

THE NAMESAKE FERN THAT WALKS UP MOUNTAINS

Signs of Ascent and Lonely Lemons

The nut-brown sign for the Valle delle Ferriere trail is accompanied by an arrow that encourages the ascent of a flight of stone steps. Named after the valley's old iron works, this half-day walk is very popular with tourists to Amalfi, so today I am grateful to begin my hike in solitude. At the top of the steps a raised path runs adjacent to islands of crumbling buildings in a sea of green netting. Protruding wooden stakes, reminiscent of Venetian mooring poles, support the nets over the precious sfusato lemon groves. By late October, most of the lemons have been harvested but I come across a solitary fruit protruding from its canopy. It brings to mind a vision of my wife, not such a keen walker as I, surrounded by ceramic lemons in crowded gift shops.

After about twenty minutes the concrete path peters out into a patchwork of stones and compacted earth. It rises more steeply and soon reveals lush, wooded hillsides and limestone cliffs reaching to touch a deep-blue sky and star-burst sun. I feel my energy lift as I cross a threshold into a wilder place and become more aware of the River Canneto as the path draws closer to its flow. Rushing, burbling, sometimes visible, sometimes not, it is now my constant companion.



Paper Mills and Electric Snakes

The first paper mill I see was once topped with a pitched roof. Dark, gaping windows overlook sprawling ivy, its vines gripping and breaking the stone. Trees push their way through floors and walls. Do these trees, disintegrating the mills, know that their forebears were pulped to make paper? The second mill, with its rough stone windows and mossy sills, is more like a series of hollows and caves. It could easily shelter animals or creatures from a Tolkien novel. It is a challenge to give these mills names – my map of the Valle Delle Ferriere trail doesn't correspond to my position in the valley – and they could be Cartiera Lucibello, Cartiera Marino or Cartiera Milano. They were ruined by a flood in the 1950s. (1)

The day's warmth suddenly evaporates, and I'm saturated by images of raging white water crashing down the valley. They merge with pictures taken in Valencia that very day – cars piled up by the torrents of water bulldozing their way down mountain valleys much like the Valle Delle Ferriere. Chilled, I look up to bathe my face in the sun's heat before continuing up the trail.

I'm soon joined by an enormous snake – it's a power cable as thick as my calf muscle, running alongside the footpath. A bright-yellow lightening sign warns of the serpent's life-threatening voltage. Further on I see a small, neat building that was once a hydroelectric station, and I wonder if the power cable is no longer lethal. Beyond it, I'm quickly enveloped by abundant, draping vegetation. The unusually intense autumnal sun generates a giddy heat in my head.

Waterfall Nymphs and My DNA

The path suddenly opens out to reveal a waterfall three times my height. The rush of foaming white is bordered by vertical rocks and cascades of vines that accentuate the rapid decent of the water. At its base, boulders and scatterings of ochre pebbles surround a sunken shallow pool. The curves and ripples of the water conjure images of water nymphs; perhaps my mind has subverted the local legend of Hercules naming Amalfi after one of these mythical creatures. I remove my wide-brimmed hat and hang it on the walking pole I've propped against a large rock and plunge my hands into the pool. The water is delightfully cool and as I splash it over my face, I feel salty sweat being washed away. I imagine fragments of my DNA dripping into the pool before being carried downstream and eventually to the sea.

The genetic material from my father's side of the family is denoted by the surname Woodward. The name dates back at least a thousand years and represents the occupation of maintaining ancient woodland: the warden of the woods. One of the greatest concentrations of historical woodlands in the UK, and hence Woodwards (2), is in Warwickshire where I grew up. My first name, Simon, has Hebrew origins: it means 'he who listens'. The names combine for an aptonym, denoting that my name coincides with my occupation. I'm an outdoor art psychotherapist and spend my days listening to people while surrounded by trees.

Monsters and Heroes at the Iron Works

I continue along the river, but the Canneto's character has changed. It loops and swerves around large boulders before navigating a dizzyingly steep escarpment of rocks and old stone buildings. I crane my neck, peering upwards at the cascade of rocks, ruins and rushing water. I'm faced with an incoherent arrangement of deliberate arches fused to natural rock. Old trees covered in plates of fungi are wedged across plunge pools. The river tumbles and twists through the heart of the old ironworks, dipping in and out of sight. The sound of the water thunders around my head



and persists even as I climb away from it, further up the ravine.

The path levels and vague shapes of the ironworks materialize. Their forms are more recognizable as human-made but lack coherent organization as they begin to return to the land. Some are no more than roofless caverns now occupied by stands of ferns and trees. I venture into one of the old buildings where fungi and ivy decorate pitted walls. I peer into a vertical drop to get a sense of the river's relationship to the structure, but my stomach lurches, and I quickly retreat.

Outside I'm relieved to find a dappled glade of slender trees. Light plays across the trampled, dusty ground. Scatterings of dried leaves drift here and there. A discreet notice gives information about the ironworks, which were built in the fourteenth century. The iron came from Calabria, Apulia and the island of Elba. Specializing in making nails, the foundry remained active until the 1800s.

Turning left an enormous arch towers over me, its rough stones forming teeth within a giant creature's mouth. A previously unseen young man scrambles to the top of the beast, assumes a heroic pose and is duly photographed from below by his beaming girlfriend. I smile at the couple's playfulness and walk through the arc. Just beyond, the river calms, and meanders towards the edge of a huge drop before suddenly vanishing. A neat line of water marks its disappearance. Upstream, a family are playing in the shallows. Father and son are crouched over the ripples and a girl of about twelve sits on a log nearby, engrossed in her notebook. I wonder if she is writing about her surroundings. I move away quietly to find somewhere to sit myself.



The Erosion of Names

The beauty of the old stone arch is highlighted by shafts of sunlight that seem to emanate from its mouth. I'm reminded of romantic eighteenth-century paintings of Roman ruins, which were popular with English elites during their grand tours of Europe. They are often bathed in golden

light, these images of decay, and include Thomas Cole's 1836 work, *The Course of Empire: Desolation* which reflects on human mortality and the fall of civilizations.



A dark cloud of thought forms – will the young people playing around the ironworks suffer the ruination of nature and humanity? We regard our climate as immutable because all of our civilizations have flourished during a relatively stable post-glacial period. We cannot conceive of the life-changing effect of a significant, permanent shift because recorded humanity has no prior experience to draw upon. Our minds are extraordinary predictive tools but can only work with prior experience. A less favourable climate due to increased volcanic activity undermined the Roman empire when it was imperilled by external enemies. The eighteenth-century melancholic romanticism of Roman ruins has parallels with contemporary post-apocalyptic imagery: the return to nature of human structures after the collapse of civilization. If we disappear, the names we ascribe to nature will fade away, along with those we gave to abandoned paper mills and iron-works.

I check my watch. The shorter, autumnal days mean I must return fairly soon to my wife, Kara Mia, in Amalfi (Kara Mia is from Canada and not Italy, as many assume from her name). As lovely a thought as this is, I also feel a powerful, instinctive tug to go further, deeper into nature, to experience more. I see a sloping path winding above the ruins through woodland and deeper into the valley. I hoist my pack on to my back and set off between the trees.

Beyond the woodland I follow an undulating path alongside a shallower stream, pass tempting signposts to other routes and ascend a series of winding steps up the hillside. The trail levels out before descending to a picnic area dominated by an ugly metal and concrete sluice gate. I make use of the water supplied from a tap jutting out of a set of stairs, delighting in the thought of drinking from a fresh mountain source.



Misunderstandings and a Significant Discovery

Rehydrated, I follow the stream, but a short distance on the path peters out at an information board. To one side is a small garden shed behind a green chain-link fence; the footpath passes through a gate in the fence. A short, dark-haired man wearing a tight-fitting navy-blue tracksuit top is behind the gate. We nod politely at each other. I read about the nature reserve on the information board. Denoted by a Union Jack flag it is conveniently in English.

“In the municipality of Scala, within the Regional Park of the Lattari Mountains, the Oriented Nature Reserve Ferriere Valley is a real treasure of biodiversity maintained by the Policemen of the Biodiversity Group.” (From this point, I assumed that the man in the hut was guarding the nature reserve and that it wasn’t possible to go any further. Back in Amalfi, I discovered that the ‘Policeman’ was in fact there to collect a €5 entrance fee to visit the heart of the reserve). “It occupies an area of about 460 hectares on the Amalfi side of Sorrento Peninsula and consists mainly of limestones resting on dolomites, limestone rocks particularly rich in calcium, belonging to the Mesozoic era. Thick pyroclastic deposits from the Somma-Vesuvio complex can also be found here. The peculiarity of the valley is connected to the great wealth of water and its

unique microclimate. The constant temperature and high humidity have favoured the creation of a landscape of extraordinary beauty, rich in flora and fauna that have disappeared on other areas of the world. Extremely rare plant species can be found in the Valley, such as the prehistoric giant fern *Woodwardia radicans*...”

I stop reading and turn towards the man while hastily searching for my wallet. With unsteady hands I rip my shorts pocket as I extract the wallet and tug out a credit card. I proudly point at the information board then hold out my card to the man: my surname matches that of the reserve’s famous fern, *Woodwardia radicans*.

The man’s expression barely changes. My throat tightens, and crest-fallen that I can’t transmit my enthusiasm I swiftly put the card back. I look at my watch, and to save face, now that I’m running out of time to return to Amalfi, quickly shoulder my rucksack, avoid further eye contact and hurry back the way I came.

Returning along the valley, my embarrassment quickly dissipates, lost to the euphoria of my discovery. I am unconcerned that I didn’t reach deeper into the nature reserve and instead feel a special connection, intensifying the already magical experience of being in the valley. However, my delight at the link between my surname and an ancient fern growing in an Italian nature reserve is soon tempered.



In the municipality of Scala, within the Regional Park of the Lattari Mountains, the Oriented Natural Reserve Ferriere Valley is a real treasure of biodiversity maintained by the Policemen of the Biodiversity Group. It occupies an area of about 460 hectares on the Amalfi side of the Sorrento Peninsula and consists mainly of limestones resting on dolomites, limestone rocks particularly rich in calcium, belonging to the Mesozoic era. Thick pyroclastic deposits from the Somma-Vesuvio complex can also be found here. The peculiarity of the valley is connected to the great wealth of water and its unique microclimate. The constant temperature and high humidity have favoured the creation of a landscape of extraordinary beauty, rich in flora and fauna that have disappeared in other areas of the world. Extremely rare plant species can be found in the Valley, such as the prehistoric giant fern *Woodwardia radicans* or the carnivorous plant *Pinguicula hirtiflora*. The fauna is particularly interesting and it includes species in serious danger of extinction such as the Spectacled salamander, the Red River Shrimp, which has recently reappeared in the streams of the Valley, and numerous birds of prey of extraordinary beauty.





From Funerals to Sexual Reproduction

Most of the local tourist information in Amalfi credits the Italian Pier Antonio Micheli for ‘discovering’ *Woodwardia radicans* during his tour of the Naples area in 1710. Micheli was an Italian botanist and renowned mycologist and he and this date are quoted in various Italian sources, the earliest being from the Italian botanist Renato Pampanini (3) in 1911. *Woodwardia radicans* was often harvested to be used in funeral bouquets (4) created by Italian florists. It was also used by shepherds to wrap fresh cheese. I wondered if local names for the Fern, now lost, would have originated from the way it was used.

Eighteenth-century categorization of plants used analogies from animal sexual reproduction to establish botanical names. *Woodwardia radicans* defies such classification, however. The epithet *radicans* means ‘with stems that take root’. The Italian name for *Woodwardia radicans*, Felce bulbifera (5), meaning rooting chain fern, is derived from its method of reproduction.

Woodwardia radicans (6) can reproduce asexually by creating a small plantlet on the end of its fronds. When this gets heavy enough to bend the frond, the plantlet touches the ground and

roots there. Eventually it will become separated from the parent frond and become an independent plant. This has resulted in the name 'The Walking Fern'. There is poetry in the notion of hiking up an Italian valley to meet a fern that also walks.

Woodwardia can also reproduce sexually through spores, which has contributed to its other monikers: the Chain Fern, the European Chain Fern and the Rooting Chain Fern. The Chain name comes from the linked sori on the undersides of the fronds. A sorus (plural sori) is a cluster of sporangia (structures producing and containing spores) in ferns and fungi. The spores are carried away by the wind and germinate when they land on moist earth.

The Pride of English Botanists

The *Woodwardia* portion of the Fern's Latin name designates its genus, which contains fifteen other species. However, it wasn't until 1793, eighty-three years after Micheli's discovery, that it was classified according to the Linnaeus system by the botanist James Edward Smith. Smith used the name of fellow English botanist Thomas Jenkinson Woodward to classify the genus. (7)

I imagine Edward Smith, founder of the Linnean Society in 1788, affably announcing at one of the Society's conventions, that a genus of Mediterranean ferns was going to be named after Thomas Woodward, and I imagine the latter's glow of pride. Yet this is so incongruous given my experience of *Woodwardia radicans*' natural habitat – a deep Italian ravine, its rivers and its golden light. It is as though *Woodwardia radicans* didn't exist before European botanists employed Linnaeus's Latin binomial nomenclature system, created at the start of the eighteenth century.

Empire and the Genesis of the Binomial System

Carolus Linnaeus (8) is regarded as the father of taxonomy and nomenclature (a system of names and terms). He used Latin as the basis of his classification system, which became the universal form of scientific classification. Latin had been the international language of scholarship, religion and science since the Roman empire.

Linnaeus loved nature deeply and felt a sense of awe and wonder about the living world throughout his life. His religious beliefs guided him towards Natural Theology, a school of thought stretching back to biblical times that flourished in the early 1800s. Since God had created the world, it was possible to comprehend God's wisdom by studying His creations. Linnaeus wrote in the preface to an edition of *Systema Naturae* that "Creationis telluris est gloria

Dei ex opere Naturae per Hominem solum” – “The Earth’s creation is the glory of God, as seen from the works of Nature by Man alone.” (9) Linnaeus saw it as the naturalist’s task to construct a natural classification system that would reveal the divine order of the universe. In Christianity, the dominant religion in Europe for the last 2,000 years, the bible origin myth directly corresponds with Linnaeus’s ambitions: all the beasts and birds were created by God but named by Adam (Genesis 1:28). I wonder what would have been the biblical Adam’s name for *Woodwardia radicans*?

Linnaeus, like most naturalists at the time, believed in the fixity of species. This belief was influenced by the biblical account of Genesis – God’s work is seen as being perfect at the point of completion. Linnaeus was confident that the number of species was finite and that cataloguing them was an achievable if monumental undertaking.



Linnaeus’s confidence in his mission would have been enhanced by the prevailing conviction that Europe sat at the pinnacle of existence, which permeated many aspects of European culture.

A depiction of the status of the four continents can be found in Linnaeus’s frontispiece for the *Hortus cliffortianus* of 1737, created by Jan Wandelaar. In the image, allegories of Africa, Asia, and America hand their botanical gifts to Europe. Personified by the pale-skinned Cybele, Greek goddess of the harvest, she holds the key to the garden of wisdom. (10)

Linnaeus’s attitude to indigenous names for species is telling. He believed that the integrity of botany was threatened by the “invasion” of “vast hordes” of foreign plants and their “barbarous names”. His naming system intentionally disconnected plants from their original cultures and its application in botany aided Europe’s colonialism and empire-building. Categorization and cataloguing allowed the exploitation and conversion of indigenous species into commodities, generating great wealth. (11)

New Names from Ancient Sources

Incorporating people's names into the identity of another living thing continues today but recently botanists have called into question the colonial implications of species named after early European botanists. Taxonomists are increasingly consulting indigenous peoples over names and using indigenous language for newly described or assigned taxa. For indigenous peoples, the name in its vernacular form may also embody history, a sense of place and knowledge.

Fossil evidence suggests that *Woodwardia radicans* has existed for around sixty million years. For the vast majority of that time, it remained nameless: living, reproducing and walking up mountains. It began to decline in indigenous areas at the same time it was given its scientific name. According to the International Union for Conservation of Nature, *Woodwardia radicans* is Vulnerable because it has declined by more than 30% in the last 150 to 300 years (a period of three generations). The quality and quantity of its forest habitat is declining due to clearing, agricultural activities and pollution. (12)

Woodwardia radicans has been introduced into California, Florida, France, Great Britain and Ireland. The effects of the redistribution of flora and fauna by European empires are still visible in global biodiversity today. The challenge of resolving today's biodiversity crisis inevitably involves grappling with these colonial legacies. (13)

Names in a River of Time

An uncomfortable tension exists between the fact that relatively few species have been assigned a Linnaean name, the magnitude of the world's total biodiversity, and the alarming rate of species loss. Linnaean nomenclature has been used to name 1.2 million terrestrial, ocean, plant and animal species out of an estimated 8.7 million. Approximately 86% of species on Earth and 91% of those in the ocean have yet to be named (14). However, the estimate for microbial species ranges from 100 billion to one trillion. Sadly, many species will become extinct before we can even give them recognition. There was a 73% decline in the average size of monitored wildlife populations between 1970 and 2020 according to WWF's Living Planet Report 2024. (15)

Naming is an act of knowing. But what you do with that knowledge is critical. Humanity now faces a watershed moment: we can use our understanding to exploit the planet for commercial gain or apply it to prevent further biodiversity loss. But this is to look at the Earth from an

anthropocentric point of view. A species' name represents only a moment in its evolutionary history and is based on our perception of them.

Remembering and Restoring

Just as we are losing the opportunity to ascribe scientific names to new species, common names for plants and animals are being lost or forgotten. This was brought sharply into focus in 2007 when the *Oxford Junior Dictionary* removed approximately fifty words (16) describing aspects of the natural world and replaced them with words associated with technology and contemporary culture. The subsequent 'Lost Words' (17) campaign, headed by the nature writer Robert Macfarlane, resulted in a successful reinstatement petition. Other valuable events followed, including exhibitions, musical works and the publication of a book, *Lost Spells*, to encourage children's re-engagement with nature names.

Recently, encouraged by early spring sunshine, I decided to walk part of the East Mendip Way, northwest of my hometown in Somerset. I joined the walking trail through the Wadbury Valley, alongside the River Mells. Here, too, you pass the ruins of ironworks – these were named after the Fussell family in the eighteenth century. The buildings are now a protected natural habitat home to rare horseshoe bats; liverworts and small wall ferns thrive in the diffused light and high humidity of the ruins. I passed tumbling buildings and limestone boulders, trees draped in moss glowing neon green in the sunshine. Moment and memory fused, and I was transported back to my hike up the Valle Delle Ferriere before voices brought me back to into the Wadbury Valley. Two young people, probably in their early twenties, were peering into the rushing stream. Curious, I approached to see what they were looking at. Below us, a small nut-brown bird with a vivid white chest was bobbing up and down on a log protruding just above the rushing water. "Why is it dipping up and down?" wondered the young women. "A good question," I replied, struggling to remember the exact purpose of the bird's dipping behaviour. Instead, I offered that its name, the Dipper, originates from its idiosyncratic habit. "It's probably hunting for invertebrates that live under rocks below the water." I added. "Oh, there are plenty of those in the stream," replied the young woman brightly. Suddenly, the Dipper flew off upstream, breaking the spell that had momentarily bound the three of us together.

Creating Connection

We can experience nature through just our senses: sunlight through a tree canopy or the burble of a stream. But learning the names of what we encounter deepens our connection. The term

species is derived in part from the act of seeing. Species names are revitalized not just by acquiring them but also actively experiencing the plant or animal firsthand. The sharing of names allows for the creation of collective knowledge, a mutual understanding of the natural world around us. It is so joyful sharing a species name with another person, connecting with them through a joint experience of nature. Our understanding of the past, present and future of species can be enriched if we are sensitive to indigenous knowledge and names. For custodians of species' names there are many ways to share them. The name of a species can be transmitted over vast distances or carried on a single breath.

End Notes

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- (12) [Woodwardia radicans \(Chainfern\)](#)
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- (15) [Living Planet Report 2024 | WWF](#)
- (16) [Children's dictionary scraps nature words for tech ones | The Wilderness Society](#)
- (17) [The Lost Words](#)



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[Environmental Arts Therapy | The Wild Frontiers of the Heart | Ian Sid](#)

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His specialty is working therapeutically with wild clay (harvested by hand directly from the earth). He has presented and written papers on the subject.

He is currently developing a book that explores how we connect to one and other through the natural world.