarity on this map's porous, chalky landscape. I was on my way towards a square church tower and the steep red-tiled roofs and chimney stacks of an old village. An old sign on the path by the church declared, 'Prohibited, all vehicles except handcarts, perambulators, invalid carriages and pedal cycles pushed by hand.'

A quiet prayer service was taking place in a side chapel of the church. I rarely encountered anyone in the churches I'd visited this year. I paused to look at the stained glass windows donated 'in thankfulness for the beauty of the ever changing seasons'. I thought about the cycle of seasons I'd seen on my map. I grew more fond of where I live with every grid square I got to know, as well as more open to living according to the moods and pace of each different month.

More than anything else, my map has offered me fresh perspectives. If the constraints of real life prevent me hitting the road, I can still be an explorer, if I choose to be. Though I don't live in the mountains, I can deepen my connection to the land I live on, which may also soothe my urge to be on the move.

What had I discovered this year, wandering and wondering around my map for hours on end? Some are obvious: it rains a lot in England! The winter is very long and my general levels of happiness are higher between April and October. Spending regular, scheduled time outdoors is good for the soul, wherever I go and whatever the weather. Indeed, going out in terrible weather increases the joy you feel afterwards. Anyone can enjoy a bike ride on a sunny day. But only the crazy folk who go out in lashing rain earn the full premium experience as we thaw out gleefully afterwards over tea and toast.

I stroked a dignified cat in the churchyard and then walked into the village. An obsolete red telephone box stood on the village green, a relic of past technology.^{cdi} The ground outside it was strewn with ferociously spiky sweet chestnut husks. A massive Alsatian dog ran at me then barked fiercely, making me jump. Its owner chuckled by way of token apology.

I continued on past the burned remains of a joyrider's motorbike, up a slight rise that offered disproportionately distant views across farmland strewn with pylons, towards the marshes and the wide river, busy with barges. A man in the distance held a flag on a golf green whilst his opponent putted for par. Crows landed on a field of harvested stubble that had not yet been ploughed. It was a slower time on the farms after the mad growth of summer and the busy tasks of harvest. The golfer missed his shot and raised his eyes to the heavens in frustration.

It took me a few moments to get my bearings as I walked over this landscape, matching what I was seeing with various grid squares I had visited over the past year. Things looked different from new perspectives, and places changed so much from season to season, each one worth savouring as it passed.

I rolled the smooth new conkers around my pocket, then climbed back onto on my bike to cycle home and line them up along the desk in my shed. They would keep me company through the winter months to come, with memories of good times, and anticipation for the next rolling around of the seasons.

MUSHROOMS

'Stopping often, watching closely, listening carefully.'
– Robert Lloyd Praeger

I began today's grid square outside the Duke of Wellington pub. It dated from 1516, two and a half centuries before Old Nosey was born, and I wondered about all the brawls it had seen, and the stories it could tell from 500 years of drinkers. I pondered also when they'd installed a *petanque* court in the garden, a game surely more suited to Napoleon than Wellington.

The Duke of Wellington was one of Britain's greatest military heroes, as well as a former Prime Minister. Although he was born way back in 1769, he lived long enough to have his photograph taken, which is impressive considering he was involved in 60 battles! And he is also a legend in the very diverse worlds of rubber boots and beef cooked in pastry.^{cdii} A quick internet search couldn't tell me what the pub had originally been called, or when it was renamed, so I climbed onto my bike and set off to explore what I'd find on the other side of the next hill or highway.

Although it was mid-October now and the grass was slick with dew, the sun was warm once again and I was wearing short sleeves. The leaves on the trees were still much greener than I mentally associate October with. Ecologist Tim Sparks noticed how green the trees were on Remembrance

Sunday at the Cenotaph, so he dived back through a century of newspaper coverage to gather photos of previous Remembrance Days. At the first event in 1919, London's plane trees were leafless and skeletal. Queen Mary hunkered deep into her warm furs. But from the 1980s, the trees in London were much greener during the ceremony. It was a clever visual demonstration of our disrupted climate.

I pedalled first of all around a new housing development. This one had smart and spacious homes and shiny, powerful cars. I passed a Range Rover, Land Rover, Tesla, Audi, GTR, BMW and a Mercedes before I reached a home with a more modest Toyota. A Virginia creeper blazed blood red up a garden fence, some houses had Halloween wreaths on their doors, and I was amused to see some gnomes in one garden.^{cdiii}

An open space behind the houses had been set aside as a recreation area, with gravel footpaths and young saplings in plastic tubes. I liberated an apple from a waist-high tree and crunched it as I rode. A small pond had been fenced off and festooned with Danger signs, as is the custom. I understand, of course, the need to keep children safe, but perhaps a compromise could be an access stile and more nuanced signs balancing the hazards of water with the joys of wildlife and the fun for kids of poking around in a pond.

Robins sang loudly in the warm sunshine, but the motorway's roar was even louder. Living by main roads like this will be quieter and healthier^{cdiv} once we replace our shiny, powerful cars with electric vehicles. The coming transport revolution will make such a difference to many aspects of life, and I'm excited about the prospect of quiet cars running on clean energy, and a decrease in the 7 million people who die prematurely each year from air pollution.

I followed a path to a footbridge and crossed over the motorway into farmland. The smell of freshly-ploughed soil alongside the roar and fumes was discordant. A windfall of shiny sweet chestnuts and the fluffy remains of a fox's pigeon dinner lay on the edge of a dappled slice of trees crimped tightly between the road and the ploughed fields. Spiders' webs strung across the path brushed my face and I quickly wiped them off. Halloween was approaching.

The path led to a 12th Century church where I sat on a tomb and enjoyed the unseasonal warmth. Hops vines grew across the church windows and tendrils wound heavenward up the copper lightning conductor. The woodland of sweet chestnut trees, pines and oaks had been mostly felled for yet another new development, covering almost a quarter of the grid square. Riding around these streets, I felt my enthusiasm flagging in the face of the relentless reduction of wild places. To be fair, this development seemed like a very pleasant place to live, which presumably is why people choose to live here. Not everyone wants to live in a cabin in the mountains or a shack by the sea.

I listened to the squeaks and fizzes and pops of starlings chattering in the bushes by the playground. They reminded me of the romance and mystery of trying to tune a shortwave radio in the middle of the ocean at night, to pick up faint transmissions and connections from thousands of miles away. I walked a lap of the pond that had been preserved in the centre of the housing development. Fenced, yes, but it was lined with willow trees, and the reeds and lily pads in the water sheltered many different species. And pushing up through every grass verge around the new streets of houses were weird and wonderful mushrooms, those mysterious denizens of a truly wild and tangled world.

Hundreds of mica cap mushrooms had emerged by a rotting tree stump, pale brown and clustered tightly together. Like many fungi, they were hard at work decomposing the stump and recycling its nutrients. Most fungi get their nutrition from dead organisms like these. Saprotrophs feed on the

leftovers after other decomposers have had their fill. They are vital for ecosystems as plants are able to use the nutrients created by the fungi and these can be passed up the food chain to other organisms.

I noticed pleated inkcaps, or little Japanese umbrellas, a delicate fungus that appears overnight on grassland after rain. They appear, grow, release their spores, and then decay – all within 24 hours, leaving no trace of ever being there at all. Also pushing through the grass was the shaggy ink cap or lawyer's wig mushroom. After depositing their spores, or after being picked, they turn black and autodigest (dissolve themselves) in just a few hours. They are good to eat, but you have to cook them quickly after harvesting before they disappear altogether! It is little wonder that, in olden times, people were filled with a sense of awe and the supernatural. Indeed, the more we learn about fungi, the more mysterious and remarkable they become.

I got up off my hands and knees, waved goodbye to the mushrooms and pedalled homewards. I was going to miss these weekly scheduled excursions. The Duke of Wellington once said that 'the whole art of war consists of guessing at what is on the other side of the hill', and that continual surprise has been one of the real pleasures of exploring my map this year.

I have shifted from pursuing adventures of a lifetime towards a lifetime of trying to live a little bit adventurously as often as I can. Moving smaller still, to just one map, had required me to develop new habits and consciously try to leave behind all the busy tasks and ideas that are crowded in my mind at any one time. Thoreau called this his 'village mind', recognising that it required discipline to learn to go to the woods in order to do less, but to do that well.

LEGACY

'Most of us are still related to our native fields as the navigator to undiscovered islands in the sea. We can any afternoon discover a new fruit there which will surprise us by its beauty or sweetness. So long as I saw in my walks one or two kinds of berries whose names I did not know, the proportion of the unknown seemed indefinitely, if not infinitely, great.'

– Henry David Thoreau

It was a bright morning, with warm sunshine and a cold breeze, that day defined in *The Meaning of Liff* as 'Brithdir - The first day of the winter on which your breath condenses in the air.' I climbed a steep hillside to enjoy the misty, pale view westwards over miles of woodland and villages. I rested on a bench, poured a cup of coffee from my flask, and gazed out over a landscape that felt far more like home to me than it had at the beginning of the year.

A plaque on the bench commemorated an old man 'who lived in this village and found peace in these hills.' A photograph of a young man who had died recently, aged just 21, was also pinned to the bench. I searched online for his story, but unusually could find no information at all about him. The very searchability of *everything* has added so much to my map project. I have learned a lot by stravaiging around my map getting my boots muddy, but I have also discovered so much from the Googling prompted by each outing and following my curiosity around the internet.

There was the first faint frost as I pedalled out this morning, pulling on my thick gloves and feeling the pinch of cold on my nose. The year was drawing down. The season's early fieldfares flew urgently over the fields, eager to forage on the abundant red hawthorn berries, a flight pattern of several wing beats then a quick glide. Fieldfares are an example of the birds I would never have noticed before I began consciously trying to pay attention to the local nature all around me. They look and act pretty much like mistle thrushes, and I would have just lumped them together, even though they stand taller, move in large hops, and spend the winter in large flocks, with up to hundreds of birds living socially together. ^{cdv}

The hillside to my right was covered in trees, except for one open field that had at some point been cleared from the wood, like a bald patch of buzzcut on someone's scalp. The woodland was a beautiful mosaic of green leaves, autumn colours and dark evergreen trees. The floor of the wood, when I entered, was covered in a golden carpet of leaves and thousands of beech nuts. One giant tree had heavy straps bound between its two primary branches to try to prevent the top-heavy tree splitting in half during heavy winds.

I crunched through the woods to an open hilltop which offered more wonderful views across the still-misty lowlands, though up here the sun was already bright. I passed a large cross and two horses, one grumpy, one friendly. The friendly horse was adamant I should give him a good long stroke before continuing.

A bench on top of the hill had a solar-powered speaker which gave information about the local area when you pressed a button. A bunch of lost keys had been hung on the fence, a beam of sunshine shone all the way through the gnarled trunk of a hollow ash tree, and a white passenger jet flew high overhead in the flawless blue sky. I used to fly often, and far, and I enjoyed it very much. But I had not travelled by plane now for a few years. I missed the excitement and the variety and the surprise of fast foreign travel. But I missed it less than I thought I would. I miss it less the more time goes by. And I certainly miss it less when I pour myself into the surprising and deep richness of exploring even this ordinary little map.

When I remember that I am living in nature and am part of nature, rather than awkwardly co-existing with a neighbour, I am aware of its restorative power for my physical and mental health, my creative vigour, and my friendships. It steers me on how I want to live my life, and how I hope governments, businesses and society will act to make the map I live on a sustainable, thriving, varied and natural place to live, rather than a mere resource that we are rapidly depleting through greed, laziness, short-term thinking, and ignorance.

This project has been an opportunity for me to reflect upon how I live on my map, and the way life in general is lived here. Does it work? Is it sustainable? It is a crude extrapolation, certainly, but if the local specifics of land use and the state of nature on your local map set alarm bells ringing, then it is a safe bet that they are playing into the larger issues of the global picture. Screw up our own maps, and we are playing our part in screwing up everywhere.

I have always revelled in journeys through wild places. I treasure the awe of vast landscapes, and the pleasant pleasures of clear rivers and forests filled with birdsong. Nature was a beautiful backdrop for the mental and physical challenges of my expeditions over many years. But, to be honest, I never really paid close attention to it. I was a fan of nature, but it was a fairly abstract relationship. I appreciated sitting outside my tent watching the sun set, but I didn't wonder what used to be here a hundred years ago, consider whether the wildlife was less abundant than a generation ago, or learn the names of any local flowers.

This year, on the other hand, I have learned more about nature than ever before, and relished the interest I found in edgeland landscapes like motorways, warehouses, and forgotten backstreets. These unexpected, easy-to-dismiss, marginal areas are definitely worthy of curiosity. I have enjoyed the crumbling factories with their nesting swallows, the hum of bees and the fizz of pylons. I appreciated the silted-up canal lively with dragonflies, and the fresh spring leaves on the sycamore tree by the kebab house. I have found solitude in abandoned buildings, and beauty on neglected marshes. It has been a fantastic project.

Sharing my magnificent hilltop view was a grand old manor house that is now a venue for Christian conferences and retreats. A noticeboard on the outer wall offered 'Evidence for the Resurrection', although any evidence that is dependent on faith pushes my credulity these days. Behind the manor house, the land flattened out into grassy fields dotted with oak trees. I walked across them towards some woods. The paths were becoming slippery and muddy again as winter approached.

A green woodpecker flew between two trees, and a cluster of pigeons flapped noisily up from the ground. I smiled to myself. I have seen loads of pigeons all year, on literally every grid square, and yet have never bothered to write about them. I had grown very fond of birds this year. I find it satisfying to watch them, listen to them, and allow them to help me become more observant. But pigeons don't interest me at all. I think this is due to their lack of mystery, as you see them everywhere, for their dumb cooing of 'my toe hurts, Betty' over and over, for their clattering and inelegant take offs, their scruffy nests of twigs, and for their tough urban cousin, the feral pigeon, who flaps and struts and shits in such numbers across the city.

Yet this dismissive discrimination is not at all in keeping with this project, which has urged me to look for the beauty and interest in every corner of my map. And so I had been reading an interesting book called *Homing: On Pigeons, Dwellings and Why We Return*. As a boy, Jon Day used to rescue pigeons from the streets. Years later, as an adult living in the suburbs, he felt he had lost his sense of 'home' and was disconnected from nature. So he built a pigeon coop, joined the local pigeon racing club, and rediscovered his early love for the birds and for the place he lived.

We have domesticated pigeons for thousands of years, even holding them up as a symbol of peace. Yet these days, many people consider them vermin due to their sheer numbers in cities and the mess they make. Jon Day's book was a reminder to me of their beauty and incredible homing abilities. But I still wasn't that interested by seeing pigeons on today's grid square.

So I turned to a fan of the bird to help me counter my prejudice. My indifference is countered by journalist Mark Cocker's ode to their 'coarse throaty song, with its characteristic five-note motif, that's so much the background music to British woods.' And he loves the mock battles between males, all game theory and bluster as they slap each other with noisy wings.

The pigeon population has exploded by 170% in the past 50 years (whilst bird numbers overall have dropped by a third) as their ability to live almost anywhere, including amongst humans, means they thrive in our barren, denatured, simplified landscape. The total biomass of pigeons now weighs almost the same as all the remaining songbirds in Britain. I don't blame the pigeon for its success, but their ubiquity highlights how relatively little of everything else I saw as I walked around my map.

I came across a giant of a beech tree in the woods, hundreds of years old and looking awesome. The

huge circle of bare earth at its base mirrored the enormous span of its canopy and showed how effectively it filtered out the sunlight, eliminating the competition of any young upstarts below. A frayed rope hung from a branch, the relic of a former rope swing. Nailed to the bole of the tree was a small plaque saying, simply, 'Peter 1925 - 2009'. The lack of biography got me contemplating how little we will know of Peter's 84 years (or mine, or yours) once the memories of whoever knew him and fixed that plaque have faded.

An old tree on a sunny morning is a fine marker of one's place in the order of things, a reminder of how wise it is to savour today rather than worrying about such intangibles as our legacy. Perhaps the best legacy we can leave behind is the old adage to plant trees (and metaphorical trees) whose great shade we know we shall never sit beneath.

Or, perhaps, I might settle for the legacy of 'our Fred' whose 60 years of life were remembered on a lovely carved bench in those same woods, along with the inscription that 'you loved to walk through these woods on your way to the pub for a glass of lunch'.

A glass of lunch with friends, plus some planted trees, would do me very well as an epitaph to work towards.

PARAKEETS

'I think that by retaining one's childhood love of such things as trees, fishes, butterflies and toads, one makes a peaceful and decent future a little more probable.'

– George Orwell

I made my way to a small town that I knew only as a motorway junction, a giant snarl of a roundabout, and some boring warehouses. And yet today I was riding to it down lanes fringed with golden leaves, blowing and spinning and spiralling in the wind. It was disorientating to never have been this way before, nor thought of this place in this way. It made me curious about what I would discover on my last day of a year exploring 52 grid squares.

One whole year on a single map that I had feared would be boring and meagre, and yet I was nowhere close to knowing it fully. I would need to continue at this pace for another seven years before I even visited every square, let alone walked around each one in each season, during rush hour or at dawn, by bike or on foot, alone or with a companion. You never pass through the same grid square twice. I can never know even this one map, not in all its seasons and weathers and times of day, not all its harvests or nature, and I had not even begun on the countless human stories and history intertwined on this seemingly nondescript area.

I felt sad that my year of exploring this area was ending, though of course there was no need for me to stop. I hope that my new nudged habits of curiosity continue forever. You can see the minute or the universal everywhere, depending on how you look. There is a world in a wild flower, or an eternity in an hour.

It was serendipitous then that I passed a house called Galleon's Lap (opposite a home with two gigantic gnomes –surely an oxymoron– and a Lego dinosaur in the front window). Looking up the curious name, I discovered it came from *The House at Pooh Corner*, where Pooh and Christopher Robin 'walked on, thinking of This and That, and by-and-by they came to an enchanted place on the very top of the Forest called Galleons Lap... Sitting there they could see the whole world spread out until it reached the sky, and whatever there was all the world over was with them in Galleons Lap.'

This book is different to many I have written in that it didn't put travelling from here to there at the centre of the story. Indeed, it's a book about going nowhere much and doing not a lot. It is perhaps understandable then that I had serious reservations about dedicating a whole year to just 20 square kilometres. To my relief, it turned into one of the most interesting journeys of my life.

The most important step in deciding my local map was worthy of investigation was to decide that my local map was worthy of investigation. The greatest restrictions to seeing anything interesting are the expectations with which we look. When I travel in a foreign country, I am desperate for interesting things to happen. So I peer from bus windows, hungry to absorb every detail. I honour the taxi driver as an oracle of wisdom. I delight in exchanging a few words with a shopkeeper. I am determined that this day will be interesting, photogenic and informative. And, thanks to a combination of both expectation and attention, I am usually right. Yes, those places are fresh to me, but a lot of their magic also stems from simply bothering to look.

Back home, by contrast, everything is familiar. I have a low expectation about what I will see every day, and the results are correspondingly humdrum, as you would expect from looking out with disinterest through grimy spectacles.

The challenge I set myself this year was to be as excited and curious at home as I am every time my passport is stamped in a new country. I'd worried that after years of global adventures, my small map would be claustrophobic, but I was wrong. It was a year of constraints, certainly, but adventure with constraints is not only more responsible to the planet, it also forced me to be more imaginative. I discovered many places I never knew existed, and was surprised at the wildness, beauty and history I uncovered. If you find somewhere new a few miles from home, then you are exploring the world just as much as someone crossing the Empty Quarter desert in Arabia.

I set off down a path that tunnelled through hedges, with branches forking off like streams as I made my way in the direction of the village church. Parakeet screeches rang out from the church's yew trees, an increasingly common bird call around here, but not one that I like yet.^{cdvi}

Neon green parakeets, with their tropical squawk which sounds so jarring in England, rocket over my shed every afternoon, loud and rapid. How they came to be thriving here is the source of excellent urban legends: The Great Storm of 1987 damaged aviaries; a plane crashed through an aviary roof in Syon Park in the 1970s; Jimi Hendrix released a pair in the 1960s; they escaped from a Humphrey Bogart and Katharine Hepburn film set in the 1950s. But boring old science and forensic analysis suggests that the population has actually just grown from the odd pet owner releasing their birds here and there, either accidentally or perhaps in panicked response to occasional newspaper frenzies about the risks of 'parrot fever'.

'Squawk!' screeched the colourful parakeets, before flying off in a small group at their typically high speed. 'Squawk! We are here because you were there.'

At some point in the past, we went to their country, messed about, and brought some parakeets home because it suited us. They settled, thrived, and now they live here. What right does that then give me to chunter about my haphazard, lop-sided perceptions of what ought to belong in 'my' country? Very

little. Yes, they are colourful and noisy and not typically British, but perhaps we could do with a bit more colour and volume in our lives anyway.

I meandered around the graveyard for a while, before being drawn towards a grave festooned with plastic flowers and heart-shaped helium balloons. A large photograph showed a young lad posing in silk boxing shorts with his fists up in a guard position. Online, I learned the sad story of a keen young boxer from the Traveller community whose final fight was with bone cancer. Traditionally, people from the Romany and Irish travelling communities buried photographs of the deceased, but that has evolved to placing photos on the graves or incorporating them into the gravestones.^{cdviii} Click led on to click and I found myself, many minutes later, still scrolling sadly through a tribute Instagram page to the boy, filled with happy photos from his life and brave thumbs-up images from hospital beds. I sighed, put away my phone, and cycled away.

I rode out towards open fields, cropped grass separated by fences and stocked with horses. There were long views under grey skies, across undulating land sprinkled with modern developments, pylons and fields. It felt satisfying to look around for the last time and notice how all the places I'd been to this year fitted together 'OK, so there's that big bridge... Oh yeah, there's the huge pylon. I see where I am now.'

Dogs barked in the distance and the sound of kids playing carried through the air. The motorway was surprisingly quiet, though continuously audible. Then the school bell rang, summoning the children away from play and back to work.

A hedgerow was full with the fruits of the spindle tree that are popular with wildlife. Spindle is a rather unspectacular tree until it bursts forth in autumn with reddened leaves and pink and orange fruits. The presence of spindle often indicates that you're in ancient woodland, or where it once stood. After being baked and powdered, the spindle's inedible, laxative fruits used to be used to treat head lice in people and mange in cows. The pale wood is hard, and was traditionally used to make spindles for spinning and holding wool, hence its name. Today it is mostly used to make artists' charcoal.

Peddalling on down a lane, I passed a few tiny bungalows, then an enormous gabled house with ornate fences, a gravel turning circle and a swimming pool. We all live such very different lives, even along the same road on the same grid square on the same little map.

A wren let loose with a burst of its distinctive staccato song, so familiar to me by now. I paused on a narrow bridge to watch a train chug slowly beneath me. I peered to look more closely at a small *Helicina* snail, one of around 120 species in the UK, which range in size from the single millimetre of *Punctum pygmaeum*, up to *Helix pomatia*, as large as a golf ball and introduced to this country by the Romans.

I turned onto a footpath through a brown empty field dotted with piles of fly-tipping. The noise of the motorway was growing louder. Someone, at some point, had hurled a vacuum cleaner high up into an oak tree, and there it dangled still, tantalising me with its mystery. Why? How? When? There are a million stories everywhere, even before you consider the thousands of years' of people who have walked these paths and fields.

I was drawn, one last time, to the footpaths and fields and woods that lie right up against impersonal

infrastructure like motorways, railways, or factories. Perhaps they feel exotic to me because they are so at odds with my own childhood of proper hills, open moors, and miles and miles to roam free. But these noisy, semi-feral, edgeland spaces have fascinated me all year.

I like being close to the noise, power and speed of motorways, and the sense that this place is very much not designed for me – a pink, squashy, slow little pedestrian. The chestnut woods were flush against the motorway, so I could peer through the branches at the lorries hammering past just metres below me. I watched a jay fly past with an acorn in its beak, its electric blue feathers gleaming even in this dark wood.

Years of old rope swings, snapped or frayed and out of reach, hung from the limbs of a tall oak tree. The latest swing was a dark blue rope with a thick stick tied to the bottom to hang on to. I had a swing, which turned into about ten. It was good fun. The swing launched you out over a steep and muddy slope. It was a perfect spot for kids to slither up and career down, arms flailing, eyes wide, laughing with enjoyment. I spent a lot of my childhood messing about, unsupervised, in woods like these and I am very grateful for those memories. I was glad that some kids today were doing the same.

I was grateful too for all the memories I had accumulated exploring this map, a year full of learning and surprises. It had helped me to notice the nearby nature in my daily life, taught me so much about so much, and helped me appreciate the area I have reluctantly found myself living in more than I had ever managed to do before.

And I couldn't think of a more apt way to finish off the grid square and the year than by barreling down a twisting, muddy singletrack path I never knew existed, on a folding bicycle designed for city life, in a surprisingly beautiful little wood strewn with golden leaves and discarded drinks cans alongside a noisy motorway.

I followed the footpath down out of the wood and through several horse paddocks back towards the road. A workman was digging a hole and stopped his machine as I approached him on the pavement. He climbed down from his digger, eager for a chat, and told me all about the new driveway he was constructing.

Then he asked me, 'where does the path go up there? I've never been.'

'Why don't you go and explore?' I suggested. 'Walk up there on your lunch break.'

'You know what, I might just do that,' he replied, and I went on my way, my day's work (and perhaps my year's work) now feeling complete.

Conclusion

As I made the final few edits to this book, there was one more ride I needed to do before letting go of it. I wanted to cycle through every square on my map, in one long, continuous ride.

Starting in the middle and circling outwards through all 400 grid squares would have fitted with my old instinct to spiral away faster and faster until slingshotting away from the gravitational pull of home and blasting out into the world! But I decided to begin on the map's outer fringes and circle inwards until I arrived home, or, more precisely, reached the pub. It fitted better with my search for

somewhere to belong, and a deep dive towards the heart of things.

I transcribed the spaghetti wiggle of my complicated planned route from the paper map into a digital navigation app^{cdviii} to save me from having to check the map at every junction. The route was 300 miles long, climbed 19,000 feet, and two-thirds of it was on paved roads, the rest being a combination of byways, footpaths and the odd spot of gentle trespassing. I didn't know where I would eat or sleep, but felt confident that those details would work themselves out over the next four days. It was time for 300 miles of adventure on a 20 kilometre map.^{cdix}

I felt the old combination of joy and nerves as I ate a large breakfast, squeezed a last minute extra warm top into my pack, and hit the road. Spring was on its way as I pedalled through familiar grid squares towards the edge of my map, the roads lined with white blackthorn blossom and the first modest green blush of hawthorn leaves. This was my map: my sunshine, my plastic junk floating in the river, my bright and skilful graffiti. This was my map and I was happy to be here.

I crossed paths with a cyclist out from the city for a day ride. He drove buses for a living, wore designer cycling clothes, and was jealous that I was camping.

'I'd love to camp, but I'm too scared,' he said. 'I've done it with friends but never on my own. I need to lose my camping cherry!'

I asked why he'd ridden out this way.

'I love scuzzy stuff. Old, broken, weird, forgotten. That sort of stuff, you know? Scuzzy. There's loads of it round here.'

He looked embarrassed at this odd admission, but I knew exactly how he felt.

'Me too!' I said. 'Edgelands, outskirts, under motorways, behind warehouses. Scuzzy!'

I certainly got my fill of scuzzy industrial units and concrete infrastructure. But I also heard my first lapwing and skylark of the season out on the marsh, and whilst hugging the hard shoulder on an unavoidable but stressful stretch of dual carriageway, I spotted my first brimstone butterfly, a flash of yellow and a herald of spring amongst the endless roadside litter.

Mid-afternoon, I paused for coffee and rocky road cake in a posh village of black and white Tudor buildings humming with Teslas. The FT Weekend supplement was available for café customers to browse. I was surprised and embarrassed by how knackered I felt after just one day of riding! Weekly bimbings clearly hadn't done much for my powers of endurance. Earlier, I'd rested on a bench in a town that smelled of weed, watching a street cleaner sweep a cigarette butt, miss, sweep again, miss, then shrug and walk on. A Home Office Immigration Enforcement van pulled up and the officers piled into a block of flats.

I slung my hammock under a three-quarter moon in a wood I'd visited earlier in the year. My map was far more rural than I had realised, more wooded and hilly, and less built-up. That was great, but it resulted in my failure to find a village pub to eat in and having to backtrack a couple of miles to a McDonald's in a retail park. I whiled away a couple of hours there, stuffing my face with delicious mono- and diacetyl tartaric acid esters of mono- and diglycerides of fatty acids, methyl cellulose, glucose-fructose syrup, xanthan gum, carrageenan, and anti-caking agent. I charged my camera batteries and stayed warm before it was time to head to the woods to sleep.

The night was bitterly cold, and in the morning my bottles had frozen solid. I cursed at shivering through a long night just a few miles from my own warm bed. Then I pedalled quickly to the first early morning petrol station I could find, to recover with hot bad coffee. I resolved to detour via my house later for a warmer sleeping bag and a tent.

I was weary again on day two, slogging up and down muddy trails through woods and slippery footpaths across fields. This ride was making my map feel huge. Although I had often felt concerned about the scale of new housing developments this year, this microadventure showed me there was so much scope for rewilding this land.

There is absolutely enough space for everyone here, and for wildlife and farming too. Gardens and roadsides across the map could give a little wild space back to nature once people are enthused to think it is a good idea. Soil can heal and hedgerows and ponds can recover, once there is a demand to boost sustainable farming. The river with its lager cans and slime is a cold clear chalk stream at heart, home to water crowfoot flowers and otters, just waiting to revitalise as soon the political will is there to get it cleaned. There are so many ways we can leave our maps in a better state for our children than they are in today.

Each day on my ride, the conker trees seemed a little greener, a little more in leaf. The dawn chorus woke me early each morning. The world was waking from winter. 'Here we go again,' my map said to me. 'Another season, another lap of the sun, another lap of the map. Another chance to make the best of things and choose to bloom as brightly as you dare.'

The sinuous route wound on nonsensically but pleasingly, with many fun back roads and bridleways that I never knew existed, even in the areas where I've focused my cycling outings for years. As I attempted to weave my way through 400 grid squares, I was proud how much I knew of this area. If you joined me for a ride I could show you around well. Exploring 52 squares over the year had definitely given me a good oversight of my neighbourhood. At the same time, it was astonishing how many new places I found even whilst only whizzing straight across grid squares.

I passed rambling old houses^{cdx} with tennis courts and trampolines, as well as crumbling 1960s tower blocks with washing lines and barbed wire on the roofs, and repeating streets of suburbs with everything in between. As I rode randomly through so many different lives, I found myself hoping that contentment was spread more evenly across my map than wealth or opportunity seemed to be. There's a crucial difference between a house and a home.

My frustration at the start of this book about living in a built-up area felt mis-targeted: it wasn't that there were no woods to explore or trails to ride, my problem was that I had nobody to do those things with. I hadn't solved that problem this year. Still, I was perfectly content as I sipped a pint with my evening meal then headed out to the woods to camp.

I slept much better in my warm tent that night and was getting back into the old groove of the cycle touring life. This trip was no different to all the times I have ridden hundreds of miles in other counties, countries or continents, apart from the need to accept that I wasn't moving very far and to be OK with that.

There was so much I enjoyed about riding hundreds of miles, yet never being more than about 10 miles from my fridge. I loved it the routes down hidden-away footpaths hemmed in with chainlink fencing behind railways shunting freight goods, facilities management warehouses and sewage works, the hedgerows and fences littered with nitrous oxide and lager rubbish. I loved the estuary with all its rubbish and derelict broken windows and birdsong and dramatic skies scudding with storm clouds, bursts of rain, and rainbows.

I loved the marshes, pylons and dilapidated wrecks of boats hauled up on muddy creeks, paint fading, wood peeling, full of intrigue and character. I loved the hideaways that few people know about, nature all around, the silent valleys and my first bluebells of the year. I loved the predators who have made this suburban landscape their home; the fox, marsh harrier, dragonfly and brown trout. I loved the ancient churches and huge trees standing proud from long before the industrial and agricultural revolutions, and knowing that they can still be around when we get back to living in harmony with nature and our communities. And I was free to enjoy all of this on miles of public footpaths.

I didn't much like all the keep out signs, the locked-away lakes, the litter, the dog poo bags, and the miles of new streets named after the meadows, birds and trees they had replaced. But there was still plenty of space to watch the sun set behind an old oak tree's thousands of crooked twigs and

branches, splintered against the sky like a shattered windscreen, and to pitch my tent in empty woods that I shared only with the duetting calls of a pair of tawny owls.

At the beginning of the year, my mind had been filled by all the oceans and mountains I did *not* have here. But as I ticked through grid square after grid square I was filled by a strong sense of all that this map *did* have to offer me. Were I to start the project again though, I would make more effort to learn about the people who live here.^{cdxi} I am more connected to the landscape now, but still feel a stranger amongst the different communities who live here. That's a hazard of being an introvert who wanders around his map by himself on weekday mornings when all normal people are at work!

Along my ride, I frequented cafés and pub gardens, delighted to spend more money on sunlit lagers and steaming Americanos in four days than I had during four years riding round the world on a young man's frugal budget! I savoured the lone traveller's prerogative of listening in from the edges, overhearing conversations about a long-lost brother from Australia, one half of a phone argument with a boyfriend, and a place to buy excellent and enormous belly pork. There are many lives being lived on this small map, in so many different ways. So many demands on the land's resources, so many differing priorities.

The meditative looping round and round the map towards its centre gave me time to consider the ways people's priorities may differ from my own. Not everyone will agree with the things I care about here. But if any of the topics in this book do resonate with you, I urge you to tell your friends about them and write to your MP^{cdxii} to engage them in the conversation. It is quick and easy to do via www.theyworkforyou.com. Nothing major changes without the will of sufficient people^{cdxiii}, without government action, and without voters holding their officials to account. It is ultimately the government which will decide whether sustainable farming is going to be adopted seriously, whether paying public money for public goods will result in an increase in rewilding and conservation, and whether any importance is placed on getting the population to spend more time in nature, with improved access and education as to how to care responsibly for nature.

Dodging broken glass down a back alley on my final morning, I found an abandoned building, with only the walls still standing and old diggers and tractors rusting amongst the sallow saplings. I passed an elderly gentleman walking his dog and asked if he knew what it was.

'A builder's yard apparently,' he said. 'It's been abandoned as long as I've known it though. Forty-odd years since I moved into the area.'

'Where did you come here from?' I asked.

'Only from town, just a couple of miles, you know. I don't know about you, but I'm not exactly a world traveller.'

'You must like it here to have stayed put so long?'

'It's alright, mate. But they built all those new houses on the old community field. Barry used to keep those pitches immaculate, you know. I don't know how they got so many houses on there. Sometimes I think it's time to move on. But there's all the upheaval. And it's what you know, right? People get used to a place. It's home, isn't it?'

I had pedalled, pushed, slithered and carried for four days. I fixed punctures and lifted over gates. I took selfies and wrong turns. I fell off my bike, hard, and managed to stick my middle finger up just in time at the passing car taking a photo of me as I lay in pain on the ground. I ate cakes and crisps and croissants and curry. I rode through hundreds of grid squares.

But in the end, I didn't manage to ride through every square. I had over-estimated how far my legs could carry me, and under-estimated how much I like cafés these days. So I ran out of time before my family returned from a few days away. I turned my nose for home and pedalled back to them (via the merest of stop-offs in a pub garden to toast the end of this long project). I still hadn't ridden many of my map's roads and footpaths, but felt content knowing they will be waiting there for me in the years to come. I could keep them for another day, knowing that I would come back.

My weekly forays this year had been an interesting contrast to the bigger adventures from my past. Long, slow journeys through different landscapes and cultures are an astonishing experience, filled with lifelong lessons and perspectives. Let nothing discourage you from heaving on a rucksack or strapping a tent to a bike, and leaving town. Go! You can't beat that feeling of being untethered and free. Do it if you possibly can. Those star-filled nights, huge horizons, and strangers who become friends: they are out there waiting for you, your life laying before you like a blank page, brilliant with possibility, daring you to begin.

Yet Thoreau, whose dogged enthusiasm for staying put and paying attention makes him the unofficial ambassador for this book, boasted that he had 'travelled a good deal in Concord', his small home town in Massachusetts. I like that idea too. For if I was to boast in my local pub, I could bore punters with memories of cycling through Albania and Zimbabwe. But I would now also tell them, with fair confidence that nobody else knew these places, about a babbling chalk stream under a motorway bridge near here, a hilltop of summer orchids and oregano, and a twisted oak tree, six metres round and magnificent, standing dark and strong in fields of snow.

I am proud to know these little spots, for they have helped me learn to appreciate where I live more, and I have been intrigued and fascinated to get to know it better. Seeking out new places, and forcing myself to pay attention to them, has transformed the way I relate to my local area, despite Thoreau's insistence that a landscape can 'never become quite familiar to you', no matter how long you live there.

Pootling around my map for a year rarely felt like adventure, I'll admit. But it did often feel like exploring. I enjoyed many tingles of surprise at discovering things I never knew existed. It was satisfying to establish how the valley I enjoy mountain biking in connects to the wood where I've slung a hammock once or twice, and that this hill is the one I see when I'm on the train to the city or in a traffic jam by the shopping centre. I won't push your credulity in claiming any of this was epic, but something about it resonated with the sliver of my soul that wants always to look beyond the horizon. These weekly meanderings did a decent job of keeping a lid on my restlessness. So much so, in fact, that I feel something akin to vertigo at imagining the prospect of having the entire globe to explore.

If you get a map of your own local area, you'll find that deciding to explore your own map is really the hardest part of the puzzle. Once you pick your first grid square and begin walking around it with your eyes open, you'll be mesmerised by the possibilities for investigation. After that, it is up to you. What do you care about and want to take a stand on?

But can a single map really be enough exploration for a lifetime, if only you dive in deeply enough? My map has changed my perception of home, made me less tempted to fly, and more motivated to do what I can to care for the earth. There is so much potential for a future full of positive stories for all of us, if we only demand change and take action.

So this map could potentially fuel my curiosity forever, in a way I once thought only distant places could do. My map is a fractal of the world. Today is a fractal of my life. To know one place and make it better is the work of a lifetime. And so, yes, a single map can be enough.

ENDNOTES

- i <https://www.instagram.com/p/CF1rWJrnEub/>
- ii <https://www.sciencedirect.com/science/article/pii/S0959378020307779>
- iii I was very proud of coming up with this pithy phrase until my friend Rob Bushby pointed out that I had blatantly stolen it from him.
- iv <https://www.goodreads.com/quotes/7371721-we-shall-not-cess-from-exploration-and-the-end-of>
- v Meaning that one kilometre is represented by four centimetres on the map.
- vi <https://shop.ordnancesurvey.co.uk/maps/paper-maps/explorer-maps/>
- vii <https://uk.bookshop.org/a/9404/9780956254559>
- viii https://www.youtube.com/watch?v=n2FZ_0d3yEI
- ix <https://amzn.to/3Fv0VDp>
- x <https://uk.bookshop.org/a/9404/9780393870701>
- xi www.history.com/topics/holidays/samhain
- xii www.newgrange.com/samhain.htm#:~:text=The%20perceptible%2C%20and%20apparent%2C%20decline%20in%20the%20strength%20of%20the%20sun%20at%20this%20time%20of%20year%20was%20a%20source%20of%20anxiety%20for%20early%20man%20and%20the%20lighting%20of%20the%20Winter%20Fires%20here%20symbolised%20mans%20attempt%20to%20assist%20the%20sun%20on%20its%20journey%20across%20the%20skies.
- xiii https://en.wikipedia.org/wiki/Calan_Gaeaf
- xiv https://en.wikipedia.org/wiki/Guy_Fawkes_Night
- xv <https://uk.bookshop.org/a/9404/9780241967874>
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- xvii www.livescience.com/65414-hubble-telescope-creates-universe-mosaic.html
- xviii www.zmescience.com/science/news-science/james-webb-hubble-comparison-13072022/
- xix <https://www.theweathernetwork.com/en/news/science/space/glass-z13-one-of-the-universes-first-galaxies-spotted-by-webb-telescope>
- xx <https://www.instagram.com/nasawebb/>
- xxi <https://phys.org/news/2023-04-webb-telescope-oldest-galaxies.html>
- xxii www.space.com/what-came-before-big-bang.html
- xxiii www.genius.com/Tom-waits-san-diego-serenade-lyrics
- xxiv www.sciencedirect.com/science/article/pii/S1018363918305051

^{xxv} The station closed because of new environmental laws and the plant was decommissioned, including blowing up the enormous chimney, which much have been a very satisfying morning's work

^{xxvi} <https://storage.googleapis.com/gpubk-archiver/blog/climate/government-planning-take-kingsnorth-defence-away-juries-20081217.html>

^{xxvii} www.theguardian.com/environment/2021/jul/17/laws-of-nature-could-uk-rivers-be-given-same-rights-as-people-aoe

^{xxviii} https://en.wikipedia.org/wiki/Bogd_Khan_Uul_Biosphere_Reserve#:~:text=Environmental%20protection%20on%20Bogd%20Khan%20Mountain%20dates%20back%20at%20least%20to%20the%20thirteenth%20century%20when%20the%20Tooril%20Khan%20ruler%20of%20the%20Keraites,%20forbade%20logging%20and%20hunting%20there,%20claiming%20that%20Bogd%20Khan%20was%20a%20holy%20mountain

^{xxix} <https://en.wikipedia.org/wiki/Cist>

^{xxx} <http://a-poem-a-day-project.blogspot.com/2014/08/day-768-heron.html>

^{xxxi} www.commonslibrary.parliament.uk/last-orders-the-decline-of-pubs-around-the-uk/

^{xxxii} <https://www.theguardian.com/commentisfree/2020/nov/29/britain-pubs-value>

^{xxxiii} I thought of the generations of memories from evenings in 'The Anchor and Hope' that now awaited demolition along with the building. Its name derived from the Letter to the Hebrews (6:19) in the Bible; 'We have this as a sure and steadfast anchor of the soul, a hope.' Pub names often give clues to their ages. For example, after Henry VIII's Reformation, religious symbolism in pub names declined as many pubs hastily switched their names from 'The Pope's Head' to 'The King's Head'.

^{xxxiv} 60,000 at the turn of the millennium

^{xxxv} Last summer, I almost trod on a badger whilst out night running in the woods. The experience scared the life out of both of us. Later that same week I cycled straight over a fox at midnight – thump, thump went the wheels. The fox fled, so hopefully it was OK. And then the very next night a gigantic, scratchy stag beetle landed on my arm while I was out running and I leapt out of my skin for a third time. Who needs the Serengeti when you've got suburbia to explore?

^{xxxvi} <https://www.nationalgeographic.com/animals/article/140305-culling-badgers-deer-bison-swans-ethics-conservation>

xxxvii Eric and Michael invited a third man to join them in the escape, Oliver Philpot. He said that ‘the best part of escaping was when we were in charge of things. Building the horse, digging, planning – the break itself, and travelling across Germany. The feeling that every minute was vital, that everything one did could sway the balance between success and failure.’

After being demobbed in 1946, Philpot resumed his career in the food industry, eventually becoming chief executive of Findus, the frozen food company. One of the aspects of that generation which intrigues me is how millions of men successfully found a way to return to normal life after the heightened experiences of a global war. Perhaps it was because the ‘excitement’ had been so extreme, far greater than any mere expedition, that they felt satiated and genuinely eager to settle down, rather than unfulfilled, with unfinished business and an uneasy sense that a single map may not be enough?

I had read *The Wooden Horse* after reading *The Colditz Story*. (Since I started reading on a Kindle I often go down tunnels of similar books before breaking out and heading to a different genre for the next few reads.) I was intrigued by the adventurous spirit and focused purpose of being a prisoner of war, hell bent on the idea of escape and freedom. Take this quote from the introduction:

‘A. J. Evans said that escaping is the greatest sport in the world. In my early twenties I thought that to ride in the Grand National Steeplechase at Aintree would be the epitome of sporting excitement – more so even than big-game hunting. I longed to do both. Since the war and my experiences as an escaper, my one-time ambitions have died a natural death. I feel I have quaffed deeply of the intoxicating cup of excitement and can retire to contemplate those ‘unforgettable moments’ of the past. I can think of no sport that is the peer of escape, where freedom, life, and loved ones are the prize of victory, and death the possible though by no means inevitable price of failure.’

Reading this now, mulling over the change in direction of my own adventures, this paragraph also caught my attention:

‘It was the first escape from this prison, probably the first escape of British officers from any organised prison in Germany. We were the guinea-pigs. We undertook the experiment with our eyes open, choosing between two alternatives: to attempt escape and risk the ultimate price, or face up to the sentence of indefinite imprisonment. There were many who resigned themselves from the beginning to the second of these alternatives. They were brave, but their natures differed from those of the men who escaped and failed, and escaped again; who having once made the choice between escape and resignation, could not give up, even if the war lasted the remainder of their lives. I am sure that the majority of the men who sought to escape did it for self-preservation. Instinctively, unconsciously, they felt that resignation meant not physical but mental death – maybe lunacy. My own case was not exceptional. One awful fit of depression sufficed to determine my future course as a prisoner. One dose of morbidity in which the vista of emptiness stretched beyond the horizon of my mind was quite enough.’

xxxviii That the trees had been coppiced told me they were hornbeam not beech, for beech is rarely coppiced due to its dense canopy. I often muddle up beech and hornbeam, though I ought not to because beech has smooth, glossy leaves with small ‘teeth’, whilst the hornbeam’s leaves are rougher and their serrations alternate between large and small ‘teeth’.

xxxix Bricks are clearly easier to build with than nodules of flint, though they do first have to be made, fired and transported. Flints are fiddly and require knapping into shape, but they are abundant on my map and the only cost is the time and effort to collect them. Indeed, many fields are so full of flint that I marvel how any crops can grow.

^{xi} Flint is found as rounded nodules in chalk landscapes, for it originates from siliceous sponges in Cretaceous seas millions of years ago. Sponges extracted silica from the seawater to use in their skeletons, and when they decomposed, the silica accumulated on the sea bed and in the burrows of urchins and worms. These filled burrows became conduits for the reactions that created flint as a concretion, a solid mass of minerals built up around a core. Their nodular shapes today often reflect the shape of the burrows they formed in so long ago.

Flint is extraordinarily hard, but it also fractures easily to produce very sharp edges. Humans discovered that it could be used to make elaborate tools. The practice began in Africa three million years ago, and reached Britain a million years ago, when people were nomadic hunter-gatherers. In the Mesolithic, people began creating arrows, spears, and early carpentry tools like the tranchet adze. In later eras, flint became important for guns, for dragging steel over flint creates sparks. The friction heats the flying microscopic particles of metal above their ignition point so they burst into a white hot spark. So you can kill a man aided by flint, or you can gather enough of the ancient nodules to raise up a church tower and pray for peace.

^{xli} If someone dumps their rubbish on your property, then that is your problem to sort out.

^{xliii} Even artist Andy Goldsworthy could not compete. He is both artist and naturalist, and all his art is inspired by nature. He creates pieces using materials he finds outdoors – rocks, sticks, feathers, icicles – attempting to understand nature by immersing himself in it and becoming part of. Unlike most works of art, his are fleeting and ephemeral because they themselves are part of nature. He says, ‘Nature is in a state of change and that change is the key to understanding... transience in my work [that] reflects what I find in nature.’

^{xliiii} The shimmering two-spotted oak buprestid and the oak pinhole borer, since you ask.

^{xliv} [https://earth.org/shifting-baseline-syndrome/#:~:text=Simply%20put%2C%20Shifting%20Baseline%20Syndrome,knowledge%20of%20its%20past%20condition'](https://earth.org/shifting-baseline-syndrome/#:~:text=Simply%20put%2C%20Shifting%20Baseline%20Syndrome,knowledge%20of%20its%20past%20condition)

^{xlv} <https://www.rspb.org.uk/our-work/conservation/centre-for-conservation-science/state-of-the-uks-birds/>

^{xlvi} <https://www.rspb.org.uk/about-the-rspb/about-us/media-centre/press-releases/new-report-reveals-huge-declines-in-europes-birds/#:~:text=A%20new%20study%20on%20breeding%20birds%20in%20the%20EU%20and%20UK%20shows%20one%20out%20of%20every%20six%20birds%20over%20nearly%20a%2040%20%2Dyear%20period%20has%20been%20lost.%20Overall%2C%20we%20have%20lost%20around%20600%20million%20breeding%20birds%20since%201980>

^{xlvii} I would love to stand in a field in North America a couple of hundred years ago and watch the mile-wide flocks of migrating passenger pigeons that roared like thunder and blocked the sun for three straight days as they passed overhead. It was, perhaps, the most abundant bird in the world. The final individual of that species, Martha, died in a zoo in 1914 with a palsy that made her tremble. And that was it. The passenger pigeon had been hunted to extinction. And none of us born since then have missed the birds, for we live under a new normal.

^{xlviii} Near my home is a wood I often run through. It's not very big as it is bordered by fields on three sides and the back fences of a row of houses on the other side. Nonetheless, I accept it for what it is and enjoy running through it. One day, however, I found the path had been blocked by a tall metal fence, shiny new with sharp spikes on top. I had no option but to turn around, furious. How dare anyone block a harmless path through the wood? I felt as though that patch of woodland had been stolen from me, and my world was slightly diminished as a result.

Now imagine a newcomer to the area saw me galloping heroically across the landscape, and was sufficiently impressed by my unflattering lycra, sweaty red face and lumbering stride to also go for a run through the wood. They would reach the new fence and just follow it around towards the edge of the wood, accepting that was the way the wood is, and still enjoying their run. Their baseline for the natural state of that wood is lower than mine. Each time a baseline drops, we consider it the new normal, and this leads to a continual increase in tolerance for environmental degradation and loss of wild places.

^{xlix} In the *Naturalis Historia*, an encyclopedia into which he collected much of the knowledge of his time.

^l <https://what3words.com/products/what3words-app>

^{li} What3Words is a location system that is easier to remember than latitude and longitude, simpler than grid references and more accurate than postcodes. It's a very handy app.

^{lii} <https://treesforlife.org.uk/into-the-forest/trees-plants-animals/trees/yew/>

^{liii} Scotland and Ireland have no Thankful Villages at all. There are just 14 villages that are 'doubly-thankful' for also losing nobody in the Second World War either. France fares even worse, with Thierville in Normandy being the country's sole Thankful (and doubly-thankful) community.

^{liv} Every morning a *dabbawalla* collects a tiffin box filled with fresh food from the customer's home in the suburbs. They deliver it to the local train station where it is taken into the city. The *dabba* is handed to another worker and delivered to the correct office at lunchtime. The process runs in reverse in the afternoon, returning the *dabba* to the customer's home so they don't have to carry their own lunchbox home. The 130-year-old business has become famous worldwide for its astounding service record. What makes the system more astonishing (and fascinating to logistics companies such as FedEx) is not simply the scale and efficiency of the system, but also that the semiliterate *dabbawallas* accomplish this incredible logistical feat with no phones or computers.

^{lv} A combination of a pamphlet titled 'Nothing gained by Overcrowding' in 1912, a report recommending terraces of houses should be '70 feet apart at a density of 12 per acre' and the poor physical condition of many urban recruits for the First World War resulted in a building campaign known as 'Homes Fit for Heroes'. A generation later, the damage or loss of four million homes during the Second World War led to a huge increase in council houses and estates, envisioned by Aneurin Bevan to be where 'the working man, the doctor and the clergyman will live in close proximity to each other'.

^{lvi} <https://www.gov.uk/government/news/health-secretary-launches-prevention-is-better-than-cure-vision>

^{lvii} <https://www.gov.uk/government/publications/health-matters-obesity-and-the-food-environment/health-matters-obesity-and-the-food-environment--2>

^{lviii} <https://www.theguardian.com/science/2018/feb/02/ultra-processed-products-now-half-of-all-uk-family-food-purchases>

lix <https://www.hsph.harvard.edu/news/press-releases/healthy-vs-unhealthy-diet-costs-1-50-more/>
#:~:text=On%20average%2C%20a%20day's%20worth,than%20the%20least%20healthy%20ones.

lx <https://www.theguardian.com/commentisfree/2015/nov/29/kis-junk-food-dont-blame-parents>

lxi Modern apples are hybrids of wild apples, facilitated by trade along the Silk Road, as fruit and nut trees were bought and sold. Indeed, the etymology of 'Almaty' in Kazakhstan may derive from a phrase meaning 'father of apples'.

Apples evolved to tempt large animals to eat them, so the apple you enjoy for lunch today (after your soggy cheese sandwich) came about through a combination of extinct megafaunal herbivores, Silk Road merchants, plus the boffins hard at work in my grid square.

lxii Mistletoe has begun to spread eastwards through the UK, perhaps because more blackcaps now overwinter here. They eat the white berry flesh then wipe their beaks on branches to leave behind the seed. This helps the mistletoe germinate and take hold on new trees.

The Christmas tradition of kissing under sprigs of mistletoe may have originated with Celtic druids almost 2000 years ago. The plant was a sacred symbol of life as it blossomed even in the bleak midwinter and was used on both humans and animals to restore fertility. However, the first record of mistletoe kisses comes only from a musical in 1784. The original custom decreed that you had to pluck a berry from the sprig before taking your kiss: once the berries were gone, that was the end of the canoodling.

Mistletoe also has a long medicinal history and it can be used as winter fodder for animals. Ancient Greeks used it to cure ailments ranging from period pains to dodgy spleens, epilepsy, ulcers and poison. Today, dried mistletoe is found in therapeutic herbal teas in Europe. Perhaps that stems from the druid Getafix who cut mistletoe with his golden sickle (as recommended by Pliny) to make Asterix his superhuman potions?

lxiii The evergreen mistletoe is 'hemiparasitic', meaning it takes some of its food from the host plant by growing into it, but it does photosynthesises with its green leaves, hence why it prefers host trees in open, well-lit spaces.

lxiv <https://ourworldindata.org/future-population-growth#global-population-growth:~:text=the%20global%20population%20to%20reach%20its%20peak%20at%20around%2010.4%20billion.>

lxv <https://biofriendlyplanet.com/eco-friendly-tips/is-it-more-sustainable-to-live-in-a-city-or-the-suburbs/>
#:~:text=it%20takes%20less%20energy%20and%20resources%20to%20power%20buildings%2C%20which%20reduces%20total%20greenhouse%20gas%20emissions

lxvi https://mobile.twitter.com/Al_Humphreys/status/1589936020681764864

lxvii <https://ourworldindata.org/yields-vs-land-use-how-has-the-world-produced-enough-food-for-a-growing-population>

lxviii https://www.researchgate.net/publication/241746569_We_Already_Grow_Enough_Food_for_10_Billion_People_and_Still_Can't_End_Hunger

lxi <https://www.gov.uk/government/statistics/family-food-201920/family-food-201920#:~:text=For%20households%20with%20the%20lowest%20%20per%20cent%20of%20income%2C%20the%20percentage%20of%20spend%20on%20food%20is%20the%20second%20highest%20at%2014.7%20per%20cent%20in%202019/20%2C%20after%20housing%2C%20fuel%20and%20power.>

lxx <https://ourworldindata.org/food-supply>

lxxi Britain is the most overweight country in Europe, we eat up to 50% more calories than we realise, and 80% of us are predicted to be overweight or obese by 2060.

lxxii <https://www.theguardian.com/books/2015/sep/25/industrial-farming-one-worst-crimes-history-ethical-question>

lxxiii <https://thehumaneleague.org/article/how-are-chicken-nuggets-made>

lxxiv <https://www.dailymail.co.uk/health/article-12003173/DR-CHRIS-VAN-TULLEKEN-reveals-care-ultra-processed-food.html#:~:text=the%20slime%20that%20bacteria%20produce%20to%20allow%20them%20to%20cling%20to%20surfaces>

lxxv <https://www.longtermplan.nhs.uk/online-version/chapter-2-more-nhs-action-on-prevention-and-health-inequalities/obesity/#:~:text=linked%20with%20type%20%20diabetes%2C%20high%20blood%20pressure%2C%20high%20cholesterol%20and%20increased%20risk%20of%20respiratory%2C%20musculoskeletal%20and%20liver%20diseases.%20Obese%20people%20are%20also%20at%20increased%20risk%20of%20certain%20cancers%2C%20including%20being%20three%20times%20more%20likely%20to%20develop%20colon%20cancer.>

lxxvi <https://www.theguardian.com/environment/2022/nov/25/chinas-26-storey-pig-skyscraper-ready-to-produce-1-million-pigs-a-year>

lxxvii <https://www.theguardian.com/environment/2017/jul/17/uk-has-nearly-800-livestock-mega-farms-investigation-reveals>

lxxviii <https://thehumaneleague.org.uk/article/what-happens-to-male-chicks-in-the-egg-industry#:~:text=In%20the%20UK%2C%20most%20E2%80%94if%20not%20all%20E2%80%94male%20chicks%20are%20killed%20using%20inert%20gas.%20Using%20this%20method%2C%20death%20can%20take%20up%20to%20two%20minutes%2C%20but%20the%20gas%20doesn%20E2%80%99t%20cause%20as%20much%20pain%20to%20the%20birds%20as%20high%20concentration%20CO2.%20Maceration%20is%20also%20allowed.>

lxxix <https://ourworldindata.org/env-impacts-of-food>

lxxx <https://www.un.org/en/climatechange/paris-agreement>

lxxxi <https://ourworldindata.org/environmental-impacts-of-food?insight=meat-dairy-food-carbon-footprint#key-insights-on-the-environmental-impacts-of-food>

lxxxii <https://ourworldindata.org/grapher/land-use-protein-poor>

lxxxiii I don't live on the coast, so there are no marine explorations on my map, but it is worth pointing out that eating seafood is also often terrible for the environment, with overfishing being a major problem, fish farms causing pollution, trawling for prawns generating much wasteful bycatch, and 92% of the oceans being unprotected.

lxxxiv <https://www.nfuonline.com/archive?treeid=141504#:~:text=Around%2070%25%20of%20a%20typical,using%20predominantly%20forage%2Dbased%20diets32>.

lxxxv <https://www.theguardian.com/environment/2022/nov/15/methane-emissions-meat-dairy-companies>

lxxxvi <https://betterfood.co.uk/embrace-eating-locally/>

lxxxvii <https://ourworldindata.org/environmental-impacts-of-food?insight=food-emissions-local#key-insights-on-the-environmental-impacts-of-food>

lxxxviii <https://www.chickenfans.com/chicken-population-stats/>

lxxxix <https://www.discoverwildlife.com/news/global-bird-populations-face-huge-declines/>

xc <https://www.monbiot.com/2023/02/05/so-what-would-you-do/>

xci <https://post.parliament.uk/research-briefings/post-pn-0661/#:~:text=Agriculture%20affects%20more%20than%2060,herbicides%20and%20fungicides%20entering%20watercourses>.

xcii <https://aquamonitrix.com/environmental-impacts-nitrate/>

xciii <https://riveractionuk.com/Campaigns/the-poultry-farms-turning-the-wye-into-a-wildlife-death-trap/>

xciv <https://ourworldindata.org/global-land-for-agriculture#:~:text=Half%20of%20the%20world%E2%80%99s%20habitable%20land%20is%20used%20for%20agriculture.%20More%20than%20three%2Dquarters%20of%20this%20is%20used%20for%20livestock%20production%2C%20despite%20meat%20and%20dairy%20making%20up%20a%20much%20smaller%20share%20of%20the%20world%E2%80%99s%20protein%20and%20calorie%20supply>.

xcv <https://ourworldindata.org/land-use#how-the-world-s-land-is-used-total-area-sizes-by-type-of-use-cover>

xcvi <https://ourworldindata.org/agricultural-land-by-global-diets#land-requirements-by-national-diets>

xcvii <https://ourworldindata.org/agricultural-land-by-global-diets>

xcviii <https://www.worldwildlife.org/magazine/issues/summer-2018/articles/what-are-the-biggest-drivers-of-tropical-deforestation>

xcix <https://ourworldindata.org/drivers-of-deforestation#:~:text=The%20expansion%20of%20pasture%20land%20to%20raise%20cattle%20was%20responsible%20for%2041%25%20of%20tropical%20deforestation>.

^c [https://www.tabledebates.org/building-blocks/soy-food-feed-and-land-use-change#SOYBB2:~:text=87%25%20of%20the%20global%20soy%20output%20is%20proc](https://www.tabledebates.org/building-blocks/soy-food-feed-and-land-use-change#SOYBB2:~:text=87%25%20of%20the%20global%20soy%20output%20is%20proc%20essed%20into%20soy%20oil%20and%20soy%20cake%2C%20with%20the%20latter%20used%20almost%20entirely%20as%20an%20animal%20feed)
essed%20into%20soy%20oil%20and%20soy%20cake%2C%20with%20the%20latter%20used%20almost%20entirely%20as%20an%20animal%20feed

^{ci} [https://earth.org/veganism-land-use/
#:~:text=if%20everyone%20went%20vegan%2C%20global%20farmland%20use%20could%20be%20reduced%20by%2075%25%2C%20the%20size%20of%20the%20US%2C%20China%2C%20Australia%20and%20the%20EU%20combined.
%20If%20our%20protein%20needs%20were%20met%20with%20soy%20instead%20of%20animals%2C%20deforestation%20would%20fall%20by%2094%25.](https://earth.org/veganism-land-use/#:~:text=if%20everyone%20went%20vegan%2C%20global%20farmland%20use%20could%20be%20reduced%20by%2075%25%2C%20the%20size%20of%20the%20US%2C%20China%2C%20Australia%20and%20the%20EU%20combined.%20If%20our%20protein%20needs%20were%20met%20with%20soy%20instead%20of%20animals%2C%20deforestation%20would%20fall%20by%2094%25.)

^{cii} [https://ourworldindata.org/land-use-
diets#:~:text=1%20billion%20hectares-,if%20everyone%20shifted%20to%20a%20plant%2Dbased%20diet%20we%20would%20reduce%20global%20land%20use%20for%20agricul
ture%20by%2075%25.-,This%20large%20reduction](https://ourworldindata.org/land-use-diets#:~:text=1%20billion%20hectares-,if%20everyone%20shifted%20to%20a%20plant%2Dbased%20diet%20we%20would%20reduce%20global%20land%20use%20for%20agriculture%20by%2075%25.-,This%20large%20reduction)

^{ciii} [https://www.greenpeace.org.uk/news/why-meat-is-bad-for-the-environment/
#:~:text=If%20everyone%20ate%20a%20plant%2Dbased%20diet%2C%20we%E2%80%99d%20need%2075%25%20less%20farmland%20than%20we%20use%20today.
%20That%E2%80%99s%20an%20area%20equivalent%20to%20the%20US%2C%20China%2C%20Europe%20and%20Australia%20combined.
%20That%E2%80%99s%20because%20it%20takes%20less%20land%20to%20grow%20food%20directly%20for%20humans%2C%20than%20to%20feed%20animals%2C%20whic
h%20humans%20then%20eat.](https://www.greenpeace.org.uk/news/why-meat-is-bad-for-the-environment/#:~:text=If%20everyone%20ate%20a%20plant%2Dbased%20diet%2C%20we%E2%80%99d%20need%2075%25%20less%20farmland%20than%20we%20use%20today.%20That%E2%80%99s%20an%20area%20equivalent%20to%20the%20US%2C%20China%2C%20Europe%20and%20Australia%20combined.%20That%E2%80%99s%20because%20it%20takes%20less%20land%20to%20grow%20food%20directly%20for%20humans%2C%20than%20to%20feed%20animals%2C%20which%20humans%20then%20eat.)

^{civ} <https://www.aeaweb.org/articles?id=10.1257/jep.5.1.193>

^{cv} Issues with fertiliser use and distribution, local employment, the importance of a single cow for poor subsistence farmers, the benefits of grazing winter cover crops on arable land, the biodiversity benefits of having both grasslands and woodlands in rewilding areas and animals' role in that etc. etc. etc.!

^{cvi} <https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law>

^{cvi} <https://www.gov.uk/government/news/pm-commits-to-protect-30-of-uk-land-in-boost-for-biodiversity>

^{cvi} <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4974628/>

^{cix} [https://www.worldatlas.com/places/10-countries-that-consume-the-least-
meat.html#:~:text=The%20world%27s%20second%20most%20populous,no%20other%20c
ountry%20eats%20less.](https://www.worldatlas.com/places/10-countries-that-consume-the-least-meat.html#:~:text=The%20world%27s%20second%20most%20populous,no%20other%20country%20eats%20less.)

^{cx} [https://www.specialityfoodmagazine.com/news/meet-the-inbetweeners?
fbclid=IwAR05EfJ_e2lyqFHI-rt7rh2yVe3S2vQDKuTa5fZqwBq2j_T7-
jhdTbExAsg#:~:text=The%20farm%E2%80%99s%20motto%20is%20%E2%80%98food%20as%20a%20byproduct%20of%20conservation%E2%80%99](https://www.specialityfoodmagazine.com/news/meet-the-inbetweeners?fbclid=IwAR05EfJ_e2lyqFHI-rt7rh2yVe3S2vQDKuTa5fZqwBq2j_T7-jhdTbExAsg#:~:text=The%20farm%E2%80%99s%20motto%20is%20%E2%80%98food%20as%20a%20byproduct%20of%20conservation%E2%80%99)

^{cxxiv} A pity then, that he did not stop there and retire to take up golf. For at the outset of the First World War, the patriotic German signed up to help the war department. His knowledge was useful in the manufacture of explosives and it's been claimed that his efforts may have extended the war by years.

But things got even worse. Oh Fritz, why didn't you give golf a go? Haber added chlorine to his ammonia and so invented poisoned gas warfare. His horrified wife shot herself dead in the garden. Haber was a friend of Albert Einstein, who was famously opposed to the First World War, but in the Second World War he urged the American government to research the nuclear weapons that his papers on quantum physics had inadvertently made possible. He had no desire for nuclear conflict, but preferred that the Americans should get there before the Nazis. In other words, good ideas can have bad, unintended consequences. And that has certainly been the case with fertiliser and industrial farming.

^{cxxv} You certainly need to be cautious when swimming in old quarries. But I was prevented from choosing to take sensible precautions for myself by the fence separating me from the natural world.

^{cxxvi} <https://alastairhumphreys.com/a-year-in-a-tree/>

^{cxxvii} <https://www.instagram.com/p/C15nJYCsetF/>

^{cxxviii} <https://alastairhumphreys.com/?s=coffee&submit=>

^{cxxix} This brought back fond memories of getting a day's pay back when I was in the Territorial Army at uni to don 'civvy' clothes and cheerfully lob half bricks and milk bottles at massed ranks of policemen in riot gear. It was all good fun and larks until they mounted their response charge at us.

^{cxxx} <https://uk.bookshop.org/a/9404/9781408889237>

^{cxxxi} 'England's longest archaeological landscape' is filled with the ephemera of daily life that doesn't merit a place in many museums but which capture my imagination: tooth marks on an old clay pipe, fingerprints on a roof tile. Whose were they? What stories do they hint at?

^{cxxxii} <https://www.gov.uk/government/news/start-of-ban-on-plastic-straws-stirrers-and-cotton-buds>

^{cxxxiii} I might have hoped for quinquiremes of Nineveh, but in these parts I was more likely to get a dirty British coaster with a salt-caked smoke stack.

^{cxxxiv} <https://uk.bookshop.org/a/9404/9781848250789>

^{cxxxv} Marked 'A.A & Co', which the internet later told me was made by 'Alfred Alexander and his two sons, Alfred (junior) and George, who were involved in a series of English bottle factories during the last half of the 19th Century and the early 20th Century.'

^{cxxxvi} <https://static.wikia.nocookie.net/candh/images/a/a2/TreasureEverywhere.png/revision/latest?cb=20180613005853>

^{cxxxvii} <https://www.onegreenplanet.org/environment/coca-cola-named-worlds-biggest-plastic-polluter-by-wide-margin/>

^{cxxxviii} <https://www.amazon.co.uk/Gone-Tomorrow-Hidden-Life-Garbage/dp/1595581200>

^{cxxxix} Yet a narrow focus on litter may divert attention and responsibility from the industries that continue to produce disposable, non-returnable, single-use products. It's a similar trick to the fossil fuel industry who concocted the notion of the individual carbon footprint – and all its guilt and responsibility – as a distraction from the true villain: them, with 20 firms being behind a third of all global carbon emissions! We need to shackle those companies, not harangue individuals to turn their microwave off at the plug. Similarly, perhaps litter is not the biggest problem, but an ugly by-product of our short-term, convenience-oriented way of living, and our increasing disconnection from nature and community.

^{cxl} <https://www.zerowastescotland.org.uk/sites/default/files/Rapid%20Evidence%20Review%20of%20Littering%20Behaviour%20and%20Anti-Litter%20Policies.pdf>

^{cxli} <https://www.yorkshirepost.co.uk/read-this/the-psychology-behind-littering-explained-and-why-lockdown-has-made-it-worse-2900716>

^{cxlii} For example, the admirable campaign to ban plastic bags and use tote bags instead, even though the environmental impact of producing an organic cotton tote bag is equivalent to 20,000 plastic ones. George Monbiot who coined the phrase says, 'we are rightly horrified by the image of a seahorse with its tail wrapped around a cotton bud, but apparently unconcerned about the elimination of entire marine ecosystems by the fishing industry. We tut and shake our heads, and keep eating our way through the life of the sea.'

^{cxliii} Juliana Berners, a nun, coined the terms in the first colour book in English, *The Boke of St Albans containing treatises on hawking, hunting and cote armour*.

^{cxliv} Pockets of the Elan Valley in the Cambrian mountains are known as the 'Desert of Wales' due to the dominance of Molinia grass and the lack of biodiversity caused by overgrazing and clearing.

^{cxlv} There's a fabulous one-star rating on TripAdvisor saying that 'it resembled a piece of wasteland such as you would find behind an industrial estate'!

^{cxlvi} We've been enjoying soup for 20,000 years. Our word soup comes from the French '*soupe*' which in turn comes from Latin's '*suppa*' meaning 'bread soaked in broth'. The French also gave us the word 'restaurant', meaning 'something restoring', dating from the 16th Century when street vendors began selling concentrated soup as an antidote to physical exhaustion. In 1765, a shop specialising in such soups opened, leading to our modern use of the word.

^{cxlvii} <https://goingtowalden.com/2017/11/24/a-poem-as-an-anchor-going-to-walden-by-mary-oliver/>

^{cxlviii} <https://www.theguardian.com/commentisfree/2018/dec/20/winter-solstice-festive-spirit-christmas-traditions-midwinter#:~:text=slaughtering%20of%20animals%2C%20the%20sowing%20of%20crops%20and%20the%20monitoring%20of%20winter%20reserves%20of%20food>

^{cxlix} Bowls has been played in England since the 13th Century. It was long considered disruptive and radical, rather than today's sedate pastime. It was banned due to fears that its popularity would distract people from practicing their archery. A government act of 1541 limited most working class people to playing bowls only at Christmas time, and even then it had to be at their master's house, whilst he was present.

^{cl} In the 1860s, people began racing the barges and the America's Cup is the only older sailing competition in the world. Thirty such barges were involved in the evacuation of Dunkirk during the Second World War, when thousands of 'little ships' sailed to rescue the beleaguered British Expeditionary Force. The barges helped bring troops off the beaches and ferry them to larger ships waiting in deeper water, though sadly 12 of them never returned.

^{cli} <https://www.wwf.org.uk/future-of-uk-nature#:~:text=The%20UK%20is%20one%20of,nature%20that%20protects%20and%20res>tores.

^{clii} https://en.wikipedia.org/wiki/Tragedy_of_the_commons

^{cliii} <https://www.thebmc.co.uk/government-not-protecting-land-and-sea-for-nature>

^{cliv} https://en.wikipedia.org/wiki/Ecological_grief

^{clv} <https://www.wildeast.co.uk/>

^{clvi} <https://www.wildeast.co.uk/connectivity-making-space-for-nature>

^{clvii} Rewilding is important in urban environments. The United Nations beats an optimistic drum, declaring that 'green spaces need to be placed at the heart of urban planning. Civic groups and municipal authorities can clean up waterways, plant trees and create urban woodland and other wildlife habitat in parks, schools and other public spaces. Permeable sidewalks and urban wetlands can protect against flooding and pollution. Contaminated industrial areas can be rehabilitated and turned into urban nature reserves and places for recreation and relaxation.'

^{clviii} The proportion of households without a car has fallen from 48% in 1971 to 22% in 2021 when there were 12 cars for every 10 households in England.

^{clix} <https://www.forbes.com/sites/neilwinton/2022/02/27/computer-driven-autos-still-years-away-despite-massive-investment/?sh=18c5c42918cc>

^{clx} The word 'toast' comes from the Latin '*torrere*' which means 'to burn'. Its first mention was in a recipe back in 1430 for Oyle Soppys; flavoured onions stewed in a gallon of stale beer and a pint of oil and instructions to serve it hot as toast. Before we ate toast, it was used add flavour to drinks and then discarded, such as in *The Merry Wives of Windsor*, where Falstaff called, 'Go fetch me a quart of sack; put a toast in't.'

^{clxi} Food deserts are neighbourhoods where access to fresh affordable food is limited due to poverty, poor public transport and unhealthy shops, and residents have to rely upon small, expensive convenience shops. Whilst they are deserts, these locations are often simultaneously 'food swamps' with large numbers of takeaways and empty calories.

^{clxii} <https://www.trusselltrust.org/news-and-blog/latest-stats/mid-year-stats/#:~:text=More%20emergency%20food%20parcels%20were%20given%20out%20during%20the%20April%20to%20September%202022%20period%20than%20ever%20before%20fo>r%20this%20time%20of%20year.
%20Over%20the%20last%20six%20months%2C%20more%20than%20320%2C000%20p
eople%20have%20been%20forced%20to%20turn%20to%20food%20banks%20in%20the
%20Trussell%20Trust%20network%20for%20the%20first%20time.

^{clxiii} One of 20,000 or so species that have been absorbing moisture, resiliently surviving extremes of temperature, colonising new land and regulating temperatures for 450 million years.

clxiv Trees for Cities do excellent community planting days: <https://www.treesforcities.org/get-involved/volunteer><https://www.treesforcities.org/get-involved/volunteer>

clxv <https://www.outdoorswimmingsociety.com/the-3-percent-access-myth/>

clxvi We have an uncontested right of access to just over 3% of English rivers. On all the others, there's the chance you might be confronted by someone challenging your right to merely exist in that place.

clxvii To accompany his 16,000 acres in Scotland.

clxviii I knew that it would definitely be a white man doing the shouting.

clxix <https://www.ethnicity-facts-figures.service.gov.uk/culture-and-community/culture-and-heritage/visits-to-the-natural-environment/latest#main-facts-and-figures>

clxx <https://cambswalks.blogspot.com/2014/04/history-of-footpaths.html>

clxxi Today a new movement, Slow Ways, is trying to create a national network of walking routes connecting all of Great Britain's towns and cities as well as thousands of villages. There are currently over 8,000 Slow Ways stretching for over 120,000km. This network of routes was created by 700 online volunteers during the COVID lockdowns, creating a unique Slow Ways map in the process.

clxxii <https://www.oss.org.uk/environment-minister-breaks-government-pledge-to-save-historic-paths/>

clxxiii <https://dontloseyourway.ramblers.org.uk/>

clxxiv The Ramblers Association, defenders of our footpaths, was born in 1931, a year before the famous mass trespass of Kinder Scout which led the way to the establishment of our National Parks and legislation for every parish to record its footpaths. Sadly, many of these paths have been swallowed up, neglected or lost.

clxxv In Chan Buddhism, this semi-historical monk is often worshipped as Maitreya, a future Buddha.

clxxvi Ivy is clingy, luscious and misunderstood, with an exaggerated reputation for strangling trees and cracking buildings. Ivy has its own root system, so isn't parasitic. In fact its evergreen, woody tangle supports around 50 species of wildlife. It used to be said that a wreath of ivy would stop you getting drunk, hence why the god Bacchus wore his wreath of ivy and grapevines.

clxxvii I always associate these with making itching powder or jam, but rosehips have been used for centuries in folk medicine for their anti-inflammatory and pain-relieving properties, and rosehip supplements may help relieve osteoarthritis.

clxxviii The web address on the drain informed me that Clark-Drain is a family owned company, ‘proud of our heritage (since 1963), which began setting new industry standards as pioneers of the first steel cover in the UK. Our core strength is our dedicated employees who embrace a clear set of values which drive everything we do. There [sic] aim is to not just deliver the best possible construction products but to help you to build a better everyday life for people, vehicle use and function of the built environment’

I learned from their website that this was not a mere drain that I was contemplating. It was a ‘ductile iron kerb gully’, designed for pavement kerbs adjacent to carriageways. It could be accessed for rodding or cleaning purposes through a wide unobstructed clear opening area which facilitated maintenance access to the sewer system.

I added one to my shopping basket on the website before discovering that I first needed to contact the company for a price quote. The next day, I received a phone call from the sales team. It was one of those awkward conversations where I feel massively emasculated, like when I take a car in for a service after it’s been dragged backwards out of a ditch. Upon disclosing that I was curious about the price for a single unit rather than, say, enough for 100 miles of highway, I was told, ‘Well obviously we don’t give prices out, do we?’

And that, I am afraid, is all that I can tell you about drains. Everyday life is filled with knowledge and specialisms and experts and industries that make life a little easier, without me even realising, let alone understanding them. The combined hive mind knowledge of everyone’s specialities is mind-boggling.

clxxix There are over a thousand varieties of Pinot, far more than other popular grapes, due to its great age. (The Romans wrote about Pinot, whilst the youngster Cabernet Sauvignon was only born in the 17th Century.) These bottles originated from South Africa, northern Italy, Norfolk and Romania, which bottle was named Sorcova after an old New Year’s custom there where children decorate a stick with colourful artificial flowers and gently hit people with it to bring them luck. In parts of Transylvania, children still go from house to house with their *sorcova*, offering good luck in exchange for treats.

clxxx <https://www.nhm.ac.uk/discover/gilbert-white.html#:~:text=%27Earthworms%2C%20though%20in%20appearance%20a%20small%20and%20despicable%20link%20in%20the%20chain%20of%20nature%2C%20yet%2C%20if%20lost%2C%20would%20make%20a%20lamentable%20chasm.>

clxxxi It also meant a lot of horse urine and corpses, for their working life expectancy was only around three years. Often the bodies were allowed to rot and soften until they were easier to saw up for removal.

clxxxii Ash particles from forest fires explained Brazil’s record-breaking raindrops. Initially, a raindrop is less than 0.005 mm in diameter and almost spherical. As they collide with other droplets they grow until they’re large enough to fall from the cloud. As they drop, wind resistance and surface tension flattens the bottom of the raindrops so they become shaped more like kidney beans. Once a droplet is larger than around 5mm, the air pressure generally overcomes the surface tension and splits the raindrop into two smaller droplets.

clxxxiii The Catholic mission in the UK began in the year 596 with Pope Gregory the Great’s mission to convert us unruly Anglo Saxons, but Boris Johnson only became the first baptised Catholic to become prime minister in 2019. Since 2015, members of the Royal Family can marry a Catholic and still become a king or queen. However, a Roman Catholic royal still cannot become the monarch.

clxxxiv Old George up there took quite the journey to get all the way to rainy England from his beginnings as a soldier in the Roman army. He is now the patron saint of not only England, but also Georgia, Ethiopia, Catalonia, Aragon, Valencia, and Corinthians FC in Sao Paolo.

clxxxv A quick wren digression (ren digwression): The Irish word for wren comes from *dreoilín*, or trickster. The bird has had a reputation for cunning, so the story goes, ever since all the birds gathered to choose the king of the birds. After much argument, they agreed that whichever bird could fly the highest would be named king. The tiny wren stowed away in the feathers of the mighty eagle which soared far higher than any other bird could possibly manage. As it descended to claim the title, the eagle heard a small but loud voice chirping, ‘I am the king, I am the king.’

The eagle refused to accept the stowaway’s victory, insisting that it had used all its might to win the contest fair and square. The wren retorted that the eagle may be strong, but that it did not have the wisdom for victory. And so the wren, using its wisdom as power, was named king of the birds.

To this day, Wren Day is celebrated on the day after Christmas in parts of Ireland. The tradition involves hunting a wren (not a real one anymore) and mounting it on a decorated pole. Crowds of wrenboys dress up in masks, suits of straw and colourful clothing to parade through the streets with musical bands. Once again, this is a celebration descended from the mists of time. It was, perhaps, once part of the Samhain midwinter festivities, for Celtic mythology portrays the wren as a symbol of the year gone by, due to its rare habit of singing even in midwinter, hence its Dutch name of ‘winter king’.

clxxxvi Named after Roger the Dodger from the Beano comic.

clxxxvii Russians and Greeks separate what we would call light blue or dark blue into two distinct colours. The Irish and Turkish languages differentiate between different types of red. Green is often considered a shade of blue in Japan, and the Pirahã language in Brazil has just two colours: light and dark.

clxxxviii For centuries, carp has been the traditional Christmas Eve feast in much of Central Europe. Traditionally, families keep a live carp in their bath for a couple of days before eating it, to give time for all the mud to be flushed from the bottom-feeding fish’s guts. Plus you have the bonus of a new family pet for a brief time, until you eat it. Before cooking, the carp is soaked in milk to improve the flavour and make it less ‘fishy’. When served with cabbage soup and potato salad, the fish is carved vertically to create horseshoe-shaped fillets to bring good luck. The fish scales also represent good fortune and some people keep one in their wallet or purse to carry until the following Christmas Eve.

clxxxix <https://www.thelandmagazine.org.uk/articles/short-history-enclosure-britain>

cxc https://en.wikipedia.org/wiki/British_Agricultural_Revolution

cxci <https://map.whoownsengland.org/>

cxcii As is the way with these things, that ancient festival led loosely on to the Christian celebration of Candlemas. This became the French tradition of ‘*la Chandeleur*’, celebrated with pancakes to remember the round, golden sun and anticipate the warmth and fertility of spring.

cxciii <https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/plants/wild-flowers/dogs-mercury/>

^{cxciiv} In Romania, it is said that the sun was a beautiful maiden who returned to warm the earth after winter. One year, winter kidnapped the sun. A hero fought winter to free the sun, saving the earth from eternal winter. The hero was mortally wounded, but as drops of his blood fell and melted the snow, snowdrops grew from those droplets. In Germany, they tell the tale that God asked all the flowers to donate some of their colour to the snow. All refused except for the generous little snowdrop. In return it got to be the first flower of the year to bloom. They traditionally flower on Imbolc, and legend suggests they've been flowering ever since the Garden of Eden. Tiring of the endless winter after her banishment from the garden, Eve was visited by an angel who created snowdrops out of snowflakes to prove that winter does not last for ever. They have symbolised hope ever since, and I share that feeling as the earth wakes up towards spring each year.

^{cxciiv} If you don't know this little black, green, and yellow bird's distinctive call yet, listen out for it. You'll soon hear it everywhere at this time of year.

^{cxciiv} Humans have lived alongside animals for millennia, but beyond an occasional elite extravagance, Britain only began keeping pets in the 18th Century. An increasing evangelical zeal towards raising moral children led to a rise in books encouraging children to rear small animals to help them learn kindness, commitment and practical nurturing skills. Working class families valued birds for the colour and song they brought into their homes, and an early example of yearning for nature in an increasingly urbanised and disconnected society. Keeping songbirds was so popular that legislation had to be introduced in the 1870s to limit the number captured, although a wild bird market persisted well into the 20th Century.

^{cxciiv} Large bodies of water take longer than land to warm or cool, which slows the rise or fall in temperature. Average temperatures only rise once there is a net gain in solar energy, so the coldest dates of the year depend upon how close you are to water, wind direction, and how much heat-reflecting snow cover there is.

^{cxciiv} www.independent.co.uk/news/uk/home-news/the-hedgerow-8-000-miles-vanish-each-year-1360413.html

^{cxciiv} Hooper's Rule can tell you approximately how old a hedge is, in years. Its age equals the number of woody plant species in a 30-yard section multiplied by 110

^{cc} www.hedgelaying.org.uk

cci Moles are seriously tough little beasts. Despite being less than 15cm long and weighing under 150 grams they can still dig 200 metres of tunnel a day, shifting 540 times their own body weight of soil. That's like me shunting 11 hippos in a day. Moles tend to work for four hours, then rest for four hours in a tough underground shift system that continues all day, every day. It puts into the shade my 45 days and nights of shift work when rowing the Atlantic. Not only that, they also need to eat half their body weight a day to survive. For me that would equal 350 quarter pounders (or half a kangaroo); for a mole it means around 20 worms. If they struggle to find sufficient in their existing tunnel network, they begin digging new runs, which means new mole hills.

I found these facts about this charming creature on the Guild of British Mole Catchers' website. Some farmers try to get rid of moles in their fields through a perception that they pollute silage, cover pastures, and encourage weed growth. Mole controllers are still going strong, but back in their heyday every parish employed one. They were paid more than surgeons, plus they also cashed in the silky pelts to be tailored into waistcoats. Techniques were kept secret and handed down through families over the generations.

The bitter period known as the Little Ice Age in 1566 resulted in mole control becoming national policy in an attempt to protect food supplies. Queen Elizabeth passed 'An Acte for the Preservation of Grayne', which remained law for three hundred years, and included bounties for the destruction of 'vermin' that included everything from hedgehogs to kingfishers and, most certainly, moles.

ccii Natufian hunter-gatherers first began making flatbreads from wild wheat, wild barley and plant roots 14,000 years ago in Jordan. Bread was central to the establishment of early societies when wheat was first domesticated in the Fertile Crescent. It spread across the world, playing a significant role in the formation of towns in preference to nomadic lifestyles. The *Deipnosophistae*, a 3rd Century book about a series of Roman banquets, contains recipes for griddle cakes, honey-and-oil bread, mushroom-shaped loaves covered in poppy seeds, and the military specialty of rolls baked on a spit that continues down the ages to the charred but enjoyable campfire bannocks made by Cub Scouts today.

cciii Here are two recipes I use a lot:

<https://bakerbettie.com/easy-no-knead-skillet-bread/>

and

<https://leitesculinaria.com/99521/recipes-jim-laheys-no-knead-bread.html>

cciv I like the languages that retain original, non-Latin names for months, such as Polish, Lithuanian or Basque

ccv <https://web.archive.org/web/20191225152008/http://culture.polishsite.us/articles/art331fr.htm>

ccvi https://england.shelter.org.uk/support_us/campaigns/social_housing_deficit#:~:text=Housebuilding%20has%20almost%20halved%20in%2050%20years

ccvii <https://www.conservatives.com/our-plan/conservative-party-manifesto-2019>

ccviii <https://www.gov.uk/guidance/understanding-biodiversity-net-gain>

ccix Lieutenant Henry 'Birdie' Bowers was a trainee cadet at the nautical college before going on to become one of the four men who accompanied Captain Scott to the South Pole.

ccx 'Below 40 degrees south there is no law; below 50 degrees south there is no God'

ccxi <https://www.countrylife.co.uk/nature/celandine-the-delicate-flower-harbinger-of-spring-which-wordsworth-thought-more-beautiful-than-daffodils-212412>

ccxii www.arboriculture.wordpress.com/2016/05/04/the-eurasian-jay-and-acorns-a-symbiosis/

ccxiii Acorns germinate in woodland, but they're often out-competed by faster-growing species. Jays inadvertently help oaks grow in less-competitive scrub by burying acorns over a large area. By the time the bird returns to eat its acorn, a seedling has often sprouted. The jay pulls it up, scoffs the acorn, and then, for some reason, roughly jabs the seedling back into the ground. The tiny tree tolerates this brief uprooting in exchange for growing in sunny conditions away from the competitive woodland.

ccxiv www.woodlandtrust.org.uk/blog/2018/07/galls-to-spot-this-year/

ccxv For 1400 years, oak galls were also used in the production of ink, with recipes dating as far back as Pliny the Elder and as recent as the 19th Century when the United States Postal Service still had an official recipe for the ink that was to be used in all their Post Office branches.

ccxvi <https://www.naturespot.org.uk/species/xanthoria-parietina>

ccxvii The lichen's colour comes from the chemical xanthorin that defends it against UV radiation in the exposed places where this pollution-tolerant lichen grows, including on bare rock where it relies on the nutrients from bird droppings

ccxviii When I was about 18, I gouged a catseye from the road in my village and set about trying to turn it into a necklace. Fashion has never been my forté. Nor has DIY: I failed even to take the thing apart. To complete Percy Shaw's fame, he has even had a Wetherspoon's pub named after him...

ccxix Bamboo can grow at up to 4 cm per hour. It is the largest member of the grass family and a valuable resource in Asia for scaffolding, building, food and more. Fast growth plus tolerance for marginal land means that it is a useful tool for creating new forests, afforestation, combating climate change and sequestering carbon.

Bamboo only flowers infrequently, though it does so in synchrony and gregariously, no matter where the plant is located or what climatic conditions it is in. The flowering interval of *Phyllostachys bambusoides*, for example, is an astonishing 120 years. We can say this with certainty because Chinese scholars have kept records of the phenomenon dating all the way back to 999 AD.

ccxx Personally I've always disliked the poem, ever since I had to memorise it at junior school and, on another occasion, copy it out laboriously for a handwriting competition (something I was never likely to win). But I do very much like the cheerful optimism of the flowers themselves, and their heralding of spring. They bring colour and hope to our days before winter has truly passed and before the warm days settle in: 'daffodils, that come before the swallow dares', as Shakespeare put it in *A Winter's Tale*.

ccxxi The symbiotic merging of algae and fungi that resulted in lichens was critical in enabling the first plants to begin to emerge from water. I learned this from the superb book *Entangled Life*, which prompted me to pay attention to this lichen today.

ccxxii In 1940, Britain hastily threw up a network of defences in preparation for the imminent German invasion, positioned at strategic spots along rivers, canals and roads. Around 28,000 were built and about 6000 still remain as modest reminders of our stand against the rampant onslaught of the Nazis.

ccxxiii Mist and fog happen when saturated air condenses to form droplets that hang suspended in the air. Saturation happens more easily when temperatures are low, so fog is more likely when the air is humid and cold. If you look up at a mountain top it may seem to be shrouded in clouds. But hike up there and you'll enter a light mist. Keep on climbing into the heart of it and at some point you'll lose visibility in the fog.

ccxxiv <https://www.mdpi.com/1660-4601/16/18/3373/htm>

ccxxv There is science galore about the benefits of spending time in nature and Attention Restoration Theory, and there are hundreds of thousands of Instagram posts celebrating *shinrin-yoku*, or forest bathing. There is also the NHS Forest, 'an alliance of health sites working to transform their green space to realise its full potential for health, wellbeing and biodiversity, and to encourage engagement with nature'.

ccxxvi <https://www.greenpeace.org.uk/challenges/renewable-energy/#:~:text=Cuts%20to%20government%20support%20for%20solar%20power%20has%20led%20to%20a%20drop%20in%20the%20number%20of%20solar%20panels%20being%20installed%2C%20and%20continued%20political%20and%20financial%20backing%20for%20fossil%20fuels%20and%20nuclear%20power%20just%20don%E2%80%99t%20make%20sense.>

ccxxvii United Nations Environment Programme has declared this to be the 'Decade of Ecosystem Restoration', aiming to prevent, halt and reverse the degradation of ecosystems because 'healthier ecosystems, with richer biodiversity, yield greater benefits such as more fertile soils, bigger yields of timber and fish, and larger stores of greenhouse gases.' They highlight some of the problems with how our land use is exhausting its vitality: 'Intensive ploughing and cultivation practices, large monocultures, over-grazing, and the removal of hedges and trees are letting rain and wind erode precious soil. Excessive use of fertiliser is polluting waterways and lowering soil quality. Nitrogen pollution poses an invisible but dangerous threat to peatlands. Pesticides are harming wildlife including insects such as bees that pollinate many crops.'

ccxxviii In the fabulous book *Three Against the Wilderness*, Eric Collier recounts how an elderly First Nations lady taught him that returning beavers to his valley in British Columbia would lead to a total recovery of the area.

'Until white man come, Indian just kill beaver now an' then s'pose he want meat, or skin for blanket.' she said. 'And then, always the creek is full of beaver. But when white man come and give him tobacco, sugar, bad drink, every tam' he fetch beaver skin from creek Indian go crazy and kill beaver all tam. Why you no go that creek and give it back the beavers? You young man, you like hunt and trap. S'pose once again the creek full of beavers, maybe trout come back. And ducks and geese come back too, and big marshes be full of muskrats again all same when me little girl.'

ccxxix Ecosystems are at their most successful and stable when there is a population of large, native keystone species there, holding everything together like the keystone on an arched bridge. Bring back these ecological engineers and degraded ecosystems can spring back to life through a trophic cascade effect. These reintroductions can be controversial though (such as the bison in Blean Woods, beavers across Britain, and bog moss near Manchester), another example of shifting baseline syndrome, as we think that the nature of our childhoods was 'normal', despite the evidence that doing so has many positive effects, such as improving tree growth, increasing biodiversity and stabilising riverbanks.

ccxxx 'I read of a man who stood to speak // At the funeral of a friend. // He referred to the dates on the tombstone // From the beginning...to the end. // He noted that first came the date of birth // And spoke the following date with tears. // But he said what mattered most of all // Was the dash between those years. // For that dash represents all the time // That they spent alive on earth. // And now only those who loved them // Know what that little line is worth...'

ccxxxii <https://www.rbkc.gov.uk/pdf/Document%2027%20-%20The%20Influence%20of%20Soils%20and%20Species.pdf>

ccxxxiii <https://www.bspp.org.uk/wp-content/uploads/2021/01/Ash-dieback-report-final-1-rdcd-1.pdf>

ccxxxiiii With their shiny, spiky evergreen leaves and bright red berries, holly is a favourite decoration at Christmas, representing the thorns of Jesus' crown and his blood. Holly leaves are not always prickly, and this varies even on individual trees, perhaps as a response to animals browsing on them: the more a tree is grazed, the pricklier it becomes.

ccxxxv <https://modernfrontierswoman.com/the-bare-soil-dilemma/#:~:text=our%20own%20health!-,What%20happens%20when%20soil%20is%20left%20bare%3F,droughts%2C%20floods%20and%20violent%20storms.>

ccxxxvi The rapid development of the British landscape following the First World War demanded more accurate maps than the piecemeal observations taken between 1783 and 1853.

ccxxxvii Rob Woodall became the first person to visit all the trig points on a mission that took him from a lighthouse at Lizard's Point in Cornwall all the way up to Unst in the Shetlands. He climbed Ben Nevis, Britain's highest peak, and bagged the one by the River Little Ouse in Norfolk which lies 1346 metres lower – one metre below sea level, in fact. It took him two years of campaigning to be granted permission to visit the privately-owned trig point in Fort Borstal, Kent.

ccxxxviii <https://www.bumblebeeconservation.org/why-bees-need-our-help/>

ccxxxix To help with this problem, 'B-Lines' are being set up by the Buglife charity. These are a series of 'insect pathways' with stepping stones of wildflower habitats along the way, like service stations, which will benefit many types of wildlife if farmers, land owners, local authorities and gardeners cooperate to create enough of them.

ccxl Hops were dried in warm air rising from a fire below and out through the conical wooden cowls in the roof. They were designed to aid the flow of air and turn with the wind to keep out the rain.

ccxli I have to admire their agility, even though their greed and population size annoys me. Squirrels can make enormous vertical or horizontal leaps with their powerful and double jointed legs. This means they can reverse paw direction and run down a tree as easily as they run up it. Cats don't have this hypermobility, hence their notoriety for getting stuck up trees.

ccxlii I guess this square was relatively litter-free as it was relatively far from a town, main road, or drive-through restaurant.

ccxlii Plenty of folklore surrounds the magpie. Salute it to stave off misfortune, greet it for luck, or fear its being in collusion with the Devil. For this is the bird, it was said, that refused to mourn Christ's death with the other birds, that refused to enter Noah's ark and instead alighted on the roof and cursed throughout the voyage. In Korea, by contrast, they say that a magpie predicts the arrival of visitors.

The magpie's reputation for thievery stems back to 1815, when a French melodrama featured a servant sentenced to death for stealing silverware from her master, though the thief was in fact the master's pet magpie. Rossini turned the story into the opera *La gazza ladra*, and the poor magpie's reputation was besmirched for good. Scientists have not found any evidence that they are any more attracted to shiny things than other birds.

ccxliii The first development of 'bungalows' opened in 1869, and their popularity boomed between the wars as people yearned to escape the city. Critics slammed them as 'bungaloid growths' that scarred the countryside, and Thomas Sharp, writing in *Town and Countryside* in 1932, blustered that the 'bungalow now stands for all that is vile and contemptible'. But despite our perceived lack of space, demand for low-density bungalows is still rising with our ageing population.

ccxliv Australians waste 361 kg of food per person each year, America discards 60 million tonnes of fruit and veg a year for being too ugly, whilst in developing countries 40% of the wastage occurs before the food even reaches the market, due to problems with refrigeration, storage and transport.

ccxlv To highlight some of the problems of our wastefulness, Rob Greenfield lived just like the average American but threw nothing away for a month. Using a custom made 'suit', Rob carried every piece of rubbish he generated. By the end of the month, Rob was having to squeeze through doorways, struggling to get through the barriers on the subway, and turning heads and prompting conversation wherever he went in New York.

ccxlvii <https://slate.com/human-interest/2020/06/a-quest-to-catalogue-every-single-house-number-in-one-suburban-zip-code.html>

ccxlviii <https://www.gilbertwhiteshouse.org.uk/gilbert-white/>

ccxlviii People in the Iron Age imported wine before the Romans introduced vineyards. Viniculture really took off with the arrival of William the Conqueror's Norman nobles, and over 40 vineyards are listed in the Domesday Book.

ccxlix James Biggs of Bristol was blinded by an accident in 1921. He felt vulnerable around traffic, so painted his cane white to make him more noticeable. Today there are different canes to warn people that you are partially sighted, guide canes to find obstacles, long canes if you have very restricted or no vision, and red-and-white canes if you are both deaf and blind. The bravery to march down a pavement if you can neither see nor hear strikes me as remarkable.

cccl The scientific name for dandelions is *Taraxacum officinale*, 'officinale' being a Mediaeval epithet given to plants that had useful medicinal properties.

cccli According to the inscription, his wife 'died in the peaceful assurance of everlasting life, her sorrowing children gratefully record in their affectionate remembrance the many domestic and private excellencies which adorned her character.'

^{cclii} I watched a couple arguing amicably over the old dilemma of jam first or cream first. The great scone debate is a contentious issue in Britain, another small rift in the schisms that divide our united kingdom. Should the cream or the jam be spread first? We've been arguing about this since the cream tea was created in the 11th Century. Those in Devon spread clotted cream onto their scones, followed by jam. (I vouch for this method. After all, I butter my toast before adding jam, not the other way round.) Yet in neighbouring Cornwall, the opposite tactic is preferred. In a rare example of not sitting on the fence on issues of national importance, the Queen was reputed to prefer the Cornish approach.

^{ccliii} They're a familiar sight, with the most famous probably being the one overlooking the Oval cricket ground in London. Since the discovery of natural gas beneath the North Sea in 1965, they have mostly become obsolete, as gas can now be pumped directly into homes.

^{ccliv} <https://uk.bookshop.org/a/9404/9781848250789>

^{cclv} <https://uk.bookshop.org/a/9404/9780571333547>

^{cclvi} <https://twitter.com/AmiesPhilip/status/1476684507046719489>

^{cclvii} The earliest record of a Dandelion and Burdock drink came from the Italian priest St Thomas Aquinas in 1265. He was praying for inspiration whilst walking in the countryside when he made himself a tippie from dandelion and burdock plants. Fast forward to 1871, and Ben Shaw began flavouring the new craze of carbonated water. His Dandelion and Burdock concoction remained popular until the 1940s when the rise of Cola and other American drinks outshone the old British flavours.

^{cclviii} <https://www.rspb.org.uk/fun-and-learning/for-kids/facts-about-nature/facts-about-habitats/urban-and-suburban/>

^{cclix} <https://morethanweeds.co.uk/urban-plants/>

^{cclx} <https://www.weforum.org/agenda/2022/12/top-10-cities-with-best-public-transport/#:~:text=Hong%20Kong%20has%20been%20named,density%20and%20good%20railway%20infrastructure>

^{cclxi} <https://merlin.allaboutbirds.org/>

^{cclxii} Herefords have been bred over time to maximise beef yield, reaching the mighty zenith of 1839, when a prizewinning bull named Cotmore weighed in at a whopping 1770 kilograms.

^{cclxiii} The leaves can be used in salads or as a herb when cooking fish or meat. In Somerset, it was said that rubbing the fresh leaves onto your feet relieved cramp. I look fondly on Jack-by-the-hedge as a nice nibble and part of British springtime, but it has become a troublesome invasive plant in the United States since being introduced in the 1800s for medicinal purposes and to help counter erosion. It has become a threat to many ecosystems, outcompeting and choking the native plants. Invasive plants weaken entire ecosystems as they also impact upon insects and then onto other species lower down the food chain.

ccclxiv Five millennia ago, when modern Lebanon was part of the Phoenician civilisation, the flag was blue and red. This lasted until 200 CE when the Tanukh tribe's white-blue-yellow-red-green vertical banded flag flew in the warm sunshine. Five centuries later, the Abbasid Caliphate preferred a plain black flag. In the past thousand years, many flags and rulers of the region have fluttered back and forth. The Kingdom of Jerusalem, founded after the first Crusade by Godfrey of Bouillon, sported a white flag with a five-fold golden cross. The Banu Ma'an tribe dominated for five centuries, beneath a banner of diagonal white and red with a laurel wreath. The Ayyubid Dynasty plumped for a plain yellow flag, whilst the Mamluk Sultanate championed an Egyptian yellow and left-facing crescent moon. The Chehab Empire preferred a blue field and a right-facing crescent. The Ottoman Empire lasted for 500 years, until the end of the First World War, with its red field and white moon and star. Lebanon then briefly sported a white flag with a green cedar tree until in 1920 the French took control and hedged their bets with three variations on their own tricolour; one with a green cedar, another with a black one, and the third with a brown trunk and green leaves.

ccclxv My friend Zac, aged 9, is obsessed with monkey puzzle trees. He shared these facts with me: Monkey puzzles are ancient trees that date back to the Jurassic period. Unlike most plants which have male and female parts, the whole tree is either male or female. Large green cones develop on female trees which, every 2 or 3 years, turn brown and explode with a load bang, scattering seeds everywhere. Fossilised monkey puzzles make a hard black stone which we call Jet, and is used to make jewellery. It is where the phrase 'jet black' comes from.

ccclxvi <https://edition.cnn.com/2022/08/17/world/patagonia-parakeets-monkey-puzzle-trees-scn/index.html>

ccclxvii The first flag flown in what is now Chile would have been the Mapuche war flag, blue with a distinctive white star called a '*guñelve*'. At some point this flag doubtless crossed swords with the invading Spaniards' saw-toothed burgundy cross. The conquering Spaniards ruled Chile beneath their national flag of red and yellow stripes and a coat of arms until Independence in 1812, when Chile adopted a horizontal blue, white and yellow tricolour, nicknamed *Patria Vieja*. Over the next century, they changed through different orders of the stripes, a blue, white and red tricolour, then the same with the blue and white bits switched round and a white star added. Then came a white and red flag with a coat of arms in the middle and a white cross on a blue square in the corner. At last, in 1934, they removed the coat of arms and settled for the smart, simple design we have today.

ccclxviii Updates on the pliers had been added below. 'Thank you to all who have taken an interest in these pliers and their use. Unfortunately we still don't know what industry or for what purpose they were made. They are a production made, quality tool, the fine jaws have not been added, they are part of the original manufacture. Maybe they were a lot thicker for metal working and have been thinned down for a specific reason?'

ccclxix Plump, short and loud-mouthed, the wren is common but secretive and troglodytic. The male is a busy fellow when courting, building a selection of domed nests with moss and twigs, offering females a range of prospective accommodation should they choose to mate with him.

cclxx <https://www.bl.uk/the-language-of-birds/articles/how-birds-sing#:~:text=Birds%20produce%20more%20complex%20sounds%20than%20any%20othe%20animal.>

cclxxi The Samaritans charity had fixed notices to the motorway bridge to try to reach anyone feeling suicidal here. ‘Talk to us, we’ll listen. Whatever you’re going through, you don’t have to face it alone.’ It was founded by Chad Varah, a vicar and writer-cartoonist who began answering calls from suicidal people via a helpline he set up. He worked all day, then stayed up late into the night taking phone calls in between writing scripts and cartoons. These days the Samaritans has grown so much that it responds to a call for help every ten seconds, which I find both inspiring and heartbreaking.

cclxxii There are an additional 9,300 miles in Scotland, not including the huge amounts of open access land there. Rambling’s popularity grew in the 19th Century as city dwellers sought to escape the polluted streets in search of fresh air and open space. It was the first time people began choosing to walk for pleasure, rather than as a means of getting from A to B. Romantic poets like Keats and Wordsworth understood the power of nature and took long walks to search for inspiration.

cclxxiii Polonius, Hamlet and myself are not the only people to appreciate clouds. There is an entire Cloud Appreciation Society for people like us which you can join via their website.

cclxxiv Today its uses range from the plastic in computer mice to silicon chips. Reject sand is a byproduct of the washing process, and is used by farmers as bedding material for cattle.

cclxxv <https://www.gov.uk/government/publications/state-of-the-environment/summary-state-of-the-environment-soil#:~:text=In%20England%20and,billion%20every%20year>

cclxxvi <https://www.clientearth.org/latest/latest-updates/news/why-soil-matters/>

cclxxvii <https://sustainablesoils.org/about-soils/facts-and-figures>

cclxxviii On the plus side, quarries do provide important habitats for species like sand martins, peregrine falcons, natterjack toads and rare orchids.

cclxxix According to the sign on the front of this pub, the Green Man was a ‘chimney sweep who walked encased in a framework of wood or wickerwork which was covered with leaves and sometimes surmounted by a crown of flowers and ribbons. He would dance on May Day and other pageants at the head of the procession.’

cclxxx Although they may have actually got muddled up with the hemlock water dropwort plant.

cclxxxi This creates a yellow reflection because buttercups have a unique combination of pigments and anatomical structures that reflect light in the same way that a spill of oil does. Buttercups are the only species found to have these thin pigmented films.

cclxxxii They explain that they ‘plant woods and trees to combat climate change, build a greener future for the UK and create havens for wildlife’.

cclxxxiii The government advises that ‘some ash trees may have genetic tolerance to ash dieback, meaning they may survive and reproduce to create the next generation of ash trees. Therefore, it is important to retain ash trees where they stand out as being healthier than those around them and it is safe to do so.’

cclxxxiv https://treecouncil.org.uk/wp-content/uploads/2019/12/5-The-many-benefits-of-ash-trees-DADBRF-Nov-2018_1.pdf

cclxxxv The spirit level was invented by Melchisedech Thevenot in the 17th Century. He was a librarian for King Louis XIV, and an amateur scientist. He is better known for his popular 1696 book *The Art of Swimming*. It was one of the first books on the subject, popularised breaststroke, and even Benjamin Franklin enjoyed reading it.

cclxxxvi The moka pot is a cult design classic that features in the Museum of Modern Art and *The Guinness Book of World Records*. Its roaring, volcanic brewing has always been my favourite kind of coffee ritual. The 19th Century was the miraculous age of steam. It transformed trains, ships and much of the industrial revolution in Britain. In Italy it led to the idea of applying pressure to coffee to create a strong, speedy drink and improve people’s morning coffee break. Alfonso Bialetti invented the moka pot, and when he died was buried in a moka pot-shaped coffin.

cclxxxvii <https://alastairhumphreys.com/coffee-outside/>

cclxxxviii <https://uk.bookshop.org/a/9404/9780241547472>

cclxxxix I knew the old nursery rhyme ‘Ladybird, ladybird’ that we croon to our babies, but hadn’t precisely remembered the grisly lyrics...

*‘Ladybird, ladybird fly away home,
Your house is on fire and your children are gone,
All except one, and her name is Ann,
And she hid under the baking pan.’*

A shorter, grimmer version of the rhyme concludes:

*‘Your house is on fire,
Your children shall burn.’*

Mind you, nursery rhymes are often rather brutal once you take notice or dig a little deeper. Take, for example,

*‘Mary, Mary quite contrary,
How does your garden grow?
With silver bells and cockleshells
And pretty maids all in a row.’*

Henry VIII’s daughter Mary, Bloody Mary as she was known by her protestant opponents, who she had a reputation for torturing. ‘Silver bells’ were a nickname for thumbscrews and ‘cockleshells’ were a nasty-sounding torture device attached to the genitals. ‘How does your garden grow?’ was a taunt to Mary’s childless state, and ‘Pretty maids all in a row’ may have referred to stillborn children, or to a beheading device called a maiden.

ccxc <https://www.newscientist.com/article/2325462-uks-earliest-hand-axes-were-made-by-ancient-humans-560000-years-ago/>

ccxc1 https://en.wikipedia.org/wiki/Homo_heidelbergensis

ccxc2 https://en.wikipedia.org/wiki/Monotypic_taxon

ccxc3 <https://nationalpost.com/news/world/there-used-to-be-nine-species-of-human-what-happened-to-them>

ccxc4 <https://www.theguardian.com/cities/2019/feb/25/concrete-the-most-destructive-material-on-earth>

ccxc5 Concrete production is responsible for up to 8% of the world's CO₂ emissions.

ccxc6 Wind is caused by differences in atmospheric pressure. Generally speaking, warm equatorial air rises and moves towards the poles. Cooler, denser air takes its place, moving towards the equator. Earth's rotation generates the Coriolis effect that causes wind systems to twist clockwise in the southern hemisphere and anti-clockwise in the north. Prevailing winds usually blow east-west rather than north-south, so if you stand with your back to the wind in Britain, you will always have low pressure on your left, which is helpful for anticipating the weather.

ccxc7 https://www.jstor.org/stable/1500918?seq=1#page_scan_tab_contents

ccxc8 <https://www.gov.uk/government/publications/electric-and-magnetic-fields-health-effects-of-exposure/electric-and-magnetic-fields-assessment-of-health-risks#:~:text=The%20results%20of%20some%20studies%20of%20human%20populations%20have%20suggested%20that%20there%20may%20be%20an%20increase%20in%20risk%20of%20childhood%20leukaemia%20at%20higher%20than%20usual%20magnetic%20field%20exposures%20in%20homes%20some%20of%20which%20are%20near%20to%20large%20power%20lines.>

ccxc9 Birds are thought to navigate with combinations of aromas, thermals, magnetic fields, constellations and much else besides.

ccc <https://www.theguardian.com/environment/2022/nov/13/raw-deal-discontent-is-rising-as-water-companies-pump-sewage-into-uk-waters#:~:text=In%202021%20annual%20bonuses%20paid%20to%20water%20company%20executives%20averaged%20%C2%A3100%20C000%20%E2%80%93%20an%20increase%20of%2020%25%20%E2%80%93%20despite%20most%20of%20these%20firms%20missing%20sewage%20pollution%20targets.>

ccci Whilst China was being invaded by Japan and most residents in my grid square were away at war or watching the Battle of Britain unfold overhead, a Japanese paleobotanist, Shigeru Miki, published a paper suggesting that fossils assumed to be Sequoia were actually a new genus, Metasequoia. Because of the war, Chinese botanists didn't have access to articles from enemy countries, so when Professor Zhan Wang saw a rare living Metasequoia tree, he did not know what it was. Locals felt the tree was important, calling it a *shuisa* (water fir) and building a shrine around it. Professor Wang collected some cones and eventually the mystery was solved: they had discovered a living fossil. Both the botanical community and the wider public were fascinated by this discovery, and seeds of what became known as dawn redwood were soon being distributed across the globe.

cccii <https://uk.bookshop.org/a/9404/9781848250789>

ccciii Yet, as recently as 1901, we hadn't figured out how to make roads much better than the Romans had done. Then Edgar Purnell Hooley, a surveyor, came upon a patch of road that was oddly smooth and firm. He investigated and learned that a barrel of tar had fallen from a cart and spilled. To sort out the sticky mess, locals dumped a load of slag waste from the nearby ironworks on top and patted it down. This was a noticeable improvement on the work of John Loudon McAdam, a Scottish engineer who'd concocted a decent, compacted road surface 80 years earlier, but hadn't mastered a way of binding the stones together. Hooley patented his discovery, got rich, and then graciously marketed it with the name of tarmacadam as a nod to McAdam. So the modern tarmac road was invented by accident, as was penicillin, viagra, and microwave ovens.

ccciv Farmers aim to harvest their hay just before the grasses' seed heads are ripe and when the leaf is at its maximum size. They leave it to dry in the sunshine so that most of the moisture is removed before gathering the hay into bales. If the weather is too dry, the leaves and seeds are stunted, creating poor hay with too many stalks. If it is too wet, the cut hay rots before it is baled. So when the weather is just right, farmers make hay while the sun shines.

ccciv <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0222936>

cccvi A *smeuse* is a word revived by Robert Macfarlane's pursuit of lost words in his book *Landmarks*. It means 'a hole at the base of a hedge (or fence) made by the repeated passage of animals'.

cccvii Modern map coverage has its roots in military strategy, beginning with mapping the Scottish Highlands following the rebellion of 1745. Maps were an important strategic tool for opening up access to the Highlands. A young engineer called William Roy began work on what became known as the Great Map. His 1:36,000 scale map took eight years to complete. It resides today in the British Museum but you can explore it online.

When the French Revolution exploded, the British government worried the upheaval may sweep across the Channel. They hurriedly began surveying England's vulnerable southern coastline. The defence ministry, known as the Board of Ordnance, created the first map and then expanded into a mission to produce an accurate map of the whole of Great Britain. And so the Ordnance Survey was born.

cccviii <https://www.discoverwildlife.com/plant-facts/do-dock-leaves-really-soothe-nettle-stings/>

cccix <https://thelead.uk/do-you-suffer-plant-blindness#:~:text=Plantago%20major%2C%20a.k.a%20the%20humble%20plantain>

cccix <https://www.jstor.org/stable/4450624>

cccxi The Second World War had a double impact on housing, for not only did most building work stop for years, German bombs inflicted a great deal of damage and exacerbated the shortages.

cccxi There are 14 green belts in England, designed to counter urban sprawl. It was an idea first implemented by Muhammad around Medina in the 7th Century, and Queen Elizabeth I also attempted to create one around London to stop plagues spreading.

cccxi Smell and memory are tightly linked by the anatomy of the brain. The olfactory bulb that processes smells zaps its information around the body via the limbic system, a region related to emotion and memory.

cccxi Jewish refugees from Iberia introduced fried fish into Britain, selling it on the streets from trays hung around their necks. Bloody foreigners, coming to our country, working hard, bringing tasty recipes and saving us from our pottage and gruel. In *Oliver Twist*, Dickens described a scene not too dissimilar from today's high streets, with 'its barber, its coffeeshop, its beershop, and its friedfish warehouse' where the fish was originally served with bread or jacket potatoes.

cccxi <https://www.theguardian.com/environment/2021/jul/10/went-to-mow-but-stopped-how-uk-cities-embraced-meadows-revolution-aoe>

cccxi See also: Let it Bloom June and Knee High July!

cccxi The grass family is one of the largest families of flowering plants, with more than 10,000 species, including wheat, rice, barley, oats and corn. Grasses have fed most humans and livestock since first being cultivated in Asia 8000 years ago.

cccxi <https://en.wikipedia.org/wiki/Geosmin#:~:text=in%20fresh%20water.-,Effects,such%20as%20carp%20and%20catfish.>

cccxi In folklore, a jackdaw landing on the roof signalled a new visitor, but it could also be an omen of sudden death. If you passed a jackdaw on your way to a wedding in the Fens, that was said to bring good luck. In the Classical world, Ovid claimed the birds brought rain, whilst in *Aesop's Fables* the jackdaw was a stupid bird that starved as it waited for the figs to ripen. And the Greeks said that 'the swans will sing when the jackdaws are silent', meaning that only after fools have finished speaking will the wise have their say.

cccxi Britain began selling artificial poppies in 1921 to raise funds for ex-servicemen and bereaved families. The campaign was so successful that the British Legion opened a factory to produce its own poppies which is still running today, producing millions each year.

cccxi <https://www.orwellfoundation.com/the-orwell-foundation/orwell/essays-and-other-works/some-thoughts-on-the-common-toad/>

cccxi <https://www.orwellfoundation.com/the-orwell-foundation/orwell/essays-and-other-works/some-thoughts-on-the-common-toad/>

cccxxiii <https://www.networkrail.co.uk/sustainability/biodiversity-on-britains-railway/>

cccxxiv <https://www.ediblegardens52.com/ediblegardens52/2022/7/5/michael-pollans-food-rule-19>

cccxxv <https://michaelpollan.com/reviews/how-to-eat/>

cccxxvi <https://amzn.to/3Fv0VDp>

cccxxvii A spiky, hairy plant with crepe-like blue flowers and pink stamen-like tongues that thrives on marginal ground and the meagre nutrients of chalk grassland and cliffs.

cccxxviii Too much exposure to UV causes sunburn, and pale-skinned me hates being sunburned. I associate my childhood summers with the itchy pain of peeling red shoulders and squirming in bed at night slathered in crusty calamine lotion.

Early civilisations countered sunburn in different ways. The ancient Greeks used olive oil, zinc oxide has been used for thousands of years in India, whilst the Egyptians used extracts of rice, jasmine and lupine that skincare companies still use today.

cccxxix <https://www.bbc.co.uk/newsround/48991574>

cccxxx <https://www.woodlandtrust.org.uk/blog/2019/05/nine-wild-uk-orchids>

cccxxxi These flowers then attract beetles, bees, elusive insects like the wart-biter bush cricket and the phantom hoverfly, as well as rare butterflies like the Duke of Burgundy, silver spotted skipper, Adonis blue, and the rare four-spotted and gothic moths.

cccxxxii <https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/bird-a-z/kestrel/feeding/>

cccxxxiii <https://blogs.bu.edu/bioaerial2012/2012/12/08/2655/>

cccxxxiv In those pivotal days of the war, the Luftwaffe threw 2600 aircraft against the RAF, who had just 640 fighter planes. Hermann Goering predicted victory within days, but Britain went into a frenzy of fighter plane production. The Spitfire's speed, manoeuvrability and firepower helped win the Battle of Britain and turned it into a beloved British icon.

cccxxxv In its early days, the Spitfire was often out-manoeuvred in duels with German pilots, resulting in many pilots being shot down and wounded. Hundreds of young men's appalling burns were treated by a Dr McIndoe, with experimental plastic surgery techniques he developed at Queen Victoria Hospital in East Sussex. The patients bonded and formed a drinking and social club known as the Guinea Pig Club, which continued to meet for 60 years after the war. Their club anthem contained these lines,

*'We are McIndoe's army,
We are his Guinea Pigs.
With dermatomes and pedicles,
Glass eyes, false teeth and wigs.
And when we get our discharge
We'll shout with all our might:
"Per ardua ad astra"
We'd rather drink than fight.'*

cccxxvi The maps are for sale on her website as stylish posters. The map of Edinburgh is titled ‘Smells of Auld Reekie on a Very Breezy Day’, whilst the description for Manhattan’s map includes, ‘Everyday smells include “gym people”, “pretentious coffee roast” and “truck”’. Her PhD was titled ‘Nose-first: practices of smell walking and smellscape mapping’.

cccxxvii Neuroimaging experiments show that songs stimulate various areas of the brain and release hits of dopamine. Repeating of songs, especially during pivotal events or formative years, imprints them in our mind, so that right from birth we become skilled at recognising songs we heard long ago and connecting them with specific memories. Men’s favourite songs tend to come from between the ages of 13 and 16, whilst women’s are from 11 to 14.

cccxxviii <https://www.theguardian.com/environment/2023/mar/20/ipcc-climate-crisis-report-delivers-final-warning-on-15c#:~:text=Ant%C3%B3nio%20Guterres%2C%20said%3A%20%E2%80%9CThis%20report%20is%20a%20clarion%20call%20to%20massively%20fast%2Dtrack%20climate%20efforts%20by%20every%20country%20and%20every%20sector%20and%20on%20every%20timeframe.>

%20Our%20world%20needs%20climate%20action%20on%20all%20fronts%3A%20everything%2C%20everywhere%2C%20all%20at%20once.

cccxxix <https://www.nhm.ac.uk/discover/news/2020/september/uk-has-led-the-world-in-destroying-the-natural-environment.html>

cccxi <https://www.theguardian.com/environment/2022/jun/23/britain-ranks-bottom-in-europe-for-nature-connectiveness>

cccxli <https://takethejump.org/>

cccxlii ‘Gauntlet’ in this context has nothing to do with an armoured glove. It is a loan word originating from Swedish, from *gata*, ‘lane’, and *lopp*, ‘running’ that was adopted into English in the 17th Century when English and Swedish soldiers fought for Protestant armies in the Thirty Years’ War.

cccxlili In the 1990s, ‘*Downtown no Gaki no Tsukai ya Arahende*’ featured ‘punishment games’ with embarrassing consequences for the losers, and highbrow pain games such as ‘Penis Machine’, where contestants had to recite tricky tongue twisters whilst being punched in the nether regions.

cccxliv <https://www.nationalarchives.gov.uk/domesday/world-of-domesday/towns.htm>

cccxlv The first day of the Battle of the Somme, 1 July 1916, was the Britain’s bloodiest day. For the winning of just three square miles of land, the British Forces suffered 57,470 casualties and 19,240 fatalities.

cccxlvi It was said that Eve carried one when she was banished from the Garden of Eden. Mediaeval women who placed a four-leaf clover in their shoe believed they would marry the first wealthy single man they passed. Pin one above her door and the first unmarried man to pass through would become hers. Clover was tossed in the path of rural brides to protect her and wish her a successful marriage. Two people chewing a four-leafed clover together would surely fall in love, and great power and fortune awaited anyone who was fortunate enough to find a five-leafed clover.

cccxlvii <https://germinal.ie/nitrogen-fixing-clover-lessens-fertiliser-dependency/>

cccxlviii <https://www.fwi.co.uk/livestock/health-welfare/clover-without-fear-ofbloat>

cccxlxi [https://read.amazon.co.uk/kp/kshare?](https://read.amazon.co.uk/kp/kshare?asin=B07N2H5TJJ&id=vf4ghpedljebfihntx4twppf5u&reshareId=BSXT4Z9GRQBBG53N9ECJ&reshareChannel=system)

[asin=B07N2H5TJJ&id=vf4ghpedljebfihntx4twppf5u&reshareId=BSXT4Z9GRQBBG53N9ECJ&reshareChannel=system](https://read.amazon.co.uk/kp/kshare?asin=B07N2H5TJJ&id=vf4ghpedljebfihntx4twppf5u&reshareId=BSXT4Z9GRQBBG53N9ECJ&reshareChannel=system)

cccl <https://www.bbc.co.uk/news/magazine-28196221>

cccli Even though it is so beneficial to butterflies, buddleia causes problems on SSSIs, such as the White Cliffs in Folkestone, where its spread means that only a small patch of protected traditional chalk grassland remains.

ccclii Until the wise old Greeks began wearing flip-flops with the strap next to the big toe, as we do, the Romans and Mesopotamians wore them with the strap between the second and third toes. The modern popularity of flip-flops began after the Second World War when American soldiers returned home from Japan with pairs of *zōri* made from rice straw. Manufacturers copied them with plastic, launching a fashion trend that continues unchanged to this day.

cccliii <https://www.sas.org.uk/water-quality/water-quality-facts-and-figures/>

cccliv During the Second World War, rosebay willowherb earned the nickname of bombweed, as it flourished in the wreckage of bombed-out land. It was rare in the UK until the proliferation of railways in the 19th Century created perfect corridors for it to spread. It is a plant with numerous traditional uses, such as producing rope, clothing fibres and lighting fires, as well as medicinal uses. The pith inside the stems has been eaten raw, cooked or fermented all the way from North American First Nations people to Kamchatkan nomads.

ccclv The meadow in its name derives from the mead that it was used to flavour. In northern Scotland and the Islands it is called '*crios chu-chulainn*', which was the belt of mythological hero of Ulster, Cú Chulainn. It was a plant with many medicinal uses, a traditional hangover remedy, and a treatment for headaches as it contains salicylic acid, which is used to create aspirin.

ccclvi Archaeological evidence suggests that farms in Scotland were using compost as long as 12,000 years ago. It took another ten millennia until anyone thought to write about it though: the Akkadians from Mesopotamia, one of the first societies to have a functional bureaucracy, kept written records on clay tablets and some from 2300 BC were the first to mention compost.

ccclvii The history of scuba diving begins with Aristotle describing Alexander the Great descending into the Mediterranean. The polymath Da Vinci invented an elaborate snorkel device. The mystery of the bends was finally solved in 1878, 35 years after the Royal Navy established the world's first scuba diving school.

ccclviii <https://www.nobelprize.org/prizes/peace/1970/borlaug/facts/>

ccclix Polytunnels often use less pesticide, fertiliser and water than traditional farming, can produce food year round at a higher yield, and are an excellent opportunity for using renewable energy such as geothermal heating or heat exchanges. And yet, as always, there are problems too. In the Netherlands, for example, polytunnel pioneers, farms emit more ammonia per hectare than most of the EU.

ccclx <https://en.wikipedia.org/wiki/Lammas>

ccclxi <https://poets.org/poem/way-through-woods>

ccclxii Corn was first domesticated 7000 to 9000 years ago from a wild grass called teosinte. Hundreds of generations of farmers selected the biggest and juiciest kernels, leading over time to modern corn with its giant, tightly-packed kernels. So much has it been modified that corn would be unlikely to survive for long in the wild. We have become mutually dependent upon each other.

ccclxiii The Royal College of Art has been commissioned to create an iconic design for our public charge points.

ccclxiv <https://ourworldindata.org/emissions-by-sector#energy-electricity-heat-and-transport-73-2>

ccclxv <https://www.woodlandtrust.org.uk/blog/2018/07/wild-marjoram/>

ccclxvi The flowers and leaves can also be frozen with water in ice cube trays to make summer drinks more refreshing and colourful, or the leaves used to make wild marjoram tea.

ccclxvii <https://www.theguardian.com/travel/2020/may/23/historic-ghost-villages-tyneham-dunwich-imber>

ccclxviii Or maybe two

ccclxix <https://www.thetimes.co.uk/article/wild-camping-is-the-best-way-to-sleep-it-shouldnt-be-banned-jvbb5js56>

ccclxx <https://www.theguardian.com/travel/2021/apr/01/updated-countryside-code-we-need-more-than-just-be-nice-advice#:~:text=just%20%C2%A350%2C000%20over%20the%20coming%20year.>

ccclxxi Dog walking and biodiversity don't mix well; essential culls of grey squirrels and deer would be harder with people rambling hither and thither; crops need to be protected from harm.

ccclxxii <https://www.trashfreetrails.org/values#:~:text=%C2%A0COMMIT%20TO%20LEAVING%20A%20POSITIVE%20TRACE%20EACH%20TIME%20WE%20VISIT%20OUR%20TRAILS%20AND%20WILD%20PLACES>

ccclxxiii Having said that, deer stalking in Scotland manages to live alongside a more enlightened right to roam.

ccclxxiv The novel *The Goldfinch* won the Pulitzer prize in 2014 for its page-turning plot revolving around the eponymous painting by Carel Fabritius. Fabritius died young, just 32, caught in a gunpowder explosion in 1654 which killed 100 people and destroyed a quarter of the city of Delf. His studio and many of his paintings were also destroyed, and *The Goldfinch* is one of his few surviving works.

ccclxxv Flowering in the summer months, its small scarlet flowers are famous as the emblem of the eponymous, chivalrous hero who operated in disguise, rescued aristocrats from the guillotine, kept his identity secret, and signed his messages with the small scarlet flower.

ccclxxvi Elsewhere, in Taoism, a pentagram represents the connection between the five classical oriental elements of earth, water, fire, metal and wood. Both the flags of Morocco and Ethiopia feature a pentagram. And an enormous pentagram, 366 metres across, has been spotted on Google Maps on the satellite view of rural Kazakhstan. Despite conspiracy theorists wondering whether it was the gateway to the underworld, it turned out to be nothing more chilling than the abandoned site of a Soviet-era summer camp.

Draw a circle around a pentagram and you form a pentacle, a symbol linked to Satanists, but also to Wiccans, a modern pagan religion, for whom the five points represent earth, water, fire, air, and spirit. Whether this gravestone commemorated a Christian, a Wiccan or a Kazakh park designer was not clear.

ccclxxvii Whilst in confessional mode, I dream of one day seeing somebody enjoying one of my books on the Tube or a train. I sit nonchalantly and anonymously, watching their rapt expression or hoots of laughter... There: I told you I was a vain and deluded fellow!

ccclxxviii In the 15th Century, a visitor to Ikkyū, the renowned Japanese Zen monk, asked him for some wisdom.

‘Attention,’ Ikkyū offered.

The visitor was disappointed and pushed for more.

‘Attention, attention,’ expanded the monk.

ccclxxix *The London Pharmacopoeia* of 1696 listed all the medicines that were permitted to be used and included blackberry wine and cordial amongst its remedies. Blackberries were believed to defend against certain spells, providing they were gathered during the correct phase of the moon. You ought to crawl through bramble patches to cure boils, they said, or to repair a child’s hernia. Yet folklore also cautioned that blackberries should not be picked after October 10th, Old Michaelmas Day, when Lucifer was banished from heaven and fell to earth in a blackberry bush. Brambles were planted on graves to deter grazing sheep, but perhaps also to keep the dead in.

ccclxxx The iPod was initially conceived as a way to get people to buy more computers, but it became a triumphant product in itself. Yet Steve Jobs realised that phones would soon be able to store as much music as an iPod. So he led the pivot, the change in focus, from iPod to iPhone before it came obsolete. The rest is history. As for BlackBerry, their adaptations did not cope with the environment or the competition, and so they became as extinct as the passenger pigeon.

ccclxxxix The earliest known use of the phrase comes from a Frenchman called John de Crevecoeur in the eastern United States in 1778. It perhaps referred to a spell of warm weather that allowed the Native Americans to continue hunting a little longer. The phrase reached the UK in the 19th Century, replacing ‘Saint Martin’s summer’ that had been used to describe warm weather close to St Martin’s Day on 11 November.

ccclxxxix <https://lovdata.no/dokument/NL/lov/1957-06-28-16#:~:text=The%20purpose%20of,preserved%20and%20promoted.>

ccclxxxix Speed limits in the UK began with the Locomotives Act of 1865, limiting motor vehicles to 4 mph or 2 mph in London, which seems to be about the fastest you can drive in congested London today! In 1878, they abolished the amusing law about having a man walking in front of your vehicle waving a flag. The current motorway limit of 70 mph was set in 1967 (with a brief reduction to 50 mph in the winter of 1973 due to a fuel crisis). Germany and Australia’s Northern Territory have no motorway speed limits, whilst Greenland, Honduras, Madagascar and Uganda have national speed limits of just 50 mph. Much of London has a 20 mph limit, yet villages are usually a speedy 30 mph and the narrow, winding roads between them often have a 60 mph limit.

ccclxxxix Since the decline of piracy, other military units have adopted the Jolly Roger insignia and spirit, including US Naval Aviation squadrons, Chilean paramilitaries and Portuguese Lancers. Admiral Sir Arthur Wilson VC, Controller of the Royal Navy, complained that submarines were ‘underhand, unfair, and damned un-English.’ He sniffed that we should ‘treat all submarines as pirates in wartime ... and hang all crews’. In rebellious response, submarine Lieutenant Commander Max Horton flew the Jolly Roger after sinking two German ships in 1914. It became common practice in the Second World War to do so after a successful mission, and the Jolly Roger has since become the official emblem of the Royal Navy Submarine Service, accompanying their motto of ‘We Come Unseen’.

ccclxxxix The art form grew in popularity throughout the Middle Ages until the killjoys of the 16th Century Reformation smashed much of it and replaced it with plain glass. Lost also were many of the traditional skills of the craft, which were only revived in the 19th Century. York Minster has Britain’s largest pre-modern windows, depicting the coming apocalypse.

ccclxxxix <https://www.nhm.ac.uk/discover/spider-webs.html>

ccclxxxix A typical web takes a couple of hours to construct. The spider begins by allowing a silk line to drift in the breeze to bridge a gap. It strengthens this strand with extra threads, then adds radial and spiral threads. Finally, it tidies up its work by removing all the knots from the middle of the web and replacing them with a lattice.

ccclxxxix <https://www.wildlifetrusts.org/wildlife-explorer/trees-and-shrubs/common-hawthorn>

ccclxxxix There is an old folk anecdote that hawthorn blossom reeked of London’s great plague. In days gone by, bodies lay in the house for days before burial, so people were familiar with the smell of death. Scientists have since discovered that hawthorn blossom does actually contain the chemical trimethylamine, which is present in decaying flesh.

^{cccxc} Sceptics are horrified at the prospect of tweaking what they call traditional ways of life, worrying that farmers will lose their livelihoods, along with all those careers connected to them, plus rural shops, pubs and schools, all for the sake of a few trees and birds. Yet this is inadvertently defending the intensive, unsustainable direction our land use has taken since farming changed enormously after the Second World War. It is part of what the ecologist Oliver Rackham cautioned as the ‘kaleidoscope myth’, our fondness for assuming that landscapes never change.

^{cccxcii} <https://12ft.io/proxy?&q=https%3A%2F%2Fwww.spectator.co.uk%2Farticle%2Fhow-to-restore-the-british-countryside>

^{cccxciii} <https://greenallianceblog.org.uk/2023/02/01/rewilding-deserves-the-right-to-more-space-in-our-land/>

^{cccxciv} <https://www.wildlifetrusts.org/news/no-real-progress-made-protecting-30-land-and-sea-nature-2030-and-deregulatory-plans-risk#:~:text=Craig%20Bennett%2C%20chief%20executive%20of,an%20alarming%20lack%20of%20progress.>

^{cccxcv} <https://uk.bookshop.org/a/9404/9781509805105>

^{cccxcvi} <https://uk.bookshop.org/a/9404/9781526659293>

^{cccxcvii} <https://uk.bookshop.org/a/9404/9780141975580>

^{cccxcviii} <https://uk.bookshop.org/a/9404/9781785947315>

^{cccxcix} <https://uk.bookshop.org/a/9404/9780141982571>

^{cccxc} <https://uk.bookshop.org/a/9404/9781804990964>

^{cd} Veteran conker players will know that there are many ways of hardening your conker before battle, though these are all banned by the official Championships. Over the years, people have soaked or boiled their conkers in vinegar, salt water or paraffin. You can bake them in the oven, coat the conker with nail varnish, or deviously fill them with glue. Two times World Conker Champion Charlie Bray recommends, ‘There are many underhanded ways of making your conker harder. The best is to pass it through a pig. The conker will harden by soaking in its stomach juices. Then you search through the pig’s waste to find the conker.’ My less-committed preference was threading dozens of conkers on long rugby bootlaces then hanging them for months in my mum’s airing cupboard.

^{cdi} The first public phone kiosk in the UK was made from concrete in 1921. It was designated as K1 (Kiosk No.1). A competition to design a kiosk acceptable to the boroughs of London resulted in the red phone box in 1924. K6, in 1935, was designed to celebrate George V's Silver Jubilee and so is referred to by aficionados as 'the Jubilee kiosk'. It spread rapidly to virtually every community, just as mobile phone masts have and electric vehicle charging points need to do. Although the K6 has become a beloved British icon, it was not universally welcomed, particularly the bright red colour. The Post Office was forced to allow a muted grey edition for use in beauty spots. In further proof that today's outrage is tomorrow's accepted and cherished norm, locales that have preserved their old phone boxes have now painted them red, 'Currant Red' to be precise, the phone box's precise colour defined by a British Standard, BS381C-Red539.

^{cdii} Before the modern age of drab but pragmatic camouflage, regimental uniforms were chiefly designed to dazzle, impress, and tempt bold young men to sign up. Arthur Wellesley asked his shoemaker to design a boot that would be both comfortable for riding and wearable with tight trousers. As Wellington's fame on the battlefield grew, so did his status as a fashion icon. And the popularity of 'Wellingtons' never looked back. The rubber version of the boots proliferated when millions were made for soldiers in the First World War to prevent trench foot, and demobbed soldiers continued wearing them for digging their gardens. Meanwhile, celebrity chef Gordon Ramsay declared that 'Beef Wellington has to be the ultimate indulgence, it's one of my all-time favourite main courses and it would definitely be on my last supper menu'. It was also President Nixon's favourite meal (if he was telling the truth). The dish was originally created to celebrate Wellington's victory at the Battle of Waterloo. What better way to immortalise a national hero than by wrapping some meat in pastry? Cornish miners had been eating pasties since the 14th Century and some sniff that Beef Wellington is little more than a stolen, rebranded French *filet de boeuf en crouste*.

^{cdiii} The renowned gardener Sir Charles Isham imported some terracotta garden gnomes from Nuremberg in 1847, and started a surprisingly enduring gardening trend. Germany already had a long history of gnomes, reputed to be jolly, mischievous souls that help in the garden late at night and keep an eye on your property. Long ago, Emperor Hadrian actually had real life hermits living in the garden of his villa. This fashion resurfaced in the 18th Century when rich English landowners began hiring people to be 'ornamental hermits'. They had to live in basic outbuildings and were forbidden to speak or wash. They wore rags and let their hair, beard and nails grow long. It sounds like a humiliating, if not particularly taxing career, and an even odder fashion.

^{cdiv} <https://www.londonair.org.uk/londonair/guide/BusyRoad.aspx>

^{cdv} Reading about fieldfares led me down a Twitter rabbit hole via the #vismig hashtag, which I'd never heard of before. Visible migration (which I'd never heard of either) is the 'visible' migration of birds (and butterflies) during daylight. Many other birds migrate at night (see #nocmig for that). They are harder to monitor, except when flocks reach the coast at dawn, an event known as 'falls'. We learned much about such migrations with the invention of radar. Suddenly all these birds could be observed properly for the first time, showing up on radar screens in the First World War as 'phantoms' or 'angels'.

cdvi Although the RSPB are not yet concerned, media reports sometimes demand a parakeet cull. As their numbers grow, so do worries about the impact they may have on native birds that nest in similar habitats, such as woodpeckers, nuthatches and starlings.

cdvii It helps the family stay connected to the memory of their loved ones, but also helps non-literate people identify fellow community members. Wreaths representing themes of Travelling are sometimes laid, along with hearts, a floral pillow or a red and white floral chair called a 'vacant chair' to represent that the deceased is still connected with the living.

cdviii RideWithGPS which worked brilliantly.

cdix Yes, I think in miles when I'm cycling, even on a metric map.

cdx The sort that I will buy once I start writing blockbuster books rather than ones about bicycling around business parks.

cdxi Perhaps it would be a good opportunity for creating Series 3 of my podcast, *Living Adventurously*.

cdxii <https://www.theyworkforyou.com/>

cdxiii <https://www.bbc.com/future/article/20190513-it-only-takes-35-of-people-to-change-the-world#:~:text=protests%20are%20twice%20as%20likely%20to%20succeed%20as%20armed%20conflicts%20%E2%80%93%20and%20those%20engaging%20a%20threshold%20of%203.5%25%20of%20the%20population%20have%20never%20failed%20to%20bring%20about%20change.>