Great plant tales

From national trust gardens

A joint project of the Royal Oak Foundation
and the National Trust

Betsy Anderson, January 2008

Great plant tales

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I came to this country in search of botanical treasures. Little could I imagine that my experience would be equally enriched by the exceptional people I would meet along the way—individuals as remarkable as the plants themselves. I have been touched again and again by the kindness of those who have opened their gardens, their archives and their homes, sharing their knowledge, their memories and their enthusiasm. They have graced my every day and contributed immeasurably to the pages that follow.

My study of notable plants in National Trust gardens was made possible by the Royal Oak Foundation and by the Trust itself. I am particularly grateful to everyone at Royal Oak for allowing me this opportunity, which has utterly changed the way I experience gardens. What a gift it is to be able to wander through a landscape and appreciate not only its collective composition but also its distinctive plants—to see, as I now do, each and every specimen as a unique individual with its own fascinating story. With this rich, underlying tapestry of historical, personal and botanical associations, the garden suddenly becomes much more than a compelling arrangement of flowers and foliage.

So many people have so generously lent their expertise to this project that no thanks I could ever write would properly express my appreciation. In addition to those mentioned specifically in the following articles, I wish especially to thank Mike Calnan, Head of Gardens and Parks, as well as the entire central Gardens team of the National Trust. I am thankful as well for the support offered by the Trust in Devon and Cornwall, most particularly at Knightshayes Court: I have never worked in such a welcoming, spirited and dynamic environment.

Ruth Lewis and Peter Colebrook provided valuable editing assistance and guidance, and the dedicated head gardeners of the National Trust, both past and present, kept me so well supplied with story topics that I could have scribbled away for a lifetime—a testament both to the Trust's unrivalled plant collection and to the passion and commitment of those who care for it.

Such devotion was displayed daily in the gardens at Knightshayes Court by what must be the most wonderful team of gardeners and volunteers in the world. This project is dedicated to them, as well as to my very dear English 'parents,' Margaret and Derek Stacey, who shared their beautiful farm with me for so many months, and lastly to John Lanyon, Head Gardener at Knightshayes and Curator of the Plant Conservation Programme: thank you for the endless inspiration and for opening a window on this extraordinary world.

Betsy Anderson
Knightshayes Court
Devon
January 2008

The Mother Orchard at Cotehele
Preserving Cornish heritage an apple at a time

Orchards: a great disappearing act

The beguiling vision of an old orchard in blossom or laden with fruit was once a familiar sight in Cornwall's Tamar Valley, and indeed throughout Britain. These simple groupings of trees and grass, tended by families for generations, were a continual source of nourishment and beauty, marking the passing seasons and sustaining long-lived local traditions tied to the orchard calendar. Each parish or farm could boast its own small collection of distinct apples, whose names and uses were carefully guarded and handed down over the years. Sadly, decades of labour shortages, negligence and the pressures of commercial fruit production took their toll on Tamar Valley orchards, and these living windows on the region's cultural heritage had all but vanished by the late 1970s.

It was around this time that St. Dominick native Mary Martin returned to the Tamar Valley to paint and discovered that the area's apple and cherry trees, so productive in her youth, had fallen into a picturesque state of dereliction. Having spent seven years studying art in an urban environment, she was struck anew by the lush, often rampant vegetation enveloping the formerly tidy lines of abandoned market garden plots and deserted orchards. These scenes of nature reclaiming human handiwork fired her artistic imagination but also opened her eyes to the alarming disappearance of apple and cherry varieties unique to the valley. Together with her partner James Evans, Mary set out to rescue the Tamar apples and their stories, combing the Cornish countryside for forgotten orchards and seeking out those old enough to remember apples shared by their parents and grandparents.

Precious details and scion wood for many varieties were captured by Mary and James in the nick of time; in one case they snatched unburned twigs from a bonfire after new homeowners chopped down a particularly rare tree. Many local residents took their fruit trees for granted, unaware that the apple falling beneath a developer's bulldozer or slowly fading on the family farm was the only one of its kind. The couple also came to the sad realization that they were too late for some varieties, dead or dying with no one alive to remember them. They also mourned the loss of genetic diversity that accompanied the orchards' destruction, recognizing the importance of salvaging what remained of a valuable gene pool, developed over the centuries and resulting in disease-resistant apples that thrived in Cornwall's damp, mild climate.

The bulldozer was not the first enemy of the Tamar Valley fruit trees, however. Apple and cherry planting in the region suffered a notable decline during and between the World Wars. The landscape celebrated in the late nineteenth century for its blossom-clad slopes was given over to planting 'essential' crops such as cereals, rather than the tapestries of daffodils, strawberries, and other produce that typically carpeted the orchard floor. Many workers never returned from the wars, and yields from the neglected apple and cherry trees decreased dramatically. The market gardening industry in the Tamar Valley experienced an intense resurgence in the 1950s, but two decades later the high cost of labour drove the descendants of fruit growers and market gardeners away from their family plots to careers elsewhere.

Cider: a golden inspiration

In the autumn of 1980, James and Mary revisited this agricultural legacy when they discovered an old cider-press at the Callington farm of Westcott and decided to make cider the traditional way, using traditional Tamar cider apples. The difficulty they experienced in their search for old apples and the treasures found in hidden and aging orchards inspired the creation of their apple collection, which later expanded to include local cherries and even a few pears and plums. Fabled cider apples, such as the 'Pig's Snout' or 'Pig's Nose' provided an appropriate foundation for the collection, as apple growing in England's West Country had long been dedicated to cider. For centuries, cider was the beverage of choice on farms and on sailing ships leaving Plymouth, keeping longer than water during transatlantic voyages and safe to drink without fear of disease. Cider-making was a much-anticipated social event, overshadowed perhaps only by the ensuing celebrations once it was ready for consumption. Mary's mother, growing up at Cotehele Mill, recalled drawing jugs of golden, gently sparkling cider for Sunday dinners.

Cider press at Cotehele

In their search for old cider varieties, Mary and James became especially intrigued by an apple said to create a cider so refined and delicate that it resembled champagne. The 'Colloggett Pippin' was behind this so-called 'ladies' cider,' but they could find no evidence of the apple on the Colloggett Farm in Landulph. Happily they eventually tracked it down in a wild-looking orchard of the same parish, where they discovered other interesting varieties, among them the shiny 'Onion Redstreak,' the long-lost 'Blackmoor Pippin' and the Tamar cider apple 'Tan Harvey,' which was undocumented in reference books and not included in the National Apple Collection.

This confirmed the importance of preserving healthy Cornish apples overlooked by the National Fruit Trials collection, as these varieties were most in danger of extinction. The propagation of such apples, free of canker and scab and vigorous in England's damp South West, will become only more crucial in view of climate change and the desire to reduce the use of chemical sprays. James and Mary have since contributed a number of Cornish apples to the National Apple Collection at Brogdale Horticultural Trust in Kent, including the 'Colloggett Pippin,' 'Tommy Knight' and 'Hocking's Green,' a brilliant green apple for cooking and eating that was among the first they saved.

Colloggett Pippin

Hocking's Green

An apple by any other name…

Mary and James' research was complicated by the fact that the same apple would often be called a different name in every parish, or even from farm to farm, where families would refer to a much-loved variety with epithets like 'Uncle Fred's sort.' The 'St. James' Pippin,' a flushed and spicy dessert apple with a strawberry aroma, possesses an incredible 132 synonyms and variations, due largely to its age and distribution: it was first recorded in the 1500s and spread throughout France, Germany and Belgium. The beautiful deep red 'Blackrock' was determined to be another European transplant, 'Mère de Ménage,' later found in nearby St. Mellion under the name 'Merrider Menedger.' Sometimes the same name was applied to several different varieties, as in the case of the 'Pig's Nose,' used to describe a number of concave-shaped Cornish apples.

Apples with colourful old-fashioned names or a unique appearance were also prized. The suitably dubbed 'Bottle Stopper,' or the peculiar 'Cat's Head' and 'Grow-Bi-Nights' add texture and charm to a walk through the orchard, as does the 'Sawpit,' actually found growing beside a sawpit in Landrake in 1983. The impressively large and ribbed 'Lady's Fingers' were also known as 'Hollow Core' apples, as they feature a wide eye open to the very core.

In addition to preserving rare regional varieties and curiosities with quaintly descriptive names, careful attention was also paid to propagating those apples with important historical associations. The apple tree is tied more intimately to human history than any other plant, and this was certainly true in the Tamar Valley. Retrieving the stories behind the apples was in some instances more critical than gathering graftwood, as a family's way of life, or that of an entire village, could be wrapped up in the particular techniques for harvesting, storing, and preparing a specific apple. Small pickling apples with long stems known as 'Sweet Larks,' for example, might help resurrect the nearly lost culinary tradition of pickled apples in Cornwall. And though Mary and James believe they've rescued the late cooker 'Cornish Longstem,' they fear that the old Cornish recipes featuring this distinctive and exceptionally healthy acid apple have not survived.

Other varieties conjure up tales of their creators, whether commercial nurseries, commemorated by the names 'Tregonna King' and 'Veitch's Perfection,' or market gardeners just up the lane, quietly developing fantastic apples for decades. Mr. Snell was one such Tamar grower, and the smooth, sunny 'Snell's Glass Apple' pays tribute to his efforts. James Walter Lawry, himself a giant in the valley's market gardening industry, is appropriately memorialized by 'Lawry's Cornish Giant,' a synonym for the 'Colloggett Pippin,' and 'Lawry's No. 1,' a ribbed pale yellow cooker introduced by the celebrated horticulturist in 1872 as 'Lord Grosvenor,' but known regionally simply as 'No. 1.'

Pig's Snout

A short, sweet history of Tamar fruit

James Walter Lawry launched the explosion of the Tamar Valley's horticultural industry in 1862, during a visit to Covent Garden Market. Shocked to see that outdoor strawberries were not yet available in London, while at home the crop had nearly finished, he saw that the valley's warm, sheltered slopes held a tremendous business opportunity. Thanks to the speed of the newly arrived railway, fruit from the Tamar Valley could reach London, the Midlands and even Edinburgh within twenty-four hours. The first Cornish strawberries were sold in Covent Garden in spring 1863, weeks before outdoor-grown fruit was available in the rest of the country, and soon small family operated gardens criss-crossed the landscape. Apple and cherry trees held the soil in place and provided additional crops, and orchards and market gardens flourished together.

Cotehele

Apples in the propagation unit at Knightshayes Court

The Mother Orchard

The spirit of these energetic growers is very much alive at the venerable Tudor estate of Cotehele, developed over six centuries by the Edgcumbe family and now held by the National Trust. Much of the Tamar Valley fruit industry prospered on land owned by the Edgcumbes, and so it is particularly apt that some of this land has now been dedicated to establishing an orchard of old Cornish apples. The Mother Orchard, as this eight-acre meadow at Cotehele is known, will be planted with 300 trees representing 120 apple varieties, all propagated from Mary and James' collection by the Trust's Plant Conservation Programme. Local cherries have already been planted, and pears and plums will follow in a second phase.

With characteristic vision and passion, Mary Martin and James Evans knew that their remarkable living museum of apples required a permanent, public home. A staggering 95 percent of orchards have disappeared nationwide since 1950, and along with them rich ecosystems, precious genetic material, and tangible links to our past. Thankfully projects like the Mother Orchard, and similar efforts throughout Britain, are stemming this loss of cultural and horticultural heritage. Mary and James' thirty-year dedication to Tamar Valley apples and their stories, combined with the resources and organization of the Plant Conservation Programme at Knightshayes Court, will keep these varieties alive in the eyes, taste buds, and imaginations of generations of future visitors.

Future site of the Mother Orchard

Special thanks to Mary Martin and James Evans, and to the garden team at Cotehele

Architects of the Global Garden
The Veitch impact on British horticulture

Little do we realise that we take a botanical tour of the world each time we wander through our garden. Many beloved plants, seemingly eternal fixtures of our herbaceous borders and parkland, are comparatively recent introductions to the British landscape. We delight in them, fuss over them, are inspired by them, and simply can't envisage life without them, but how often do we stop to wonder how this species or that arrived in the plant shop, and by whose efforts? The answers to such questions can be endlessly fascinating, for behind each plant calmly gracing our doorstep lies the wild, often harrowing tale of its discovery and introduction.

These stories have taken on dramatic significance in recent years, as native populations of species are increasingly threatened worldwide. A plant's journey to these shores, whether yesterday or 500 years ago, may suddenly be the only thing standing between it and extinction. Centuries of plant collecting and ardent gardening have endowed Britain with an unrivalled representation of the earth's flora, much of which is held in the more than 200 gardens cared for by the National Trust. The labours of one family of nurserymen in particular, the Veitches of Exeter and Chelsea, had an enormous effect on the botanical wealth we enjoy in these gardens today.

Viburnum davidii

The changing face of Victorian gardens

Passionate botanists have scoured the globe for new plants for as long as there has been exploration, but in England in the mid-nineteenth century favourable social and technological circumstances and the visionary inspiration of the House of Veitch conspired to change the face of the British garden forever. For more than seventy years, Veitch nurseries sponsored plant-collecting expeditions to remote corners of the Americas, Australasia, and the Far East, introducing thousands of species to gardens indoors and out, both modest and magnificent. Veitch's was the first British nursery to employ plant hunters on such a large scale, and their commercial success had a staggering influence on horticulture that continues to this day.

Imagine the British garden without the favourite barberry *Berberis darwinii*, or the rosy flush of *Clematis montana* var. *rubens*. Consider a winter devoid of the cerulean fruit of *Viburnum davidii*, or a spring lacking the starry white blossoms of *Magnolia stellata*. Enterprising Veitch-backed expeditions also popularized the inimitable *Araucaria araucana*, or monkey puzzle tree, and brought the vigorous *Parthenocissus tricuspidata* to our garden walls. We can additionally thank the Veitch dynasty for the tuberous begonia and a dizzying array of hothouse species and hybrids, including innumerable orchids, pitcher plants, and tender rhododendrons.

Allée of monkey puzzle trees (*Araucaria araucana*)
at Bicton, Devon

But the monumental impact of the Veitch nurseries is perhaps best illustrated by the mammoth conifers dotting the British countryside: towering specimens of western red cedar (*Thuja plicata*), and the extraordinary Wellingtonia (*Sequoiadendron giganteum*), to name only two examples, constitute a living record of the explorations of Veitch's first plant hunter, William Lobb. Throughout the 1840s and '50s Lobb searched the forests of North and South America. His prodigious seed collecting resulted in exciting new discoveries and also allowed Veitch to propagate thousands of conifer seedlings still rare in cultivation, such as the stately Douglas fir (*Pseudotsuga menziesii*). The exclusive and exotic nature of these introductions was alluring to well-heeled Victorians, and the majestic trees they planted around their great estates remain a powerful visual tribute to Britain's first commercial plant collector and his pioneering sponsor.

Douglas fir (*Pseudotsuga menziesii*)

Western red cedar (*Thuja plicata*)

Killerton: the origin of an empire

This legacy is most apparent at Killerton in Devon, where richly textured plantings reflect more than 150 years of Veitch influence. It was here in the 1770s that the foundation for the great nursery was laid, humbly enough, when Sir Thomas Acland engaged the young Scotsman John Veitch to assist him in establishing a great landscape park. Veitch proved a gifted gardener and landscaper and by 1808, with Acland's support, he had opened a small nursery at nearby Budlake. This modest enterprise specialized in trees and shrubs and was so successful that Veitch expanded by renting additional land in 1810, and by 1832 his thriving venture was relocated to a larger and more prominent location at Mount Radford, near Exeter. In partnership with his son James, and later his grandsons, John Veitch launched an empire that eventually encompassed major nurseries at both Exeter and Chelsea; the latter featured eleven departments in its heyday and was likely the leading such operation in the world.

More plants for more people

James Veitch obviously inherited his father's knack for business, displaying remarkable acumen in his aspiration to sponsor exclusive plant hunters for the Veitch nurseries. In 1840 he became the first nurseryman in the country to employ his own plant collector, and he could not have selected a better moment: the coming decades would see a dramatic rise in personal wealth as Britain asserted her economic power, and this increased prosperity sought physical expression in the creation of more and bigger gardens. The twenty-three plant hunters dispatched by Messrs Veitch over the better part of a century would strive to feed an insatiable demand for exotic plants from far-flung corners of the globe.

Plant hunting was until that time the domain of the scientific community; new botanical specimens were either preserved in herbariums or in the gardens and conservatories of connoisseurs eager and affluent enough to fund private expeditions. Veitch-sponsored collecting suddenly put previously uncommon species into the hands (and gardens!) of the average enthusiast, as seed gathering and propagating were conducted on such a scale that these plants were now affordable for members of the burgeoning middle class.

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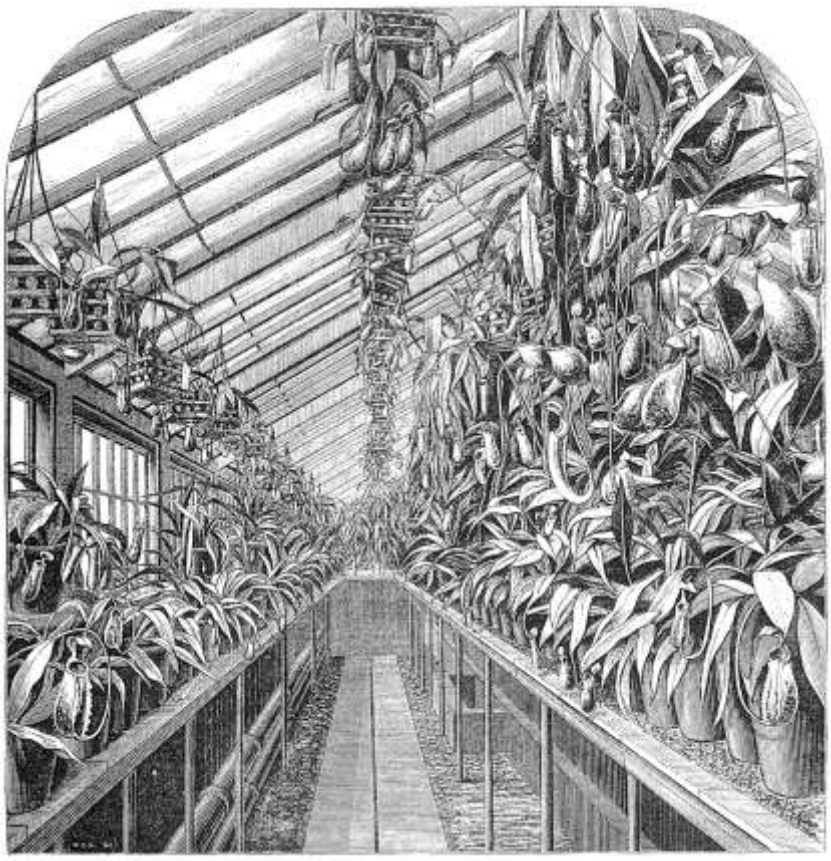
Moreover, any discoveries made during the journey would fetch a handsome price among those of greater means, also providing valuable raw material for talented and indefatigable Veitch hybridists. Over the years a string of illustrious 'travellers'—among them William Lobb and his brother Thomas, Richard Pearce, Charles Maries, and the great Ernest Wilson—contributed some of the finest plants in cultivation today, and we would be hard-pressed to find a garden in Britain untouched by their influence and that of the nursery that sent them around the world.



Messrs Veitch's *Nepenthes* house, illustrated in *The Gardener's Chronicle*, 1872

Plants worth hunting for

Veitch remains a name largely unfamiliar to the average gardener, and though many of their plants are well-loved institutions other equally excellent Veitch introductions have slipped into obscurity. This is both a sad and a potentially dangerous development, for as wonderful species and varieties disappear from our gardens they may also be vanishing entirely.

One species of note is *Meliosma veitchiorum*, whose honey-scented blossoms evoke the adventures of Ernest Wilson in the rugged terrain of western China. The delicate pinnate foliage of this deciduous tree features red petioles, and its creamy flowers give way to striking violet fruits; an exceptional example in the gardens at Nymans is well worth a visit. Introduced by Wilson during his first expedition for Veitch, this fine architectural species is far too rare in cultivation and merits inclusion in many more gardens.

Meliosma veitchiorum at Nymans, November 2007

Hydrangea macrophylla 'Veitchii' is another superb contribution, and happily more frequently grown. First displayed in 1903 by Messrs Robert Veitch of Exeter, this lovely lacecap hydrangea was likely brought over from Japan and pairs white ray florets with blue fertile flowers, held above rich green leaves.

Rhododendron schlippenbachii, again a Japanese import, was observed by James H. Veitch and introduced in 1893. Long cultivated in Japan, the species is native to Korea and bordering areas of China and Russia and was discovered in 1854 by Baron Schlippenbach. A deciduous azalea with blushing, saucer-shaped flowers and vivid autumn foliage, it strikes an exquisite note in the great rhododendron symphonies of gardens like Trengwainton, Bodnant and Rowallane.

The New Zealand flax *Phormium tenax* 'Veitchianum' has a decidedly more acute presence in the landscape, punctuating borders at Cotehele, Lanhydrock, and Knightshayes. An introduction of John Gould Veitch, this arresting but often overlooked variety deserves a greater presence in our gardens. With upright green blades streaked in buttery yellow, *P. tenax* 'Veitchianum' was an attractive new addition to Victorian bedding schemes when it was made commercially available in 1866, just as the craze for subtropical plantings reached a fevered pitch. As usual, Veitch plant introductions kept perfect pace with the swings of garden fashion . . . or did they dictate them outright?

A living legacy

Whether highly effective trendsetters, shrewd entrepreneurs with a talent for divination, or simply perceptive nurserymen making the most of fortunate circumstances, the Veitch family shaped the evolution of horticulture in this country for the better part of a century. Though the firm closed on the eve of the First World War, its influence is still strongly felt, not least in the region of its origin. This is particularly true at Killerton, full of rare and truly special plants, many of them the progeny of Veitch's original collection. A prolonged and intimate relationship with the great nursery has resulted in one of our very finest gardens, a many layered tapestry of leaves, limbs and time.

The Veitch-Acland association persisted well into the twentieth century and was emblemized in 1933 when the Aclands were presented with *Magnolia* x *veitchii* 'Peter Veitch' by Mrs. Veitch herself, in memory of her late husband who developed this excellent cross of *M. campbellii* and *M. denudata.* The sole pink-flowered seedling in Peter C. M. Veitch's original group of six, *Magnolia* x *veitchii* 'Peter Veitch' remains a vigorous inhabitant of Killerton's wooded slopes, raising its rosy goblets each spring to Britain's nursery dynasty and the Devon garden where it all began.

Killerton today

Special thanks to Caradoc Doy and Kate Tuke

CONSERVING CAPTAIN FITZROY'S CONIFER

Fitzroya cupressoides is a graceful Chilean conifer named after Captain Robert Fitzroy, commander of the H. M. S. *Beagle* during Darwin's famous voyage. Though first recorded by the captain himself, the species was introduced to the British Isles by William Lobb, who gathered seed in Valdivia, Chile in 1849 during a plant-hunting expedition for the Veitch Nurseries. Lobb was captivated by this dignified evergreen and described it as one of the most remarkable South American forest trees he'd encountered.

It was also one of the tallest Lobb saw in the region, attaining a height of 50 metres (160 feet), and one of the oldest, living as many as 3,600 years. *F. cupressoides* is in fact the second longest-lived tree after the bristlecone pine (*Pinus longaeva*), and in 1976 it was declared a national monument of Chile. This recognition was intended to combat the rampant destruction of *Fitzroya* forests for their valuable timber, but the enforcement of protective laws has proved difficult and these ancient, complex woodland ecosystems remain threatened by logging, grazing, and human expansion.

Fitzroya cupressoides at Killerton

Endangered in Chile, at home in Britain

To help secure the future of the Alerce, as it is known in its native habitat, the National Trust is to embark on a collaboration with the International Conifer Conservation Programme (ICCP) at the Royal Botanic Garden Edinburgh. Established in 1991 and led by Martin Gardner, the ICCP defends wild populations of *Fitzroya* and other endangered conifers while actively promoting their conservation ex situ—such as in the National Trust's gardens and parks. *Fitzroya* collected in the wild by scientists from RBG Edinburgh and the Universidad de Chile can now be distributed by the Plant Conservation Programme at Knightshayes Court to Trust properties throughout Britain.

Though hardy in this country, *F. cupressoides* is seen in shrub-like proportions in all but our mildest regions. The tallest *Fitzroya* in the country grew at Killerton in Devon, and likely found its way into this rich and varied garden through the estate's long association with the Veitch dynasty of nurserymen. Planted in 1864, this venerable old tree was felled by a storm in January 1990, having achieved a height of 50 feet. Hopefully specimens of *F. cupressoides* planted in the past two decades at Killerton and in other Trust gardens, such as Biddulph Grange, Glendurgan and Sheffield Park, will allow coming generations to appreciate a tree facing an uncertain future in its homeland.

A Chilean Beauty in Danger

How can a plant be endangered when it's found in gardens all over the country? Though the Chilean coral plant (*Berberidopsis corallina*) scrambles up numerous walls and along countless fences, its abundance does not reflect a healthy, varied gene pool. In fact, the vast majority of *Berberidopsis corallina* in gardens today are clones, propagated from the first plants introduced to Britain in the nineteenth century. Increasingly threatened in their native habitat, wild-source *Berberidopsis corallina* specimens—and their precious genetic material—may find a safe haven in National Trust gardens.

Berberidopsis corallina in the gardens of Knightshayes Court (left) and Mount Stewart

Commercial forestry in Chile has all but decimated the habitat of this stunning evergreen climber, which was collected for the Veitch nurseries by Richard Pearce in 1862. Its crimson bell-shaped flowers have captivated plant enthusiasts ever since, illuminating shady corners of gardens great and small.

Unfortunately it is not fully hardy in our climate and usually fails to produce viable seed, resulting in widespread vegetative propagation. The subsequent lack of genetic diversity among cultivated *B. corallina* in Britain, coupled with the plant's near extinction in the wild, has spurred a team from the Royal Botanic Garden Edinburgh to gather seed from the endangered Chilean plants. This wild-source material has entered a conservation programme and will eventually be distributed to properties such as Knightshayes Court, where the Plant Conservation Programme can assist in ensuring its continued presence in National Trust gardens, and ultimately in its home forests of Chile.

In the Shadow of the Big-Tree
The great Sequoiadendron craze

A feverish William Lobb, racing back to England in the autumn of 1853, knew he held the raw material of a legend. The seeds he cradled aboard ship carried an epic tale, dwarfed only by the mythic proportions of the tree that had produced them. Though a seasoned plant hunter for the Veitch Nurseries, he had seen nothing in his travels to prepare him for his first glimpse of the 'big-tree.'

A vegetable monster

It was during his third American expedition in 1852 that Lobb first heard of a shadowy grove of mammoth conifers, tucked in the foothills of California's Sierra Nevada range. He was in San Francisco attending a meeting of the newly formed California Academy of Sciences when the Academy's founder, Dr. Albert Kellogg, brought forth a local hunter whose pursuit of a grizzly bear had led him face to face with an entirely different sort of giant.

Stumbling out of the towering stand and regaining his party, the hunter was derided and even accused of drunkenness when he recounted his experience of the other-worldly forest. Luckily the scientific community proved more liberal-minded, and a hushed and reverential crowd greeted the specimen produced by Dr. Kellogg that fateful summer evening.

The spine-tingling story certainly filled Lobb with a burning desire to see the remarkable tree in its native habitat, but his hurried flight to the Sierra foothills was largely fuelled by mercenary concerns: he knew this 'vegetable monster' would trigger an equally enormous craze in British horticultural circles, and he was determined to provide Messrs. Veitch with the plant material needed to corner the market.

Reaching the grove in Calaveras County, he collected seed, shoots, and seedlings; in fewer than two years' time these would give rise to thousands of saplings, snatched up by wealthy Victorians to adorn great British estates. The larger-than-life conifer, so symbolic of the vast American wilderness, suddenly became a status symbol, rising boldly from expensive and highly groomed landscapes an ocean away.

The stunning avenue of 'big-trees' (left) leading to Sunnycroft and a majestic specimen at Sheffield Park

Back in California the fanfare was even more sensational. The gigantic trees so exclusive in Britain were presented as tourist attractions to the American public. The big-tree, as they dubbed it, was vastly appealing to the masses flocking from far and wide to visit Calaveras Grove, sleep in its hotel, and waltz across its expansive tree-stump turned dance-floor.

Lobb reported that among the eighty to ninety trees in the stand, one recently felled specimen had measured 300 feet with a diameter of over 29 feet near its base. A section of this 3,000-year-old tree was displayed in San Francisco where its hollowed (and carpeted!) slice of trunk could comfortably accommodate either a piano with an audience of 40 or a group of 140 squirming children. Today's tallest specimen measures an astounding 311 feet and can be seen at Kings Canyon National Park in California.

The race for recognition

Like many celebrities the big-tree's rapid rise to fame was accompanied by a name change, though in this case the naming caused as much of an uproar as the tree's discovery and came dangerously close to straining Anglo-American relations. The stakes were high on both sides of the Atlantic, as Lobb knew that Dr. Kellogg only needed to complete his set of herbarium specimens to register the new species. Kellogg planned to name the tree the *Washingtonia* in honour of America's revered first President. Lobb knew this, and effectively stole Kellogg's glory by returning to England with the required plant material before his rival could carry out his plans.

Sequoiadendrons at Killerton (left) and at Sheffield Park

To add insult to injury, John Lindley of the Horticultural Society, who was assigned the task of naming the introduction, opted for the decidedly un-American *Wellingtonia gigantea* to commemorate the lately deceased Duke of Wellington. This was understandably greeted with indignation (and worse) across the pond, sparking a passionate debate that would rage for years. Ultimately tensions were calmed by the objective intrusion of science, and *Sequoiadendron giganteum* was chosen to reflect the tree's botanical link to the coastal or California redwood, *Sequoia sempervirens.*

That we persist in affectionately—or stubbornly—calling it the Wellingtonia is a testament to its value as a living monument. The sequoiadendrons standing sentinel across our landscape celebrate Britain's insatiable horticultural curiosity and rich legacy of botanical exploration. Even when glimpsed from the motorway, the peaked rugged crown of the big-tree raises echoes of the past.

Seen at close range in such gardens as Killerton, Sheffield Park and Penrhyn Castle, magnificent examples of *S. giganteum* remind us of the proud nineteenth-century landowners who also fell under their spell. Though mere youthful suggestions of the ancient groves traversed by Lobb, the *Sequoiadendron* specimens protected by the National Trust are breathtaking reminders of the power and wonder of the natural world. May they captivate us for another 3,000 years.

Special thanks to Caradoc Doy

Haunted by the Ghost Tree
Ernest Wilson's *Davidia involucrata*

Sometimes even the greatest plant hunter can have a bad day . . . or a bad year, in the case of legendary plant collector Ernest Wilson and his search for the elusive *Davidia involucrata*. Though his nickname would suggest otherwise, 'Chinese' Wilson's first expedition to China was less than promising. In 1899 the inexperienced twenty-three-year-old botany student was sent by the Veitch nurseries to find and collect an ethereal tree, discovered by the French missionary Abbé David in 1869 during a trip to Western Szechwan and the Tibetan borderland. Called alternately the handkerchief, dove, or ghost tree, its enormous, pendulous white bracts are indeed eerily beautiful when spied against an emerald canopy of leaves.

A handkerchief tree flowering at Emmetts

Wilson set off in April in quest of this desirable species, and he would endure oppressive heat, malaria-laden mosquitoes, an epidemic of bubonic plague, and seething anti-European sentiment to reach the tree's purported location in the hills outside Badong, in western Hubei province. Deciphering his only map was an ordeal in and of itself: amateur botanist Augustine Henry had provided him a crumpled scrap of paper roughly outlining an area of 20,000 square miles. Within this massive expanse a scratch mark indicated the position of a solitary *Davidia involucrata*! Not one to lose heart, Wilson struggled on and managed to reach the site by the end of the next April, having travelled 13,000 miles since his departure from Britain.

What followed could compete with the best moments of Greek tragedy. Wilson and his retinue, arriving exhausted from a strenuous journey upriver, found themselves face to face not with a healthy specimen covered in heart-shaped foliage but with a sparkling new house likely built from its wood. Next to the gleaming structure stood the lifeless stump of the davidia. Even the stoical Wilson gave way to despair, writing in his diary that he had been unable to sleep the night of April 25, 1900.

But this was only the beginning of the heartbreak the handkerchief tree would inflict on its collector and his sponsor. Though Wilson ultimately succeeded in gathering seed from a davidia found in the woods near Ichang, the Veitch nurseries were denied the honour (and accompanying profit) of introducing the species to European gardens. Unbeknownst to Sir Harry Veitch, in 1897 thirty-seven davidia seeds had been sent by Frenchman Paul Guillaume Farges to his compatriot, nurseryman Maurice de Vilmorin. Of this initial group a single seed germinated in 1899, eighteen months after its arrival in Europe and ironically only two months after Wilson's departure.

Vilmorin's davidia first flowered in his nursery near Paris in May 1906; Wilson's would not bloom for Veitch until 1911. However, Wilson must have felt vindicated to some degree when it was discovered that the plants raised from his seed differed from Vilmorin's both in the downy under-surface of their leaves and the overlapping lobes of the leaf where it joins the petiole. In fact, the variety sent to France by Farges was collected much farther east than Wilson's, which had been gathered in the area of Western Szechwan originally described by Père David. So although *Davidia involucrata* var. *vilmoriniana*, as Vilmorin's variety came to be called, appeared in Europe first, Wilson is credited with introducing the type to our gardens.

Today both davidias flower harmoniously in National Trust gardens, though *Davidia involucrata* is by far the rarer of the two. This is doubtless because *D. involucrata* is more difficult to establish than its eastern cousin and more subject to damage by late frost, and also because fewer seedlings of the type were raised and dispersed in the first place. Handsome examples grace the gardens of Emmetts, Bodnant, and Cotehele, where they can be compared with var. *vilmoriniana* specimens growing nearby. And at Rowallane, in Northern Ireland, the wraithlike bracts of a handkerchief tree still flutter in the woodland where it was planted in 1904, part of Veitch's original introduction.

The original *Davidia* at Rowallane (left) and the striking bracts of a specimen at Emmetts

The stunning species was equally persistent in Wilson's memory, as anyone who has seen it festooned with its flock of white 'doves' could understand. Despite—or perhaps because of—the trouble it caused him, the hardened plant hunter would always have a soft (or sore) spot for the object of his first mission. He would later declare the davidia 'the most interesting and beautiful of all trees of the north-temperate forest,' comparing its snowy bracts in a poetic moment to 'huge butterflies hovering among the trees.'

A Mass of Magnolias
Lanhydrock's inspired selection

The idea was as simple as it was beautiful: picture a Cornish hillside, awash in pink and white every spring with the blossoms of hundreds of magnolias. This was the vision of Peter Borlase over forty years ago, and today's visitor to Lanhydrock will be treated to a stunning display in March and April as the trees burst into flower. Arrive at any time of the year, though, and you're likely to find a magnolia in bloom, for Peter's original inspiration has given rise to a superlative collection of our most exquisite hardy flowering tree.

Peter would say that it is a selection and not a collection, however, and that over the years he has chosen only the most exceptional plants for inclusion in the garden. A mere handful of magnolias greeted him when he arrived at Lanhydrock as Head Gardener in 1966, but he was especially impressed by the vigorous growth of five specimens that had been planted in 1933. These included three *Magnolia campbellii* subsp. *mollicomata* and two *M. x veitchii*, all of which had attained the impressive height of 60 feet in little more than three decades.

An original specimen of *Magnolia campbellii* subsp. *mollicomata*

Magnolia sprengeri var. *diva* 'Lanhydrock'

The vitality of the original plantings encouraged him to introduce more species and varieties, taking full advantage of Lanhydrock's ideal climatic conditions to establish a virtual forest of magnolias. This evocative estate with its northeast facing slope has proved the perfect host for these plants, fond as they are of moist, cool conditions. Lanhydrock is also unique amongst Cornish gardens for its hillside orientation, allowing the impact of the magnolias to be appreciated from afar in sweeping, distant views.

Vivid magenta splashes of *Magnolia sprengeri* var. *diva* 'Lanhydrock' are especially striking when viewed in this manner from the top of the park; Peter Borlase ranks this chance seedling as his favourite, though he's quick to add the brilliant white *Magnolia* 'Albatross' to the list as well. 'Albatross,' a hybrid of *M. cylindrica* and *M. x veitchii* 'Peter Veitch,' was raised at Trewithen, and the seedling sent to Peter in 1974 was the only one of the original group to survive. This fine specimen now stands at over 20 feet, providing an architectural focal point for a circular garden of herbaceous borders.

Among the more noteworthy trees is the stately *M. sargentiana* var. *robusta*, an unusually mature example of this variety whose glorious stature is eclipsed perhaps only by its breathtaking blush-pink blossoms. Then there are the red-purple goblets of *M.* x *soulangiana* 'Lennei,' arching overhead in a luxurious tunnel. Yet this visual splendour belies the importance of Lanhydrock's gathering of magnolias, for few gardens can boast such a prominent specialisation. Careful to select plants that would perform best for the garden, Peter's search for

Magnolia sargentiana var. *robusta*

Tommy Teagle, John Lanyon and Peter Borlase observing 'Albatross,' August 2007

Lanhydrock's magnolia momentum has continued in recent years under the guidance of Tommy Teagle, who has carried on as Head Gardener after Peter's retirement. Under his leadership, the Higher Garden has been further enhanced by the addition of excellent new American hybrids, notably the soft yellow-flowering 'Elizabeth' (*M. acuminata* x *M. denudata*) and the sunny fragrant cultivar *M. acuminata* var. *subcordata* 'Miss Honeybee.'

The mingling of first-rate magnolias, new and old, paints Lanhydrock in springtime blossom and confirms that the founding spirit of this National Trust collection is very much alive. The original group of five trees that inspired the garden in the 1960s remains a treasured spectacle, accompanied now by another 250 specimens, including a rich rosy flowered seedling of *Magnolia campbellii* subsp. *mollicomata*, fittingly called 'Peter Borlase.'

Special thanks to Peter Borlase and Tommy Teagle

Botanical jewels of knightshayes court

Stachyurus praecox

In late winter, when our eyes hunger for any glimpse of colour in the garden, an encounter with the golden curtain of *Stachyurus praecox* is an unforgettable experience. Thousands of yellow blossoms drape like pearl necklaces from red polished branches, illuminating the subdued landscape of February and early March with a dazzling, tasselled display. This striking deciduous shrub is native to the mountains of Japan, where its seed is used in black dye and where it attains a height of 10 feet. In Britain it rarely grows half as tall, though Knightshayes Court in Devon boasts an especially robust specimen, exceptional for its luxurious, long-lasting flowers and for its resistance to late frosts. This outstanding form came from Sir Eric Savill's famous garden in Berkshire, and the Plant Conservation Programme is eager to share it with other gardeners across the country.

Stachyurus praecox

Erythronium revolutum 'Knightshayes Pink'

Erythronium revolutum **'Knightshayes Pink'**

Anyone familiar with the nodding petals and marbled foliage of the trout lily will await its emergence each spring with much anticipation. This is certainly the case at Knightshayes Court in Devon, where every March *Erythronium* devotees gather from far and wide to see a swathe of pink and white flowers raise their heads against the mossy floor of Sir John's Wood. Long prized for its elegant form and delicate coloration, *Erythronium revolutum* hails from the dense, moist forests of western North America. But it is equally at home under the old trees at Knightshayes, where a vast population gave rise to a robust pink seedling, observed and named for the garden in the mid-1960s. *E. revolutum* 'Knightshayes Pink' is distinguished by its richer flower colour and mahogany mottled foliage, and produces five to six flowers per stem in contrast to the usual two or three. This lovely rosy *Erythronium* is well worth growing in its own right, and its special association with one of Britain's greatest woodland gardens warrants its preservation. Handfuls of dark pink trout lilies, scattered through our naturalised bulb displays, will hopefully become a more frequent sight as the Plant Conservation Programme undertakes its propagation and distribution.

Gentiana asclepiadea **'Knightshayes'**

In late summer visitors to Knightshayes Court may brush past the intense blue cascade of a willow gentian in flower. Quietly arching at the feet of all those who enter the house, this graceful plant catalysed the creation of one of our most outstanding twentieth-century gardens. *Gentiana asclepiadea* 'Knightshayes' was named by Graham Stuart Thomas in the 1970s, when he first noticed its unique white-throated blossom during a visit to his friends, Sir John and Lady Heathcoat Amory. The gentian is one of very few plants named for this extraordinary plant-lover's garden, and aptly so, as it was among the first specimens given to the Amorys when they began to develop the Knightshayes landscape in the 1940s.

Native to the mountains of Europe and ranging east to Turkey and Iran, *Gentiana asclepiadea* came to rest on this Devon hillside through the efforts of Miss Nellie Britton, who lived in the village below Knightshayes and encouraged her neighbours with their burgeoning alpine beds. Miss Britton's enthusiasm for plants, especially alpines, inspired the Amorys to create the garden in the first place, and so her gift of this unusual, pale-throated willow gentian is particularly significant. Yet attempts to propagate it for other gardens have proved unsuccessful over the years, and only a single plant remains to remind us of Miss Britton and her contribution.

Happily this will not be the case for long: though very difficult to propagate using conventional methods, *G. asclepiadea* 'Knightshayes' has responded well to micro-propagation in the laboratories of Duchy College, Cornwall. Dozens of 'Knightshayes' gentians will now be raised and distributed countrywide by the Plant Conservation Programme, travelling much farther than Nellie Britton could ever have imagined. Tumbling out of borders at Knightshayes and at properties across the National Trust, Miss Britton's gentian highlights the role of modern technology in ensuring the future of our most cherished plants.

Special thanks to Michael Hickson and John Lanyon

A New Look at Yew
Taxus baccata and the fight against cancer

Did you know your hedge trimmings could save your life? Every year National Trust gardeners collect over 11,000 kg of yew clippings that are used to manufacture an important anticancer medication. The English or common yew (*Taxus baccata*), such an institution in our gardens, has long impressed us with its longevity and its air of mystery. Now the extraordinary chemical power of this plant has been harnessed as a potent weapon in the fight against cancer.

Clipping the massive yew hedge at Powis Castle

Trimming yew cones, Westbury Court

Killer and saviour

Humans have long greeted the yew with a mixture of awe and fearful admiration. No doubt this had a lot to do with the fact that the leaves and seeds of the tree were notoriously lethal if consumed. This may not sound like a promising quality in the raw material for a medicine, but the poisonous alkaloid found in *Taxus baccata* contains some incredibly useful chemicals.

Members of the genus *Taxus* produce compounds known as taxanes, which disrupt microtubule function in our cells. Microtubules are key players in the process of cell division, known as mitosis, so any interference with them prohibits the creation of new cells. This capacity might seem undesirable, but it is invaluable when the cells in question are cancerous and doctors are trying to halt the growth of tumours.

These precious taxanes are most concentrated in the needles of the English yew between the months of May and October, when they are chemically extracted from the clippings, purified, and converted into the chemotherapy drug Taxotere® (docetaxel). The National Trust is collaborating with Friendship Estates, a family-run farm in Yorkshire that collects the cuttings nationwide and sends them to the Rhône-Poulenc Rorer pharmaceutical laboratory in Essex, where the drug is manufactured. Taxotere was made available in the UK in 1996 and has proven effective in combating lung and prostate cancer, and remarkably successful in the treatment of advanced cases of breast cancer.

Anticancer drugs derived from yew were first developed in the United States in the 1960s when it was discovered that the bark of the Pacific yew (*Taxus brevifolia*) contains a compound called paclitaxel; like all taxanes, paclitaxel was determined to be toxic to cancerous cells. But over-harvesting of paclitaxel led to the scarcity of *T. brevifolia*, which was already threatened in the forests of western North America by poor logging practices.

Fortunately, extensive research revealed that an analogous compound (docetaxel) could be isolated from the needles of the common yew, which, as its name suggests, is in no danger of disappearing. Indeed, with tens of thousands of miles of yew hedging stitched across the British Isles alone—and all requiring an annual haircut—*Taxus baccata* clippings have proved a marvellously renewable resource!

Sarah Vine-Tester collects yew clippings in the kitchen garden at Knightshayes Court

Yew clippings ready for pick-up

The remarkable yew

Yew is the indispensable backbone of the English garden, and it is easy to see why. Its rich, deep evergreen foliage responds beautifully to trimming, enhances any style of planting, and complements every possible colour. The importance of this versatile plant in formal landscape design cannot be overstated: the same *Taxus baccata* that so crisply delineates the garden rooms of Hidcote bulges and ripples alongside the terraces of Powis Castle in a massive eighteenth-century hedge.

As the topiary tree *par excellence*, it can also withstand literally hundreds of years of exacting shaping as well as the occasionally drastic shearing, springing to life again and again in such whimsical creations as the Fox and Hounds hedge at Knightshayes (where hunters and hunted are locked in an endless stalemate), or sombrely assembled in a giant topiary representation of the Sermon on the Mount at Packwood House.

The expressive *Taxus* Apostles, Evangelists, and assembled multitude of Packwood, gathered at the feet—or lower branches, rather—of the lofty Master, echo the religious significance accorded the yew in these islands since the dawn of time. Britain's fascination with its yew (one of only three conifers indigenous to the country) predates its obsession with gardens, stretching back at least to the time of the Druids, who built their temples in close proximity to the venerable trees. Early Christians erected their churches on the same sacred sites, and to this day *Taxus baccata* evokes churchyards in the minds of many. Its funerary association is appropriate: the yew remains an ideal symbol for eternal life both because it is evergreen and because it happens to be an exceptionally long-lived tree.

Fox and Hounds hedge, Knightshayes Court

Yew Garden, Packwood House

Yews are in fact our longest-living native trees, and revered ancient specimens still dot the landscape. Each has a story to tell, though some are better known than others, such as that of the 2,000-year-old Ankerwyke Yew in Berkshire, which was well into middle-age when King John sealed the Magna Carta at nearby Runnymede in 1215. Henry VIII is said to have met Anne Boleyn under its boughs in 1530. It must have created a sizeable canopy even then, for today its trunk measures an astonishing 9.4 metres (31 feet) across. Then there are the Crom Castle yews in Northern Ireland, two trees which have grown together in the past 400 years to give the sprawling appearance, according to one nineteenth-century observer, of 'an enormous green mushroom in contour.'

For a more lyrical portrait of *Taxus baccata* we can turn to Wordsworth, who immortalized four wizened yews on a Cumbrian hillside in his 1803 poem, 'Yew Trees.' Of 'those Fraternal Four of Borrowdale' only three remain (the fourth fell in a great storm in 1883); one of these can accommodate four people in its hollowed trunk. The yew will live healthily and happily even when its trunk has been hollow for centuries, and its strong, resilient wood was once prized above all others for fashioning bows—crucial tools of defence well through the Middle Ages until the widespread availability of gunpowder.

Roots of the Crom Castle yews

The wizened bark of a Borrowdale yew

From garden to pharmacy

Taxus baccata continues to defend us today, this time through its unique chemical composition. This old familiar mainstay of our gardens may not be the first thing that comes to mind when we think of medicinal plants, but it is an important reminder that any plant could contain beneficial compounds only waiting to be discovered by scientists. National Trust gardens can be considered a vast pharmacopeia, protecting everything from the humble herbs of our medieval ancestors to endangered rainforest species. A staggering proportion of our medicines are plant-derived, lending a critical new dimension to the role of the Plant Conservation Programme at Knightshayes.

So the next time you tour a National Trust garden, imagine the medical potential of the plants around you. Even the household yew, backdrop to our history and garden borders, is now playing a leading role in the recovery of thousands of cancer sufferers. Whether ordinary or rare, creeping or stately, showy or inconspicuous, the plant you pass on the garden path may be the most important encounter of your entire life.

Yew Walk in February, The Courts Garden

Tree of Dreams
The past, present and future of Cragside's Douglas firs

Visit Cragside and you're in danger of falling head over heels in love with a tree—or tens of thousands of trees, to be precise, for to highlight an individual specimen in this enormous plantation of Douglas fir would be as inconceivable as choosing a favourite child. And children they are: though it seems as if they've been there forever, the Douglas firs of Cragside are barely 140 years old, mere youngsters in a species that can attain 1,000 years in the wild.

Incredibly, the plunging hills, lakes and dramatic valleys of this conifer forest were planted little over a century ago, but its trees have earned a permanent place in the hearts and minds of all who know them, individuals now working to safeguard them against the increasing threat of the fungal pathogen *Phaeolus schweinitzii*. The fungus (its attractive common name is Schweinitzii butt rot) typically attacks Douglas fir and is affecting a high proportion of Cragside's population, causing decay in the trees' roots and at the base of their trunks.

In an effort to protect this stately conifer, the National Trust is taking active measures to survey, record and analyse Cragside's huge and hugely diverse collection. The endeavour will unite modern science and technology with iconic plantsmen and visionaries of the past, leading researchers on a journey from the dense coastal forests of the Pacific Northwest to the DNA molecules of these evergreen skyscrapers. With any luck, the resulting findings will ensure the future of Douglas firs at Cragside . . . for it is impossible to imagine its windswept skyline without them.

Cragside

One of Cragside's Douglas firs

A forest garden

It's not often that a single plant can entirely alter the appearance, atmosphere and even climate of a site. It is rarer still that one man's vision, will and wealth could transform over 1,700 acres of exposed Northumberland moorland into a woodland so vast and masterfully conceived that to step into it is to find oneself transported to the great conifer forests of North America.

Such was the achievement of Lord Armstrong, the brilliant scientist, industrialist and inventor who swathed a spare and craggy stretch of moor with an astonishing seven million trees and shrubs. Armstrong's woodland eventually encompassed 1,400 acres and was the earliest mass planting of conifers in the country. Created in the 1860s and '70s, it predates the first Forestry Commission plantations by half a century. Unlike later large-scale plantings, however, Cragside's conifers were introduced for ornamental rather than commercial reasons. It is, to quote Landscape and Engineering Technician Andrew Sawyer, 'a forest garden with woodland fringes.'

The landscape of an imagination

Cragside began as a holiday home, evolving from Lord Armstrong's impulse buy of a handful of acres in the Debdon Valley, thirty miles north of Newcastle-upon-Tyne. It was 1863, and Armstrong had not taken a holiday in over fifteen years due to the gruelling demands of his factory: W.G. Armstrong & Company had been turning out Armstrong's inventions in hydraulics and armaments non-stop since its founding in 1847.

The bracing scenery in and around the village of Rothbury must have provided a welcome release from manufacturing works, all the more so as Armstrong cherished memories of childhood fishing trips and explorations in the region. The banks of the sparkling Debdon were an ideal location to indulge his love of angling and other outdoor pursuits, and the wide open countryside surely promised freedom and escape for a man who often felt constrained by his own success.

This sentiment is apparent in an adventure story written by Armstrong in which the autobiographical main character escapes the tedium of a business journey to the Himalayas—of all places—by striking off on his own to explore the wooded slopes. As he observes,

> I am a greater lover of nature than most people give me credit for, and I like her best when untouched by the hand of man. The mountain air and vigorous exercise suit my constitution, and produce an exhilarating effect . . . while the total absence of all restraint inspires a glowing sense of liberty which I never elsewhere experienced.

This most surprising document is Armstrong's transcription of a story he used to tell the sons of a dear friend. Entitled 'The Trap Rocks of the Himalaya Mountains: A Dream in a Railway Carriage,' the tale was set down on paper in 1855, at least a decade before he began to plant his gardens near Rothbury. His account of the ridges, lakes, woods and streams in this Himalayan fantasy are markedly similar to features at Cragside. Particularly striking is a view, described in great detail, that is nearly identical to the famous aspect to be had from the mansion today. An intimate glimpse into the mind of a great Victorian industrialist, Armstrong's Himalayan yarn reveals that Cragside is first and foremost a dreamscape. Long before it was crafted from stone and sweat and seedlings it lived fully in his mind's eye.

From its very inception, then, this was a landscape of possibility—the realisation of boyhood dreams, drafted by a surprisingly fanciful imagination, fired by boundless enthusiasm and bottomless coffers, and furnished by a majestic, moody tree the equal of them all: *Pseudotsuga menziesii*, or the Douglas fir.

The rolling Northumberland hills seen from Cragside's formal gardens

The view from the mansion today

David Douglas' fir

No matter that Armstrong chose a distinctly American tree to create his Himalayan forest!

Pseudotsuga menziesii is as dominant in its native habitat of Western North America as it is at Cragside, growing lush and thick along the coast of northern California, Oregon, Washington, and southern British Columbia, and stretching as far inland as the Rocky Mountains. Not a true fir, because its cone falls from the tree intact, this fast-growing species has been known to reach 400 feet in nature. Its imposing spires and deeply furrowed trunks were first observed in 1793 by Archibald Menzies, the botanizing doctor who accompanied Captain George Vancouver on his famous voyage through the green, misty region.

Menzies discovered countless fine plants in this fertile wilderness but was thwarted in his attempts to collect them by the uncooperative Vancouver, who regarded plant hunting as a waste of time and rarely allowed the naturalist off the ship. Thanks to this cruel intervention Menzies was unable to return to Britain with his find, and though the species' scientific name commemorates the frustrated botanist, the glory of its introduction will forever belong to a rough-and-ready adventurer almost as legendary as the tree itself.

David Douglas was above all a maverick, more at home beneath a canopy of evergreens than anywhere else in the world. The romantic life and death (he was gored by a wild bull in Hawaii) of this enigmatic Scotsman never cease to fascinate us, as evidenced by the number of biographies he has inspired over the years. Landing at the mouth of the Columbia River in 1825, at a spot auspiciously dubbed Cape Disappointment, Douglas had little difficulty finding Menzies' conifer, so dense and prolific were the stands that greeted him everywhere he looked.

Considering the importance of the introduction, it was remarkably easy for Douglas to collect seeds and cones and send them home—the irony that a man who thrived on near superhuman challenges is best remembered for so effortless a contribution has not been lost on historians. *Pseudotsuga menziesii* is by far Douglas' most famous introduction, reaching British shores in 1827, but he also brought our gardens an excellent array of trees, shrubs and herbaceous plants, including *Mahonia aquifolium*, or Oregon grape, and *Ribes sanguineum*, the lovely flowering currant. The Native Americans he met with began to call him the 'Grass Man,' due to his incessant plant gathering, but in the end we remember him for his conifers, which revolutionized the nineteenth -century garden and which continue to provide raw material for the forestry industry the world over.

David Douglas' introductions have a dramatic impact on Cragside's skyline

A fine noble fir at Cragside

Cragside and the Victorian conifer craze

In addition to the tree that bears his name, notable conifers introduced by Douglas include the noble fir (*Abies procera*), the grand fir (*Abies grandis*), the Western yellow pine (*Pinus ponderosa*) and the Sitka spruce (*Picea sitchensis*), all of which feature in the woodland at Cragside. This torrent of new species generated a tremendous amount of excitement and fetched prices to match: between 1845 and 1853, seed collected from an original plantation of *Pseudotsuga menziesii* growing at Scotland's Scone Estate raised a dizzying £500.

North American conifers were indescribably alluring to prosperous Victorians: big, brash, exotic, and cutting-edge, there could be no better way to leave one's mark on the landscape, indeed on the entire horizon, for generations to come. Their arrival coincided with and largely encouraged the development of the fashionable Pinetum, or collection of conifer specimens displayed in a decorative manner.

The Douglas fir was the poster child for this budding craze, and the tree's dramatic, rapid growth must have been especially appealing to newly wealthy manufacturing giants (industrious plants for industrious people!) like Lord Armstrong and Sir John Heathcoat Amory at Knightshayes Court in Devon. For Armstrong in particular it was a good choice, eminently suited to his rocky landscape and preferred architecture, and dazzling in winter, all the more so when gleaming under a dusting of Northumbrian snow.

Significantly, and in contrast to most Victorians, Armstrong was not content to dot a few *Pseudotsuga* around his parkland. Instead he shrouded the rolling moorland with thousands upon thousands of their spiky crowns. The effect is startlingly authentic. Those familiar with David Douglas country will feel transported to another hemisphere, called back to Britain only at the fringes of the property, where the dark brooding conifers feather into a wood of golden beech, framing glimpses of pasture and sheep.

The fringes of the forest garden

Lost in translation . . . or transplantation?

On a recent visit to Cragside, I was taken aback by vistas that seemed to have been lifted directly from the Cascade Mountains and wedged amongst Northumberland sandstone. Having grown up in Western Washington State, I share the same native soil as the Douglas fir, and I was more than idly curious about this vast plantation of *P. menziesii* so far away from home.

Like an intimidating grandfather, this stern but beloved species was not only a backdrop to my childhood but established an important context for everyday life. History coursed through its heavy limbs and the deep channels of its bark, and every tree you encountered mapped the passage of time, from soaring mature groves to colossal stumps, scarred by a long-dead logger's springboard, to pearly seedlings springing from a nurse log. In a part of the world with little built heritage, we looked to our trees for a whisper of the past.

And the same tree represents a similar sense of living history a continent and an ocean away, though admittedly I found its rugged form a somewhat incongruous presence amid the soft lines and subtle greens of British parks. When cultivated as specimens, David Douglas' introductions sometimes bear little resemblance to the trees he saw in the wild: the extra elbow-room offered by wide-open expanses of ground can encourage the growth of thick, low-swinging lateral branches—huge arms that would never be seen in a thick woodland canopy. Indeed, these ponderous Victorian conversation pieces often only hint at the great cathedral of Pacific Northwest forests.

Not so at Cragside, however, where Lord Armstrong planted on a truly American scale, perhaps taking a cue from his Himalayan dream, in which a 'rich mantle of foliage . . . covered all,' so that 'a monkey might have travelled all round the sylvan ring without once touching ground.' Perhaps Douglas' journals served as his guide; certainly the great drifts of appropriate understory plants like *Gaultheria shallon* and the salmonberry, *Rubus spectabilis*, indicate that Armstrong had read up on his conifer's native habitat.

Ultimately it is the size of the property and the sheer number of trees that allows so effective a translation. Like everything Armstrong did, he laid out his garden grandly and decisively, and the result is one of the world's most remarkable landscapes.

Diversity by necessity

Little did he know that the magnitude of his plantation might one day save his lofty evergreens from a powerful but decidedly lowly fungus. Armstrong required so many trees to fill his 698 hectares that he couldn't possibly have acquired them all from the same place. Even over a planting period of ten years, he would have needed to seek out numerous sources to provide him with enough trees and shrubs to clothe his corner of moorland.

Though scant records exist for the gardens of Cragside, there is evidence that Armstrong purchased plant material from several nurseries, including Falla's of Gateshead, James Dickson & Son, Waterer of Bagshot, Standish & Noble, Veitch and Lawson's of Scotland. Each of these nurseries would have received a continuous stream of Douglas fir seed, collected from different regions throughout the tree's large geographic range, resulting in an enormous amount of genetic variation in the specimens sent to Cragside.

Given the ornamental nature of Cragside's forest, it is probable that Lord Armstong would have been keen to obtain as many different forms of the tree as possible. For this reason, and simply because he needed so many plants, Armstrong's population of *Pseudotsuga* is likely the most genetically diverse in cultivation.

The conifers we enjoy there today reflect this diversity. Differences in bark texture and cone length can be easily observed, for example, as are fascinating and unusual growth habits. Certain specimens possess almost willow-like, pendulous branches, whereas others boast distinctively shaped limbs that Head Gardener Alison Pringle likens to horses' necks. 'You just feel like patting them,' she exclaims, in the affectionate tone shared by the property's team of gardeners and foresters whenever they speak of their 'Dougies.'

Diversity in branching habit and bark texture

Head Gardener Alison Pringle with her favourite 'Dougie'

In the face of *Phaeolus*

The Dougies have been a hot topic lately, ever since a 2005 survey of trees in the Debdon Valley called attention to the prevalence of *Phaeolus schweinitzii* among a sizeable percentage of the collection. The fungus attacks other conifers as well but is most common in Douglas fir, causing cubical brown decay in the tree's butt heartwood and root crown. The 2005 report was a national wake-up call, explains Head Forester Ian Fletcher, even though *Phaeolus* had been a concern at Cragside since formal tree inspections began in 1991.

Schweinitzii root and butt rot is a challenging disease to manage because it is very difficult to detect the decay externally. Infested trees can survive a long time, but it is important to identify those that present an immediate threat to visitors. The vast majority of Cragside's *Pseudotsuga* appear perfectly healthy, but in some specimens active growth and robust physique could be masking a fungal infection that might, in certain circumstances, shorten their natural life. However, with careful management many of the trees have the potential to grace Cragside indefinitely.

In the absence of dependable external indicators, the property's foresters are now relying on ultrasound readings to support their own knowledge and experience in assessing the internal state of these mighty trunks. A tomographic survey of the trees is currently underway using PiCUS® equipment, which sends sound waves into the wood to detect weakness and the possible presence of rot. A micro-drill called the Resistograph® measures the resistance of the wood and is augmenting the tomography to provide as complete a portrait as possible of the structure and potential defects at the base of each tree. Together these procedures allow the forestry team to make more informed, scientific judgements about the state of each tree and monitor the progress of infection. As a result, healthy trees have already been saved that might otherwise have been condemned, and it is hoped that the lives of a number of other trees can be safely prolonged.

Tree testing with PiCUS equipment

Cragside's Pinetum

Phaeolus also attacks Douglas fir in the wild, but its presence at Cragside is of particular concern because these conifers are so significant to the character of the site—they're the reason the landscape is Grade I Registered. As in nature, some of the Cragside's Douglas firs have proved more susceptible to the fungus than others, reflecting the value of the collection's richly varied gene pool. For example, *Pseudotsuga* forms with smooth bark seem to be more resistant than those with craggy bark, indicating that certain wild populations naturally have greater resilience to the pathogen.

The National Trust has begun to catalogue the various types of Douglas fir growing at Cragside and intends to undertake a study of their genotypes to determine which forms are resistant to *Phaeolus*. This information will be of invaluable importance to historic landscapes countrywide, which are also suffering from the effects of the fungus: it would be a difficult task to find a garden or park in the British Isles without at least one Douglas fir, not to mention properties like Knightshayes Court, whose horizons would be unimaginable without the trees' expressive silhouettes.

Further research may even shed light on the specific regions in America that Armstrong's trees called home, sending botanists to comb mountain slopes and coastal forests in the footsteps of David Douglas. Resistant forms could then be selected and propagated to ensure that the Dougie remains a dominant feature of Cragside for generations to come.

Lord Armstrong would doubtless approve. This 'modern magician,' as he was known, ultimately found the most magic in the natural world, preferring the steadfast growth of conifers to the rapid expansion of his industrial empire. He once remarked that his favourite pastime was planting trees, and we have no reason to doubt his claim! Thanks to his enthusiastic embrace of this well-loved hobby, the impact of his forest garden may stretch farther than even he—the great Imaginer—could have envisaged, swelling beyond the round Northumberland hills to protect Douglas firs everywhere.

Special thanks to Alison Pringle, Andrew Sawyer, Ian Fletcher, John O'Brien and Morag Warburton

Rowallane: a story told in plants

Volumes could be written about the peerless plant collection at Rowallane. And this is exactly what Hugh Armytage Moore did, leaving behind an astounding paper trail of correspondence, journal entries and invoices detailing the evolution of his life's work: the planting of a singular, 52-acre garden in the rolling hills of Northern Ireland's County Down. Shy of speech—perhaps because he suffered from a lifelong stutter—Moore chose instead to communicate in writing and in plants, embracing both means of expression beginning in 1903, when he found himself the owner of a rocky framework of fields, outcroppings, dry stone walls and mature conifers.

This framework he inherited from his uncle, the Reverend John Moore, who purchased the humpy farmland in the mid-1800s, responding to the naturally rugged terrain by introducing sober swathes of evergreens, cairns and other similarly evocative hardscape features. In the quiet, primeval atmosphere that resulted, the younger Moore saw an exceptional horticultural opportunity. He would spend the next fifty years filling the Reverend's canvas with plants, painting with specimens gathered first-hand from famous nurseries and plant hunters, and recording every brush stroke with a diligence to warm the heart of even the most exacting archivist.

But Hugh Armytage Moore's records excite gardeners as well as historians, and the inert contents of his well-thumbed journals and yellowed invoices are being translated into a dynamic, living landscape. A process of renewal has been underway in the garden in recent decades, and the plants listed in faded letters, diary entries and nursery receipts guide past, present and future efforts to replant and rejuvenate.

One of the Reverend Moore's cairns

Right plant, right place

Each plant brought into the garden was meticulously researched by Moore to ensure its success in its new home. Like all great gardeners Moore considered himself a selector rather than a collector of plants, and he was careful to choose the right plant for the right place. Those who look after the garden today are continuing this tradition of fastidious research, but in addition to matching a plant with its proper growing environment, Head Gardener Averil Milligan must also be sure that plant selection and arrangement preserves the intended feeling and ethos of Rowallane.

Soon after her arrival in 2003, the impending restoration of the Outer Walled Garden prompted Averil to delve into Moore's papers for the first time, opening a treasure trove—in some cases a Pandora's box—of detail about the development of the garden and its plant selection in the first half of the twentieth century. Moore's decisive hand or the spidery script of commercial nursery documents could lead to either elation or a headache. Yet the frustrations caused by certain discoveries—for example that the hydrangeas removed over the years from the Outer Walled Garden had been a particular favourite of Moore's—were more than made up for by the thrill of others, such as holding a November 1904 invoice from the Veitch nurseries for two plants of *Davidia involucrata* var. *vilmoriniana*, raised from seed collected by Ernest Wilson.

One of Veitch's original davidias remains at Rowallane today, spreading its massive branches like a giant octopus in the grounds of the Hospital, so named because this area of the garden was once used to rehabilitate ailing livestock. The other davidia grew in the Outer Walled Garden: although this tree is no longer standing, it has been re-propagated, and a replacement version is thriving near its original site.

The great *Davidia* in the Hospital, purchased from the Veitch nurseries in November 1904

A who's who of horticulture

When renewal plans for the Rock Garden began, Averil had the envied opportunity to consult lists of seedlings that Moore received directly from Ernest Wilson's expeditions, as well as those of Frank Kingdon-Ward, George Forrest and other stars of plant exploration's heyday. A particular prize is a lengthy letter from Forrest to Moore, detailing the native habitat of the dwarf *Rhododendron lapponicum* and its worth as a cultivated plant, especially in rock garden plantings. Forrest's 1926 description is accompanied by a handful of photographs of the species in the wild (he refers to the snapshots as his 'cast-offs'), signed and labelled in his own hand.

Moore was also corresponding with the eminent nurseries of the day: in addition to Veitch in Exeter and Chelsea, Moore patronised establishments ranging from Lemoine et fils of Nancy, the first to propagate hydrangeas from seed, to the great County Down institutions, just around the corner, of Slieve Donard and Daisy Hill. An indefatigable plantsman, Moore sought material from humbler sources as well, including the modest mid-Devon nursery of Miss Nellie Britton, who would have such an impact on the gardens at Knightshayes Court.

A pantheon of horticultural luminaries emerge from these aging bills and receipts, which were found nailed on a spike in Rowallane's chicken shed by Head Gardener Mike Snowden, Averil's predecessor. Mike is largely responsible for the garden's extensive archive, discovering gems over the years in the most unlikely places (the tack room proved another mine of information). Many documents had been tossed away since Moore's time, but those that remain provide a fairly comprehensive portrait of the garden and the expansion of its plant collection.

Rhododendron lapponicum

Rhododendrons in the Spring Ground, Rowallane

The eight-shilling magnolia

We know from Moore's diary, for example, that he acquired a specimen of *Magnolia dawsoniana* from the Orléans nursery of Léon Chenault in January 1921. We're further informed that he paid the French nurseryman eight shillings for what is perhaps the rarest of all Chinese magnolias.

Chenault brought numerous new Chinese species to European gardens, usually from plant material gathered by French missionaries. In this case, though, the Orléans outfit had propagated the magnolia from seed sent by the Arnold Arboretum outside Boston, where specimens introduced by Ernest Wilson were in danger of succumbing to the harsh New England winter. Wilson was collecting for the Arnold in 1908 when he came across this glorious species in a remote area of Western China, noting its rarity and its 'shining green leaves and stout fruit.'

Few of Wilson's original introductions of *M. dawsoniana* survive today, but the seedling Moore purchased from Chenault lives on in Rowallane's Outer Walled Garden. It is a doubly special plant, for in 1932 it became the first *Magnolia dawsoniana* to flower in Britain. The abundant pale flowers, flushed rose to purple, hang limply but luxuriously from its bare branches beginning in late March. Gardeners and friends recall Moore greeting this exuberant display with much enthusiasm, making an annual count of the blossoms until the tree became too floriferous to continue!

The magnolia flowers valiantly on, despite the ailments of old age, but the gardeners at Rowallane have been watching it anxiously of late: *M. dawsoniana* is notoriously difficult to reproduce, and previous attempts at propagation have failed. But they've discovered that the plant seems to respond best to air-layering, and though the process can take up to three years to complete, they're optimistic about recent efforts.

Magnolia dawsoniana

Carrierea calycina

Lost and found: a goat-horn tree on shaky footing

A tour of Rowallane's botanical rarities illustrates just how tenuous the future of these plants can be, relying as they do on assiduous care and vigilant record-keeping. The story of the garden's goat-horn tree (*Carrierea calycina*), is an astounding case-in-point. *Carrierea calycina* is an exceptionally rare, deciduous tree notable for its glossy dark foliage set off by handsome red petioles. The flowers hang in clusters of heart-shaped sepals in ivory or in white tinged with yellow-green; the distinctive claw-like fruit capsules are thought to resemble horns, hence the species' common name.

The goat-horn tree grows in the forests of western and central China at an altitude of between 1300 and 1600 metres (4,265–5,249 feet). It was introduced by Ernest Wilson in 1908, and though he had high hopes for its success in cultivation, *Carrierea calycina* has proved an ambivalent tenant in British gardens. Of questionable hardiness in this climate, Wilson's original specimens seldom reached flowering stage and even fewer survived beyond. For decades the only known tree in the British Isles was at Birr Castle in the Republic of Ireland.

Meanwhile, a plant of about the same age was growing in apparent obscurity in the gardens of Rowallane. So obscure, in fact, was Moore's *Carrierea* that it was nearly grubbed out in the late 1980s . . . and no one would have been the wiser. The tree is located in the Holly Rock section of the garden, which was overrun with vegetation in the years following the Second World War. A group of temporary workers set forth to clear the area with gusto when Mike Snowden recognized the botanical importance of a spindly tree in the line of demolition, which he luckily succeeded in tagging before it fell along with the rest of the overgrowth.

Today the *Carrierea calycina* at Rowallane is going strong, but unlike the Birr Castle tree it has not yet flowered, perhaps because it spent so much of its life in inhospitable conditions. Things are looking up, however, for this previously anonymous member of a little-known species: *Carrierea calycina* has attracted more and more attention since Peter Wharton reintroduced it to cultivation in the mid-1990s. Curator of the David C. Lam Asian Garden at the University of British Columbia Botanical Garden, Wharton collected from two populations found in the Dashahe Cathaya Reserve in Guizhou near the border with Sichuan. Trees from Wharton's seed are now growing in British Columbia, New Zealand, and in various gardens across Britain, including Knightshayes Court.

Rowallane's *Carrierea calycina*

The chance *Chaenomeles*

Serendipity is the guiding force behind all gardens. The same swings of fortune that cause a plant to be lost, or salvaged in the nick of time, are also behind the development of some of our finest horticultural specimens. Like any true, breathing garden, Rowallane has been site of many such accidents—happy as well as tragic. The property has lent its name to numerous inadvertent treasures, including yellow, orange and apricot forms of *Crocosmia masoniorum*, a *Viburnum plicatum* with claret-coloured autumn foliage, and an excellent hypericum.

Viburnum plicatum f. *tomentosum* 'Rowallane' (left), and *Hypericum* 'Rowallane'

The ornamental quince *Chaenomeles* x *superba* 'Rowallane' may best embody this fortuitous quality of gardening. Raised at Rowallane in 1920, the original quince still grows in a heap in the Outer Walled Garden where it first rooted. This area was previously the nursery and frameyard for the estate, and Mike Snowden speculates that the seedling sprang up within a cold frame and continued to grow long after the cold frame had disappeared. Prized for its full crimson blossoms, *Chaenomeles* 'Rowallane' has a low, scrambling habit and is ideally grown against a wall.

Chaenomeles x *superba* 'Rowallane,' trained up a wall at Knightshayes Court

Rowallane's original *Chaenomeles* Garden, October 2007

A visit to the original, freestanding plant is well worthwhile, however. Mike likens it to a roll of barbed wire, sprawling across an open stretch of lawn. Even a glance at its untamed, shapeless mass—so at odds with its perfectly formed flowers—brings one nearer the true spirit of the plant, of the garden that produced it, and of the generations of gardeners who've allowed it to remain.

A contemporary plantswoman and garden writer once declared that 'Mr Armytage Moore lives close to his plants.' This intimate knowledge, the kind that comes from day-to-day living, must have taught Moore to respect those moments when a plant chooses its place itself.

Special thanks to Averil Milligan and to Mike and June Snowden

Not your common myrtle
The ancient roots of Vita Sackville-West and her *Myrtus communis*

Year in and year out, the path leading to the Long Library at Sissinghurst Castle is fringed with a glossy mantle of myrtle leaves. It is tempting to imagine Vita Sackville-West brushing past them on the way to her Tower writing room, much as the pupils of Plato and Aristotle would have done as they strolled and philosophized in the groves of ancient Greece. *Myrtus communis*, or the common myrtle, has been cultivated for millennia. It has grown up alongside the greatest developments in human thought and has long been associated with the finest human feelings. Likely one of the first shrubs to reach these shores from the Levant, the myrtle along the library wall was also one of the first plants that Vita introduced to Sissinghurst.

Sissinghurst's myrtle (left) frames a bench in the Front Courtyard (left) and is visible just to the right of the clipped yew (right)

Humans take their gardens with them wherever they go, and it was the Romans who swept the myrtle northward. Sissinghurst's myrtle came from Vita's cherished Knole, her family's ancestral home in Sevenoaks, Kent. Forced to abandon Knole because it was entailed along the male line, she arrived at Sissinghurst in 1930 with a single souvenir from its garden, a plant that captured both the essence of Knole and the spirit of the newly discovered landscape that would absorb her passion and artistry for the next three decades.

The myrtle was a sacred plant in the ancient world, where its fragrant foliage and spangled white flowers were believed to be a favourite of the goddess of Love. So powerful was this association that the mythical species has maintained her amorous reputation: to this day *Myrtus communis* is an essential feature of traditional wedding bouquets. In fact, the original myrtle from which Sissinghurst's was grown is rumoured to have come from a sprig in the posy carried by Vita when she married Sir Harold Nicolson in 1913 . . . but like so many sentimental tales, the truth of this story has long been shrouded in romance.

Nevertheless, the myrtle that flourishes in Sissinghurst's Top Courtyard remains an indisputable symbol of the Nicolsons' alliance, representing their partnership in marriage as well as in garden-making. The clean, classical qualities of its tidy emerald leaves echo Harold's architectural genius, which was best displayed in his brilliant sequence of garden rooms. Its perfume, luxurious growth and romantic whispers of the past would certainly have endeared it to Vita, who filled her husband's geometric composition with emotional and effusive plantings.

Like the garden and the marriage, it is also an enduring specimen, springing back to life after a harsh winter storm nearly killed it to the ground. Pamela Schwerdt and Sibylle Kreutzberger, Head Gardeners from 1959 to 1990, believe that this occurred during the infamous winter that scorched the estate in 1962–63, a year after Vita's death.

Today the lustrous shrub is thriving, along with its owner's writings and the ethos of her garden creation. And yet the thousands of visitors who flock to Sissinghurst annually are likely to take little notice of this leafy evergreen, eclipsed as it is by the cascades of roses and the sumptuous herbaceous borders for which the estate is justly famous.

But the pulse of history that first drew Vita Sackville-West to Sissinghurst is most strongly felt amidst the myrtle's quiet beauty, fading into the crevices of inconceivably old and crooked brickwork and framing a bench that is perfectly placed for a moment's hushed reflection. Though not so showy as the roses with which she shares the wall, the library myrtle possesses many of the qualities that Vita once ascribed to her beloved Knole, particularly the 'deep inward gaiety of some very old woman who has always been beautiful, who has had many lovers and seen many generations come and go.'

Fittingly, a cutting from Sissinghurst's myrtle will be propagated and returned to its—and Vita's—original home. She would have had it no other way.

Special thanks to Alexis Datta, Sibylle Kreutzberger and Pamela Schwerdt

The Hunt for the Future
Modern-day plant collectors defend biodiversity

Far from a forgotten fad

Speak of plant hunters and tales of long-lost adventurers come immediately to mind. The very words evoke individuals of exceptional stamina, risking life and limb to stock British gardens with the finest selection of plants in the world. The steely determination of a David Douglas—a man more comfortable with conifers than with people—and incredible ordeals such as those faced by Ernest Wilson possess a powerful hold on our imagination. We picture Frank Kingdon-Ward in full plant-exploring regalia, scaling Himalayan peaks with his prized tea thermos in tow or plunging through vast rhododendron thickets in China's northwestern Yunnan province, once the exclusive collecting ground of a rather intimidating George Forrest. The territorial Forrest, who has been called the 'Indiana Jones of the plant world,' cut an imposing figure in spite of his choice of leg-wear: he was never seen without a pair of his signature knickers!

With such visions as these it is easy to see how the plant hunter has become an historical figure. Veiled in romance and lost to the mists of time, our tradition of plant hunting is often pigeonholed as an offshoot of British exploration and the expansion of the Empire, conveniently filed away as a phenomenon of each great—and long past—era of plant discovery and introduction. When we talk of the plant hunters it often sounds as if that chapter of our history is closed. Nothing could be further from the truth. For while the political, social, and technological circumstances that propelled the heyday of plant collecting are gone, plant hunting itself is still very much alive and has taken on vital new significance.

Rhododendron macabeanum in bud

The face of plant hunting in the early 20th-century: Ernest Wilson and his Chinese collecting team

Despite challenges posed by modern travel restrictions and regulations, plant collectors traverse the globe every day in search of new or rare species and varieties. They are sponsored by governments and by scientific organisations like Kew's Millennium Seed Bank or the International Conifer Conservation Programme at the Royal Botanic Garden Edinburgh, rather than by wealthy enthusiasts or commercial nurseries. Individual countries now take an active role in protecting their native flora, collaborating with collecting teams to ensure both in-situ and ex-situ species preservation. The focus of late-twentieth- and twenty-first-century plant exploration has clearly shifted to emphasize conservation, education, and the defence of biodiversity, demanding more than ever before that today's plant hunters share the spirit, tenacity, and passion of their distinguished predecessors.

Roy Lancaster, storyteller for the voiceless

More than anywhere else, this legacy thrives in the Hampshire garden of Roy Lancaster. Arguably the greatest plantsman of our time, Roy has travelled the world in search of the beautiful, the rare, and the overlooked, taking him from China to South Africa to the garden around the corner. His discoveries have inspired myriad books, innumerable articles and countless broadcasts on radio and television: a humbling and prolific testament to his energy, enthusiasm and pure love of plants.

Roy has regaled millions with the fascinating histories of our garden plants, particularly those deserving greater attention, such as *Itea ilicifolia* and its honey-scented cascade of late summer blossom. This large evergreen shrub is native to Western China and was discovered and introduced by Irish botanist Augustine Henry, first flowering in Britain in 1895. Despite its intoxicating perfume and robust character it remains a relatively rare species in cultivation. However, its fragrant, pale chartreuse tassels swathe the walls of National Trust gardens such as Sissinghurst, Cotehele and Castle Drogo, and a vigorous twenty-five-year-old specimen is trained up the west side of Roy's house

To stroll through Roy's third-of-an-acre garden is to take a botanical tour of the world, providing a singular glimpse into the life of a modern-day plant collector. Behind every plant is a story, and this dizzying horticultural array will call forth the very finest tales, ranging from the incredible and the amusing to the gory . . . and the gooey, such as a *Prunus tomentosa* near his terrace, raised from seed plucked from bear droppings in Kashmir.

Mahonia russellii

Hedera colchica 'Batumi'

We could envisage his forerunners engaging in a similar excavation, but it would be difficult to conceive of them rescuing seeds from a washing machine, for example, which is how *Mahonia russellii* found its way into Britain and into Roy's front garden. This delicate mahonia, with rosy new shoots, creamy flowers and prolific black fruits was discovered in Veracruz, Mexico by the late Jim Russell, and its seed was brought to this country in 1984 in his shorts pocket. Curious as to what caused the vivid stains in the aforesaid article of clothing, his wife rediscovered the crushed fruit of this graceful shrub as it was about to join a load of dirty laundry. One wonders how many other 'household' plant hunters are equally deserving of recognition!

Roy doesn't have to leave home to admire a stunning, nearly black Persian ivy that cushions a passageway between his front and back garden. He discovered *Hedera colchica* 'Batumi' growing wild in the woods outside the Batumi Botanic Garden, on the eastern end of the Black Sea in present-day Georgia. With leaves nearly the size of a salad plate, *Hedera colchica* is native to the Caucusus and arrived in Britain in the mid-nineteenth century. Travelling through the region in the late 1970s, Roy found several new forms of *H. colchica* with unlobed or shallowly lobed leaves, like those belonging to the deep glossy 'Batumi.' Though introduced in 1979, this handsome variety has only recently become available in the nursery trade, thanks to the renewed popularity of ivies.

This illustrates the supreme importance both of current plant collecting efforts and of initiatives like the Plant Conservation Programme at Knightshayes Court. Unlike trends in architecture and the decorative arts, the comings and goings of fashion in horticulture and garden design can have a deathly serious impact on biodiversity. We could recreate the shag carpet if it ever seemed like a good idea, but in the plant world a forgotten fad might mean the permanent loss of genetic material.

The Plant Conservation Programme (PCP), which Roy has likened to an ark, was established to prevent such losses and protect all plants, fashionable or not. The iconic plantsman's presence at a recent visioning day for the project was a highlight for all in attendance, as was his gift of six special plants to the National Trust, including the Batumi ivy.

Thanks to Roy, a small corner of the Trust's 'Ark' is now also home to a nodding Japanese chrysanthemum with edible petals (*Chrysanthemum* 'Kakiromoto'); an intriguing aucuba (*Aucuba himalaica* var. *dolchophylla*) that merits wider cultivation; and the bewitching tree peony 'Sandrine.' They're accompanied by a wild-collected specimen of the China rose, *Rosa chinensis* var. *spontanea*, ancestor of many of the thousands of roses we enjoy today, and by the fine bamboo *Fargesia denudata*, introduced by Roy, propagated by the PCP and now flourishing in the gardens of Ickworth, Greenway and Mount Stewart.

Fargesia denudata

An 18th-century botanical illustration of *Rosa chinensis* var. *spontanea* and one of its hybrids

Special thanks to Roy and Sue Lancaster

Chris Chadwell:
The new era of high-altitude plant hunting

National Trust gardens are also an eager custodian of Himalayan plants collected by explorer Chris Chadwell, though the genteel parks, borders and alpine beds of the British Isles are a far cry from these species' 14,000-foot homeland. An internationally recognised authority on the flora of the Himalaya, Chris recently completed his twenty-second expedition to the region; he organised his first plant-hunting trip to Kashmir in 1983, which was funded in part by the gardens at Knightshayes Court and their newly established Plant Conservation Programme.

Paper fit for a king: the majestic Himalayan birch

It was during this inaugural foray into Kashmir that Chris first encountered the pearly spires of *Betula utilis*, or the Himalayan birch. Native throughout the Himalaya and into Western China, this deciduous tree reaches 60 feet and is characterised by its dazzling bark, which exhibits enormous variation within its large geographic range: it can appear ghostly white, flushed with a soft pink that gives its peeling strips the same rosy glow as the inside of a seashell, or alternatively it will take on the warm flashings of new copper. Bark colour ranges from rich reds and browns in the Eastern Himalaya to a pure white form known as *Betula utilis* var. *jacquemontii*, named for the French naturalist Victor Jacquemont, who was among the first to explore for plants in Kashmir in the early 1830s.

For a garden setting, Chris advocates planting a selection of diversely coloured specimens, noting that stunning effects can be achieved when Himalayan birches are underplanted with the dwarf rhododendrons that are their companion plants in the wild. *B. utilis* is one of our finest birches, and it has become a memorable feature of numerous National Trust gardens, from Anglesey Abbey to Wimpole Hall to Colby Woodland Garden. Young trees from Chris Chadwell's seed are currently being grown on in the propagation unit for the PCP at Knightshayes and will soon be ready for distribution to gardens throughout Britain, where Trust gardeners will strive to highlight their unique colour and form.

Betula utilis var. *jacquemontii* planted in the Winter Walk, Anglesey Abbey

In nature *Betula utilis* is typically observed growing up extremely steep slopes, threaded through by clear mountain streams and framed by a backdrop of glaciers and snowy peaks. The elegant, filigreed appearance of this endangered species belies the strength required to survive in such an environment, though its stamina is hinted at by the distinctive curve that frequently appears at the base of the trunk: this is caused by the persistent pressure of snow as the tree grows, and young seedlings are even forced to contend with the occasional avalanche.

The Himalayan birch has captivated observers for thousands of years, and its striking ribbons of bark have long inspired both creative and practical applications. The inner bark served as a paper substitute for transcribing ancient Sanskrit texts, and to this day forms of the tree in the Eastern Himalaya are known as *Bhujapat*, which literally means 'the King's paper.' In addition to providing a surface on which to write, the tree's bark could also be put to more colourful use: pigment from the deeply tinted variants was frequently extracted to illustrate early versions of the *Kama Sutra*.

In remote Himalayan villages the bark is still collected, albeit for less exotic purposes: it is suitable for packing material and used in fashioning umbrellas and as an alternative to paper. The bark has valuable medicinal properties as well and is utilised in antiseptic infusions and poultices, in ears to relieve earache, and as an effective treatment for ailments ranging from jaundice to hysteria.

Chris' field notes usually include this type of information. His approach to plant hunting is distinguished by a marked interest in the people who share the plant's native habitat and their interaction with the species. He freely acknowledges that the relationships he has built with local communities are vital to successful expeditions, a reminder that such associations—either with individuals, organisations or governments—are at the heart of plant exploration today.

The collecting team of plant hunter George Forrest, near Lijang, China, ca. 1913

Herbarium specimens—not just a pastime of Victorian ladies!

Collaboration was always necessary when plant collecting, but in the past the contribution of others, particularly members of the local population, was rarely recognized. Likewise, Western collectors would descend into a plant's native habitat to gather seed and herbarium specimens, sometimes taking everything in sight and usually returning home without leaving a duplicate specimen for the herbarium in the country of origin. As a result, it has been extraordinarily difficult for botanists in these countries to study their own native flora.

Fortunately, many projects are now underway to repatriate much of this information through digital photography and the internet—an example is Kew's repatriation of herbarium data from northeastern Brazil—and preparing a duplicate herbarium specimen for the host country is now a requisite procedure. Chris stresses that a properly prepared herbarium specimen is fundamental to good collecting practices: accompanied by descriptive field notes, a well dried and preserved sample is still the only way to ensure that botanists are provided the detail necessary to identify a plant. Some things haven't changed since the days of David Douglas!

Despite developments in modern technology, the herbarium specimen remains the cornerstone of correct plant identification, and correct identification is absolutely essential to plant conservation efforts. Inaccurate identification has proved problematic in recent years and is surprisingly prevalent: Chris' research indicates that at least half of all plant species originating in the Himalaya and named as species are incorrectly identified. The error is compounded when the plant is in a public garden and is given a label; not only will everyone assume the label is correct, but gardeners may not be aware that they are caring for a particularly rare or threatened form or species, making it all the more likely that the plant might disappear from cultivation.

Correct plant identification can be a matter of life or death for humans as well, particularly when the plant in question is important medicinally. Much of Chris Chadwell's work has centred on Himalayan plants used in traditional medicine, and he has collaborated with the Royal Government of Bhutan and the Tibetan Medical Institute in Dharamsala, Northern India to explore the feasibility of cultivating endangered medicinal species instead of harvesting them from the wild.

From mountainside to garden and back again

One such plant is *Podophyllum hexandrum*, or the Himalayan mayapple, an attractive herbaceous perennial with charming pink flowers that open in spring on purplish stalks, just as the great palms of its mottled glossy leaves unfurl. In the Himalaya *Podophyllum hexandrum* is often called 'bear's apple,' as its bright red plum-sized fruit is a favourite snack for the region's bears. Humans consume the egg-shaped autumn fruit as well, chiefly to soothe coughs and sore throats.

It is the rhizome of the *Podophyllum* that is most powerful medicinally, however, as it contains an alkaloid called podophyllin, which combats the spread of cancer by interrupting cell division. The American mayapple, *Podophyllum peltatum*, produces this substance as well, though in lower concentration. *P. peltatum* has been grown and harvested for many years for its medicinal properties, but scientists have only recently begun to investigate opportunities for cultivating its Himalayan cousin, which is threatened in the wild.

The Himalayan mayapple

Chris Chadwell has been at the fore of efforts to grow *Podophyllum hexandrum* as a crop in the Himalaya. Observation of the species in British gardens like those at Knightshayes Court, where it is a highly desirable addition to woodland plantings, has convinced him that it lends itself to cultivation and could be successfully raised in a commercial setting. Many of our prized ornamental species are also of great importance medicinally: *Arisaema tortuosum*, *Mahonia napaulensis* and *Lilium nanum* are good examples.

Information gathered from nearly a century of gardening with these showy Himalayan plants is invaluable to those who are trying to protect their wild populations without compromising the cultural heritage surrounding their use. When Ernest Wilson, George Forrest and Frank Kingdon-Ward returned to Britain and unleashed scores of exciting new plants on the horticultural scene, they could scarcely have imagined the impact their introductions would have on traditional Himalayan medicine and on the future of the plants themselves.

Because of the legendary plant hunters of the past, the plant hunters of today, like Chris Chadwell, may arrive in the Himalaya already in possession of their most precious discovery: the inestimable knowledge that is gained by watching, tending and loving a plant for generations.

Special thanks to Chris Chadwell

WE'RE ALL IN THIS TOGETHER—
the alliance to save our plants

The spirit of cooperation that infuses plant exploration today is also at the heart of the National Trust's plant conservation efforts. The Plant Conservation Programme (PCP) provides a forum for head gardeners countrywide to exchange information as well as material from their most important plants, assuring their continued presence in National Trust gardens. But in addition to propagating and distributing plants within the Trust's collection, the PCP is also committed to augmenting this gene bank with the introduction of new wild-source and botanically or historically significant individuals.

Partnerships forged with other gardens and conservation initiatives have been absolutely essential in fulfilling this aim, ensuring not only that National Trust gardens remain vibrant horticultural showcases filled with interesting plants, but, more crucially, that these priceless plants have at least one, if not several, permanent homes. Sharing our botanical wealth is the best insurance policy available. Never has this been a more critical concern, as 70 percent of plants assessed by the World Conservation Union are at risk of extinction, a statistic that is all the more alarming when we consider that only 3 percent of the world's described species have been analysed. Rather than simply a showcase for remarkable plants, the garden has become a safe depository.

The pencil cedar of Painshill Park

National Trust gardeners are already curators for the world's largest collection of historic plants, but these living links to our past will soon be joined by original specimens from gardens like the celebrated eighteenth-century landscape of Painshill Park in Surrey, filled in the mid- to late-1700s with glamorous new species from the eastern United States. Painshill's visionary creator, Charles Hamilton, received seeds and plants from John Bartram, a Quaker naturalist who ran a nursery for native plants on his farm in Pennsylvania. Though many of these introductions have been lost over the last 250 years, a surprising number of Bartram's original collection endure.

Still, Head Gardener Kath Clark is in a race against time to propagate noteworthy specimens before they succumb to age and the ravages of weather. A pencil cedar (*Juniperus virginiana*) gathered as seed by Bartram in the mid-1700s was felled by a storm in January 2007; luckily Painshill's gardeners were able to harvest cuttings from this venerable old plant; these were sent to the PCP at Knightshayes where they rooted the following summer. In a few years the plants will be ready to resume their places in this great landscape garden, and duplicate specimens will make excellent additions to National Trust parks of the same era.

The pencil cedar at Painshill Park, before (left) and after the winter 2007 storm

Bedgebury National Pinetum

Relationships established with the Forestry Commission's tree collections—Westonbirt National Arboretum in Gloucestershire and Kent's Bedgebury National Pinetum—have also brought an array of botanical treasures into the propagation unit of the Plant Conservation Programme.

Since its founding in 1925, Bedgebury has quietly but actively been securing the future of hundreds of conifers by planting its 320 acres of parkland with both unusual and apparently common species. The Pinetum currently cares for over 15,000 specimens, representing 60 percent of the world's temperate conifers.

The dwarf conifer collection at Bedgebury (left) and a sparkling winter view of the Pinetum

Here exceptionally rare trees rub shoulders with old, familiar favourites: at present Bedgebury is growing and researching conifers ranging from the Chinese evergreen *Cathaya argyrophylla*, endangered in the wild and almost unknown in British gardens, to the whimsical, instantly recognizable monkey puzzle tree, *Araucaria araucana*. The ubiquitous monkey puzzle might seem an odd target for conservation, but in its native habitat of Chile and Argentina populations of this eccentric conifer have been destroyed by grazing, land clearing and fire. Today more monkey puzzle trees can be found in British gardens than in the wild.

As cautionary tales like that of the monkey puzzle occur with greater frequency, it is little wonder that Bedgebury endeavours to increase the genetic diversity of all temperate conifers in Britain, even those that are widely cultivated and have a seemingly indestructible natural population. The Douglas fir (*Pseudotsuga menziesii*) is an example of such a species. As John Lanyon, Head Gardener of Knightshayes Court and Curator of the PCP, notes, 'this is a tree we plant all the time, particularly in National Trust gardens and parks. Just think of the opportunities presented by having wild-source Douglas firs available from Bedgebury. Instead of planting a bog-standard conifer, we could plant something really special and encourage biodiversity at the same time.'

Monkey puzzle trees in the wild (left) and growing on the National Trust-managed estate of Arlington Court

In recent years Bedgebury has supplied the PCP with numerous natural-source conifers, including several *Pseudotsuga* that were distributed to the vast conifer garden at Cragside in Northumberland, where National Trust foresters and gardeners have been grappling with a fungal infection of the mighty trees. 'Bedgebury is looking after all conifers, not only those that are at risk at the moment,' adds John, 'and this far-sighted attitude distinguishes them from many other conservation groups.'

Yet among the more than 2,000 species that call the Pinetum home, over 100 are classified as threatened in the wild. Bedgebury is at the forefront of conifer conservation through its work with the International Conifer Conservation Programme at the Royal Botanic Garden Edinburgh. Together these organisations strive to protect conifers that are threatened in their native habitats, such as the *Fitzroya cupressoides* in Chile and Lebanon's iconic cedar, *Cedrus libani*. Plant collecting plays a key role in these conservation efforts: natural-source specimens supplement the gene bank of trees in cultivation in Britain and, even more importantly, preserve material that can hopefully be reintroduced to the wild once the threat to the plant has abated.

A stately cedar of Lebanon (*Cedrus libani*) casts a distinctive shadow over the lawn at Dudmaston

Fresh hope for the stinking cedar

This approach has lately been implemented in an attempt to rescue an obscure American conifer from impending extinction. ***Torreya taxifolia***, known by the less-than-alluring nickname 'stinking cedar,' is an ancient tree that once existed across the entire northern hemisphere. Retreating glaciers left this 40- to 50-foot (12–15-metre) evergreen scattered in microhabitats in the Southeastern United States, principally in southwestern Georgia and along the steep slopes fringing the Apalachicola River in northwest Florida.

Discovered in the 1830s and named for New York botanist John Torrey, *Torreya taxifolia* impressed nineteenth-century observers with its pungent odour, released when its yew-like, deep green needles are crushed (a possible explanation for the epithet 'stinking' cedar). Its prevalence was also recorded: as late as 1914 it was described as a dominant species in a Florida forest of beech, magnolia and pine. But sometime during the first half of the twentieth century, something went terribly wrong with the *Torreya*. From several well-stocked pockets of woodland, the conifer's numbers have plummeted to a horrifying 200 individuals, strung across a minute range in northern Florida and southwest Georgia.

Scientists to this day are unable to determine exactly what has caused this dramatic downswing in population: many blame a fungal blight, which killed nearly every adult tree by the early 1960s, and the species' decline has also been hastened by persistent drought and other introduced soil pathogens. Everyone agrees that unchecked habitat destruction and logging for its valuable, rot-resistant timber would have sealed the fate of this once-characteristic conifer, but for the energies of concerned individuals and organisations interceding on its behalf.

Bedgebury National Pinetum and the Royal Botanic Garden Edinburgh have recently joined what is now an international effort to save the stinking cedar. Cuttings from wild torreyas have been rooted at the Royal Botanic Garden Edinburgh and are currently growing at Bedgebury; these trees will be allowed to mature and set seed. Their distinctive fruit resembles nutmeg, but the seed is covered in a fleshy pulp that emits an astonishingly putrid aroma when ripe—an even more likely explanation, it would seem, for the plant's common name! Seedlings raised from these ex-situ plantations are vital to the species' future, as native Florida torreyas rarely reach maturity and almost never produce seed: those torreyas that persist in the wild are root sprouts or shoots springing from stumps of trees that were logged or felled by disease.

Across the Pond, similar conservation initiatives put in place by the Arnold Arboretum and the Atlanta Botanical Garden have met with considerable success. In 2002, in collaboration with the Florida State Park Service, the Atlanta Botanical Garden reintroduced *Torreya taxifolia* seedlings to forest ravines that had not seen the species in decades. Their survival rates are promising.

Torreya taxifolia with its distinctive seed

Torreya taxifolia seedlings in the propagation unit at Knightshayes Court, January 2008

Awareness about the plight of Florida's torreya is growing as well, thanks to groups like the Torreya Guardians (www.torreyaguardians.org), a worldwide, self-organised band of advocates who have harnessed the internet to inform the public about the conifer and coordinate measures for its protection. Projects like these are vital to the continued existence of the stinking cedar, but re-establishing the species will be an uphill battle at best. As David Ruland of the Atlanta Botanical Garden, writes, 'the Florida torreya is a glacial relic, seemingly stranded in an increasingly hostile niche without any natural means of escape or survival.'

Gardens, then, are one of the very few habitats available to a species so acutely in jeopardy in its native environment. Bedgebury hopes their plantation of *Torreya taxifolia* will preserve and expand an irreplaceable gene bank that can eventually be drawn upon to bolster wild populations of the tree in the United States. They also intend to increase the number of Florida torreyas in cultivation: in January 2008 the Pinetum sent a hundred wild-source *T. taxifolia* seedlings to the National Trust's Plant Conservation Programme. In a few years the plants will find a happy refuge in some of the finest gardens in the British Isles, adding texture and appeal to the landscape while ensuring that the stinking cedar escapes the fate of the great vanishing glaciers that swept it south.

Special thanks to Kath Clark and Dan Luscombe